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

Dr. ALEX JACOB
B.E., M.Tech (Str)., Ph.D (Hon)., Dip. Bdg.Sc(Aust)., M.I.E.(Aust), M.I.E.(Ind)
CONSULTING ENGINEER
Old No.41/A, New No. 70, Beach Road, Kalakshetra Colony,
Besant Nagar, Chennai - 600 090.

Phone { Off : 044 - 24910945
044 - 24464478
Mob : +91-98401-59550
E-mail: alexjacobuc@gmail.com
alexjacob@unitedconsultants.in
Web : www.unitedconsultants.in

09.01.2025

STABILITY CERTIFICATE

The detailed engineering and structure design of the proposed building comprising of STILT FLOOR +5 FLOORS RESIDENTIAL BUILDING (HEIGHT-18.30M) WITH 14 Dwelling Units Availing Premium FSI at. Old Door No.5, New Door No.9, Thirumoorthy Street, T.Nagar, Chennai Comprised in T.S.No.6974, Block No.108-B of T.Nagar Village With in the Limits of Greater Chennai Corporation has been done by us based on the report of geotechnical investigation (soil test) done by **JOSMAR CONSULTING ENGINEERS** Report No. **JCE/GEOTECH/2022/104** Dated **22.11.2022** and considering the functional requirement of the building.

2. It is certified that among other factors, the proposed building has been designed to resist earthquake. I/We have checked various parameters and found that the proposed building would be safe.

3. I/We further certify that:

(i) The minimum grade of concrete is M25

(ii) The design and analysis has been done using the code of practice for plain and reinforced concrete as per IS 456, design loads as per IS Codes No.875 Part I to V and design of earthquake resistant structure as per IS Code No.1893.

The building will be safe and sound when used for the purpose for which it is designed.

(Dr.ALEX JACOB)
Dr. ALEX JACOB
B.E., M.Tech (Str), Ph.D(Hon),
M.I.E. (Aust), M.I.E. (Ind)
STRUCTURAL ENGINEER,
41/A, BEACH ROAD, KALAKSHETRA COLONY,
CHENNAI - 600 090.
REG No. SE/GR-I/19/02/001
REG No. RSE100392019

THE PROPOSED CONSTRUCTION OF STILT FLOOR + 5 FLOORS RESIDENTIAL BUILDING (HEIGHT-18.30M) WITH 14 DWELLING UNITS AVAILING PREMIUM FSI AT OLD DOOR NO.5, NEW DOOR NO.9, THIRUMOORTHY STREET, T.NAGAR, CHENNAI COMPRISED IN T.S.NO.6974, BLOCK NO.108-B OF T.NAGAR VILLAGE WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION.

GENERAL NOTE ON STRUCTURAL DESIGN

1.0 GENERAL

1.1 DESIGN BASIS

The design of this building is carried out based on frame analysis using STAAD Pro V8i.

1.2 CODES AND STANDARDS

All structural design is carried out conforming to the provisions in National Building Code of India and other relevant Indian Codes and Standards.

1. I.S. 456
2. I.S. 875 - Part I to V
3. I.S.1893
4. I.S.13920
5. I.S.800

2.0 BASIC CIVIL DESIGN LOADS

2.0 DEAD LOADS & LIVE LOADS

Typical slab dead load is calculated as follows

Residential Building

Self weight of slab	=	2.0kN/m²
Floor finish	=	2.0kN/m²
Live load	=	3.0kN/m²
		7.0kN/m²

Dr. ALEX JACOB
B.E., M.Tech (Str), Ph.D(Hon),
M.I.E. (Aust), M.I.E. (Ind)
STRUCTURAL ENGINEER,
41/A, BEACH ROAD, KALAKSHETRA COLONY,
CHENNAI - 600 090.
REG No. SE/GR-I/19/02/001
REG No. RSE100392019

3.0 SOIL DETAILS

Based on Soil Test Report Pile Foundation is adopted.

4.0 DESIGN METHODS

General design and detailing of concrete members/elements are done conforming to the provisions of I.S: 456 and other relevant I.S codes. Limit State method is followed for the design.

Seismic Zone III load is taken into account for the analysis. The predominant direction of vibration is horizontal. Relevant combination of forces has been taken into account.

4.1

Load Combination	Ultimate Limit Load	Serviceability Limit State
DL+LL+WL Or DL+LL+EL	1.2DL+1.2LL+1.2WL Or 1.2DL+1.2LL+1.2EL	DL+LL+WL Or DL+LL+EL

-

4.2.1 MINIMUM COVER

Slab	20 mm
Beam	25 mm
Columns	40 mm
Foundations	50 mm

Structure will be sound and stable when used for the purpose for which it is designed.

Dr. ALEX JACOB
B.E., M.Tech (Str), Ph.D(Hon),
M.I.E. (Aust), M.I.E. (Ind)
STRUCTURAL ENGINEER,
41/A, BEACH ROAD, KALAKSHETRA COLONY,
CHENNAI - 600 090.
REG No. SE/GR-I/19/02/001
REG No. RSE100392019

```
*****************************************************
*                                                   *
*          STAAD.Pro CONNECT Edition                *
*          Version  22.12.00.142                    *
*          Proprietary Program of                   *
*          Bentley Systems, Inc.                    *
*          Date=    JAN  9, 2025                    *
*          Time=    15:15:21                        *
*                                                   *
*  Licensed to: United Consultanta                  *
*****************************************************
```

```
    1. STAAD SPACE
INPUT FILE: D:\HARIHARAN V\STABILITY REPORT\SKYLINE, T.NAGAR\THE PROPOSED (G+5) RESIDENTITAL BUILDING .. .STD
    2. START JOB INFORMATION
    3. JOB NAME THE PROPOSED (G+5) RESIDENTITAL BUILDING IN T.NAGAR, CHENNAI
    4. JOB CLIENT SKYLINE
    5. JOB NO AJ-3547
    6. ENGINEER NAME HARIHARAN. V
    7. CHECKER NAME DR. ALEX JACOB
    8. ENGINEER DATE 09-JAN-25
    9. END JOB INFORMATION
   10. INPUT WIDTH 79
   11. UNIT METER KN
   12. JOINT COORDINATES
   13. 2 1.36 0 0; 3 4.49 0 0; 4 7.83 0 0; 5 11.84 0 0; 6 14.2 0 0; 7 19.44 0 0
   14. 8 23.09 0 0; 9 26.64 0 0; 10 0 3.2 0; 11 1.36 3.2 0; 12 4.49 3.2 0
   15. 13 7.83 3.2 0; 14 11.84 3.2 0; 15 14.2 3.2 0; 16 19.44 3.2 0; 17 23.09 3.2 0
   16. 18 26.64 3.2 0; 19 0 6.4 0; 20 1.36 6.4 0; 21 4.49 6.4 0; 22 7.83 6.4 0
   17. 23 11.84 6.4 0; 24 14.2 6.4 0; 25 19.44 6.4 0; 26 23.09 6.4 0; 27 26.64 6.4 0
   18. 28 0 9.6 0; 29 1.36 9.6 0; 30 4.49 9.6 0; 31 7.83 9.6 0; 32 11.84 9.6 0
   19. 33 14.2 9.6 0; 34 19.44 9.6 0; 35 23.09 9.6 0; 36 26.64 9.6 0; 37 0 12.8 0
   20. 38 1.36 12.8 0; 39 4.49 12.8 0; 40 7.83 12.8 0; 41 11.84 12.8 0
   21. 42 14.2 12.8 0; 43 19.44 12.8 0; 44 23.09 12.8 0; 45 26.64 12.8 0; 46 0 16 0
   22. 47 1.36 16 0; 48 4.49 16 0; 49 7.83 16 0; 50 11.84 16 0; 51 14.2 16 0
   23. 52 19.44 16 0; 53 23.09 16 0; 54 26.64 16 0; 55 0 19.2 0; 56 1.36 19.2 0
   24. 57 4.49 19.2 0; 58 7.83 19.2 0; 59 11.84 19.2 0; 60 14.2 19.2 0
   25. 61 19.44 19.2 0; 62 23.09 19.2 0; 63 26.64 19.2 0
   26. MEMBER INCIDENCES
   27. 10 2 11; 11 3 12; 12 4 13; 13 5 14; 14 6 15; 15 7 16; 16 8 17; 17 9 18
   28. 18 10 11; 19 11 12; 20 12 13; 21 13 14; 22 14 15; 23 15 16; 24 16 17; 25 17 18
   29. 27 11 20; 28 12 21; 29 13 22; 30 14 23; 31 15 24; 32 16 25; 33 17 26; 34 18 27
   30. 35 19 20; 36 20 21; 37 21 22; 38 22 23; 39 23 24; 40 24 25; 41 25 26; 42 26 27
   31. 44 20 29; 45 21 30; 46 22 31; 47 23 32; 48 24 33; 49 25 34; 50 26 35; 51 27 36
   32. 52 28 29; 53 29 30; 54 30 31; 55 31 32; 56 32 33; 57 33 34; 58 34 35; 59 35 36
   33. 61 29 38; 62 30 39; 63 31 40; 64 32 41; 65 33 42; 66 34 43; 67 35 44; 68 36 45
   34. 69 37 38; 70 38 39; 71 39 40; 72 40 41; 73 41 42; 74 42 43; 75 43 44; 76 44 45
   35. 78 38 47; 79 39 48; 80 40 49; 81 41 50; 82 42 51; 83 43 52; 84 44 53; 85 45 54
   36. 86 46 47; 87 47 48; 88 48 49; 89 49 50; 90 50 51; 91 51 52; 92 52 53; 93 53 54
   37. 95 47 56; 96 48 57; 97 49 58; 98 50 59; 99 51 60; 100 52 61; 101 53 62
   38. 102 54 63; 103 55 56; 104 56 57; 105 57 58; 106 58 59; 107 59 60; 108 60 61
```

Dr. ALEX JACOB
B.E., M.Tech (Str), Ph.D(Hon),
M.I.E. (Aust), M.I.E. (Ind)
STRUCTURAL ENGINEER,
41/A, BEACH ROAD, KALAKSHETRA COLONY
CHENNAI - 600 090.
REG No. SE/GR-I/19/02/001
REG No. RSE100392019

```
39. 109 61 62; 110 62 63
40. DEFINE MATERIAL START
41. ISOTROPIC CONCRETE
42. E 2.17185E+07
43. POISSON 0.17
44. DENSITY 23.5616
45. ALPHA 1E-05
46. DAMP 0.05
47. G 9.28139E+06
48. TYPE CONCRETE
49. STRENGTH FCU 27579
50. END DEFINE MATERIAL
51. MEMBER PROPERTY
52. 10 TO 25 27 TO 42 44 TO 59 61 TO 76 78 TO 93 95 TO 110 PRIS YD 0.5 ZD 0.2
53. CONSTANTS
54. MATERIAL CONCRETE ALL
55. SUPPORTS
56. 2 TO 9 FIXED
57. DEFINE IS1893 2016 LOAD
58. ZONE 0.16 RF 3 I 1.2 SS 2 ST 1 DM 0.05
59. SELFWEIGHT 1
60. MEMBER WEIGHT
61. 18 TO 25 35 TO 42 52 TO 59 69 TO 76 86 TO 93 103 TO 110 UNI 12.8 0 0
62. 18 TO 21 23 TO 25 35 TO 38 40 TO 42 52 TO 55 57 TO 59 69 TO 72 74 TO 76 86 -
63. 87 TO 89 91 TO 93 103 TO 106 108 TO 110 UNI 12.18 0 0
64. DEFINE WIND LOAD

*** NOTE: If any floor diaphragm is present in the model Wind load definition
          should be defined after Floor Diaphragm definition. Otherwise wind
          load generation may be unsuccessful during analysis.

65. TYPE 1 WIND 1
66. <! STAAD PRO GENERATED DATA DO NOT MODIFY !!!
67. IS875-2015:PARAMS 0 0 0 19.200 0.000 3.200 0 CHENNAI 50.000 0 1.000 1 7 -
68. 1.000 1.000 1.000 1.000 1.028 1.054 1.067 1.000 2 1.000 0.020 0 26.640 0.000 -
69. 19.200 0 0 0 1.000 0 0 0.200 1.000 0 1.000 1.000 1.000
70. !> END GENERATED DATA BLOCK
71. INT 1.5 1.5 1.5 1.5 1.585 1.666 1.707 HEIG 0 3.2 6.4 9.6 12.8 16 19.2
72. EXP 1 JOINT 2 TO 63
73. LOAD 1 LOADTYPE SEISMIC-H TITLE EQX
74. 1893 LOAD X 1
75. LOAD 2 LOADTYPE SEISMIC-H TITLE EQ-X
76. 1893 LOAD X -1.
77. LOAD 3 LOADTYPE SEISMIC-H TITLE EQZ
78. 1893 LOAD Z 1
79. LOAD 4 LOADTYPE SEISMIC-H TITLE EQ-Z
80. 1893 LOAD Z -1.
```

Dr. ALEX JACOB
B.E., M.Tech (Str), Ph.D(Hon),
M.I.E. (Aust), M.I.E. (Ind)
STRUCTURAL ENGINEER,
41/A, BEACH ROAD, KALAKSHETRA COLONY,
CHENNAI - 600 090.
REG No. SE/GR-I/19/02/001
REG No. RSE100392019

```
 81. LOAD 5 LOADTYPE DEAD  TITLE DL
 82. SELFWEIGHT Y -1
 83. MEMBER LOAD
 84. 18 TO 25 35 TO 42 52 TO 59 69 TO 76 86 TO 93 103 TO 110 UNI GY -12.8
 85. LOAD 6 LOADTYPE LIVE  TITLE LL
 86. MEMBER LOAD
 87. 18 TO 21 23 TO 25 35 TO 38 40 TO 42 52 TO 55 57 TO 59 69 TO 72 74 TO 76 86 -
 88. 87 TO 89 91 TO 93 103 TO 106 108 TO 110 UNI GY -12.18
 89. LOAD 7 LOADTYPE WIND  TITLE WLZ
 90. WIND LOAD Z 1 TYPE 1
 91. LOAD 8 LOADTYPE WIND  TITLE WL-Z
 92. WIND LOAD -Z 1 TYPE 1
 93. LOAD COMB 9 1.5(DL+LL)
 94. 5 1.5 6 1.5
 95. LOAD COMB 10 1.2(DL+LL+EQX)
 96. 1 1.2 5 1.2 6 1.2
 97. LOAD COMB 11 1.2(DL+LL-EQX)
 98. 2 1.2 5 1.2 6 1.2
 99. LOAD COMB 12 1.2(DL+LL+EQZ)
100. 3 1.2 5 1.2 6 1.2
101. LOAD COMB 13 1.2(DL+LL-EQZ)
102. 4 1.2 5 1.2 6 1.2
103. LOAD COMB 14 1.2(DL+LL+WLZ)
104. 5 1.2 6 1.2 7 1.2
105. LOAD COMB 15 1.2(DL+LL-WLZ)
106. 5 1.2 6 1.2 8 1.2
107. LOAD COMB 16 1.5(DL+EQX)
108. 1 1.5 5 1.5
109. LOAD COMB 17 1.5(DL-EQX)
110. 2 1.5 5 1.5
111. LOAD COMB 18 1.5(DL+EQZ)
112. 3 1.5 5 1.5
113. LOAD COMB 19 1.5(DL-EQZ)
114. 4 1.5 5 1.5
115. LOAD COMB 20 1.5(DL+WLZ)
116. 5 1.5 7 1.5
117. LOAD COMB 21 1.5(DL-WLZ)
118. 5 1.5 8 1.5
119. LOAD COMB 22 0.9DL+1.5EQX
120. 1 1.5 5 0.9
121. LOAD COMB 23 0.9DL-1.5EQX
122. 5 0.9 2 1.5
123. LOAD COMB 24 0.9DL+1.5EQZ
124. 5 0.9 3 1.5
125. LOAD COMB 25 0.9DL-1.5EQZ
126. 5 0.9 4 1.5
127. LOAD COMB 26 0.9DL+1.5WLZ
```

Dr. ALEX JACOB
B.E., M.Tech (Str), Ph.D(Hon),
M.I.E. (Aust), M.I.E. (Ind)
STRUCTURAL ENGINEER,
41/A, BEACH ROAD, KALAKSHETRA COLONY,
CHENNAI - 600 090.
REG No. SE/GR-I/19/02/001
REG No. RSE100392019

```
128. 5 0.9 7 1.5
129. LOAD COMB 27 0.9DL-1.5WLZ
130. 5 0.9 8 1.5
131. PERFORM ANALYSIS
```

P R O B L E M S T A T I S T I C S

NUMBER OF JOINTS	62	NUMBER OF MEMBERS	96
NUMBER OF PLATES	0	NUMBER OF SOLIDS	0
NUMBER OF SURFACES	0	NUMBER OF SUPPORTS	8

Using 64-bit analysis engine.

SOLVER USED IS THE IN-CORE ADVANCED MATH SOLVER

TOTAL PRIMARY LOAD CASES = 8, TOTAL DEGREES OF FREEDOM = 324
TOTAL LOAD COMBINATION CASES = 19 SO FAR.

**WARNING: IF THIS UBC/IBC ANALYSIS HAS TENSION/COMPRESSION
OR REPEAT LOAD OR RE-ANALYSIS OR SELECT OPTIMIZE, THEN EACH
UBC/IBC CASE SHOULD BE FOLLOWED BY PERFORM ANALYSIS & CHANGE.

***NOTE: Equivalent Static Analysis should preferably be performed for regular structures with approximate natural time period less than 0.4s and regular structures with height less than 15m in Seismic Zone II. Ref Cl.6.4.3 and 7.6
BASE SHEAR AND TIME PERIOD IN X

```
*********************************************************
* UNITS - KN    METE                                    *
* TIME PERIOD FOR X 1893 LOADING =   0.68792 SEC        *
* SA/G PER 1893=    1.977, LOAD FACTOR= 1.000           *
* VB PER 1893=    0.0633 X     4558.85=     288.41 KN   *
* VB Act Based on Clause 7.2.1 =      288.41 KN         *
* VB Min based on Clause 7.2.2 =       50.15 KN         *
*                                                       *
*********************************************************
```

***NOTE: Equivalent Static Analysis should preferably be performed for regular structures with approximate natural time period less than 0.4s and regular structures with height less than 15m in Seismic Zone II. Ref Cl.6.4.3 and 7.6
BASE SHEAR AND TIME PERIOD IN X

```
*********************************************************
* UNITS - KN    METE                                    *
* TIME PERIOD FOR X 1893 LOADING =    0.68792 SEC       *
* SA/G PER 1893=    1.977, LOAD FACTOR=-1.000           *
* VB PER 1893=    0.0633 X     4558.85=    -288.41 KN   *
* VB Act Based on Clause 7.2.1 =     -288.41 KN         *
* VB Min based on Clause 7.2.2 =      -50.15 KN         *
*                                                       *
*********************************************************
```

Dr. ALEX JACOB
B.E., M.Tech (Str), Ph.D(Hon),
M.I.E. (Aust), M.I.E. (Ind)
STRUCTURAL ENGINEER,
41/A, BEACH ROAD, KALAKSHETRA COLONY,
CHENNAI - 600 090.
REG No. SE/GR-I/19/02/001
REG No. RSE100392019

***NOTE: Equivalent Static Analysis should preferably be performed for regular structures with approximate natural time period less than 0.4s and regular structures with height less than 15m in Seismic Zone II. Ref Cl.6.4.3 and 7.6 BASE SHEAR AND TIME PERIOD IN Z

```
*********************************************************
* UNITS - KN    METE                                    *
* TIME PERIOD FOR Z 1893 LOADING =    0.68792 SEC       *
* SA/G PER 1893=    1.977, LOAD FACTOR= 1.000           *
* VB PER 1893=    0.0633 X     4558.85=     288.41 KN   *
* VB Act Based on Clause 7.2.1 =      288.41 KN         *
* VB Min based on Clause 7.2.2 =       50.15 KN         *
*                                                       *
*********************************************************
```

***NOTE: Equivalent Static Analysis should preferably be performed for regular structures with approximate natural time period less than 0.4s and regular structures with height less than 15m in Seismic Zone II. Ref Cl.6.4.3 and 7.6 BASE SHEAR AND TIME PERIOD IN Z

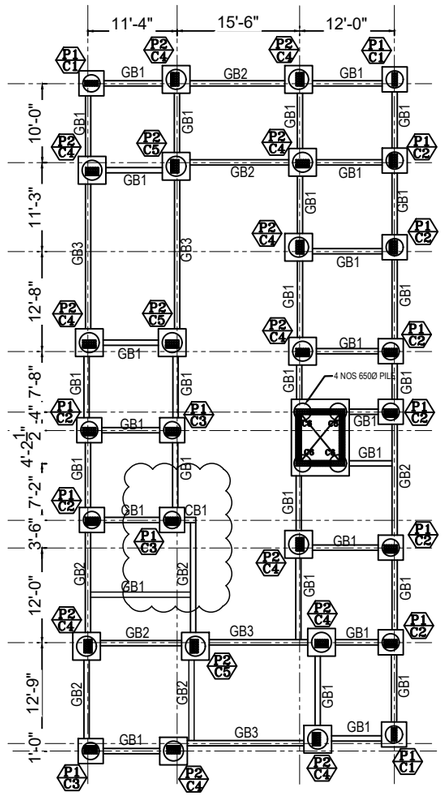
```
*********************************************************
* UNITS - KN    METE                                    *
* TIME PERIOD FOR Z 1893 LOADING =    0.68792 SEC       *
* SA/G PER 1893=    1.977, LOAD FACTOR=-1.000           *
* VB PER 1893=    0.0633 X     4558.85=    -288.41 KN   *
* VB Act Based on Clause 7.2.1 =     -288.41 KN         *
* VB Min based on Clause 7.2.2 =      -50.15 KN         *
*                                                       *
*********************************************************
```

132. FINISH

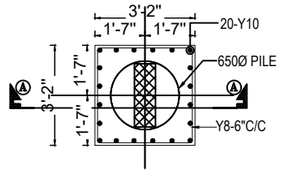
********** END OF THE STAAD.Pro RUN **********

**** DATE= JAN 9,2025 TIME= 15:15:22 ****

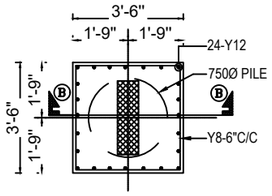
Dr. ALEX JACOB
B.E., M.Tech (Str), Ph.D(Hon),
M.I.E. (Aust), M.I.E. (Ind)
STRUCTURAL ENGINEER,
41/A, BEACH ROAD, KALAKSHETRA COLONY,
CHENNAI - 600 090.
REG No. SE/GR-I/19/02/001
REG No. RSE100392019



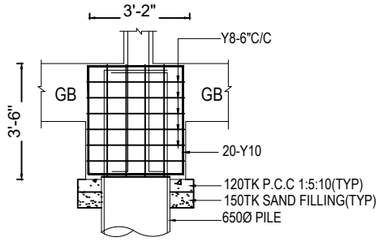
COL-NO	SIZE	REINFORCEMENT		SECTION	SHAPE OF TIES
		MAIN REINF.	TIES		
COL-C1	8" X 20"	4-Y16	Y8-TIES @ 8"C/C		
COL-C2	8" X 20"	6-Y16	Y8-TIES @ 8"C/C		
COL-C3	8" X 20"	4-Y20(a)+ 2-Y16(b)	Y8-TIES @ 8"C/C		
COL-C4	8" X 20"	6-Y20	Y8-TIES @ 8"C/C		
COL-C5	8" X 20"	4-Y25(c)+ 2-Y16(b)	Y8-TIES @ 8"C/C		
COL-C6 (LIFT WELL)	8" X 20"	6-Y16	Y8-TIES @ 8"C/C		



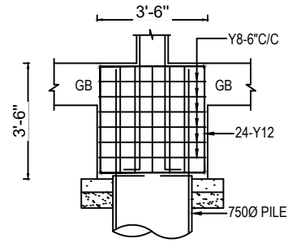
PILE-P1



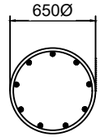
PILE-P2



SECTION A-A



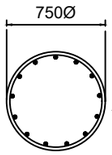
SECTION B B



9-Y16
Y8-HELICALS @ 8"C/C

650Ø PILE

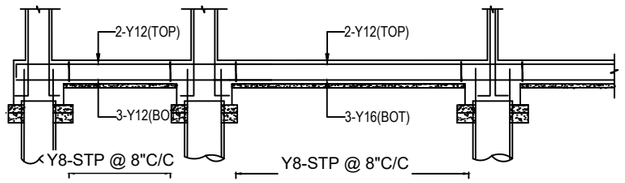
(SAFE LOAD 80 TONNES)



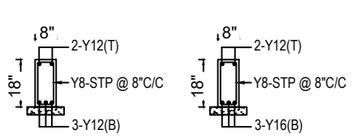
13-Y16
Y8- HELICALS @200C/C

750Ø PILE

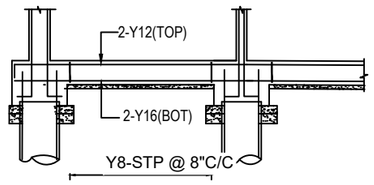
(SAFE LOAD 140 TONNES)



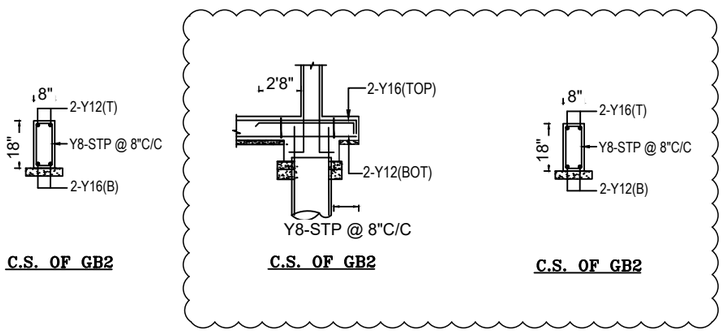
L.S OF GB1 L.S OF GB3



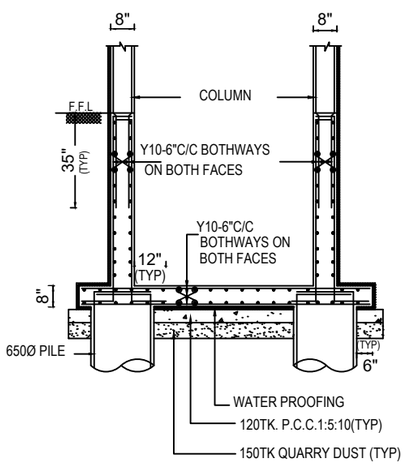
C.S. OF GB1 C.S. OF GB3



L.S OF GB2

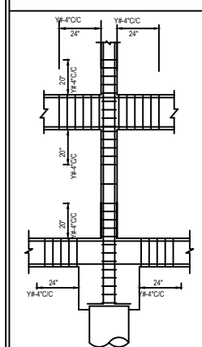


C.S. OF GB2 C.S. OF GB2 C.S. OF GB2

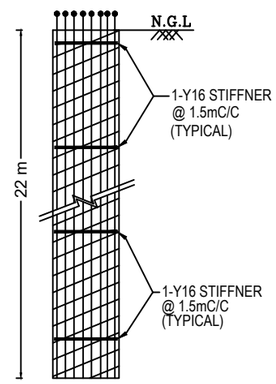


LIFT WELL SECTION

 # DENOTES
8 or 10 or 12mm
WHICH EVER MAXIMUM DIA
OF THE STIRRUPS
BAR USED IN BEAM or COLUMN



TYPICAL SECTION FOR STIRRUPS DETAILS



TYPICAL SECTION OF PILE
(BORED CAST-IN-SITU PILE)

Dr. ALEX JACOB
B.E., M.Tech (Str), Ph.D(Hon),
M.I.E. (Aust), M.I.E. (Ind)
STRUCTURAL ENGINEER,
41/A, BEACH ROAD, KALAKSHETRA COLONY,
CHENNAI - 600 090.
REG No. SE/GR-I/19/02/001
REG No. RSE100392019

G+5

NOTES

REFER ARCH. DWG. FOR CENTRE LINE DIMENSIONS.

- **CONCRETE MIX SHALL BE M30 FOR COLUMN & M25 FOR ALL OTHER R.C.C WORKS**
- **ALL REINFORCEMENTS ARE OF Fe500 GRADE.**
- **CLEAR COVER TO MAIN REINFORCEMENT SHALL BE**

(i) PILE	50mm
(ii) PILE CAP	50mm
(iii) COLUMN	40mm
(iv) TIE BEAM	30mm
(v) R.C.C WALL	25mm

- LAP LENGTH SHALL BE 50 x DIA OF THE BAR

R.NO	DATE	DESCRIPTION OF REVISION	REVISED BY
R.1	09.12.23	CLOUDED AREA REVISED	NIBIN

STRUCTURAL CONSULTANT

Dr.ALEX JACOB
CIVIL & STRUCTURAL CONSULTING ENGINEERS.
41/A, BEACH ROAD,
KALAKSHETRA COLONY,
BESANT NAGAR, CHENNAI 600 090
P.H. NO: 044-24910945,24464478
email: alexjacobuc@gmail.com

ARCHITECTS

CLIENTS

M/s. SKYLINE CONSTRUCTION

PROJECT

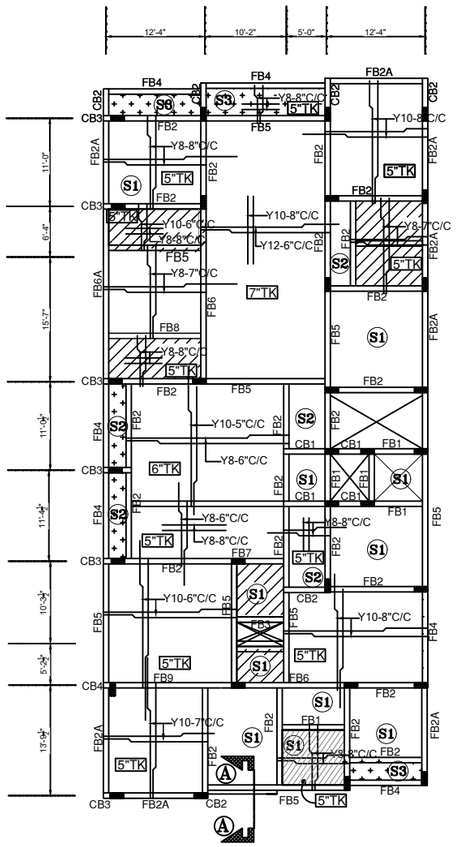
PROPOSED RESIDENTIAL BUILDING
T.NAGAR

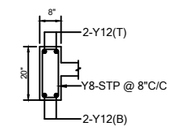
TITLE

PILE FOUNDATION DETAIL

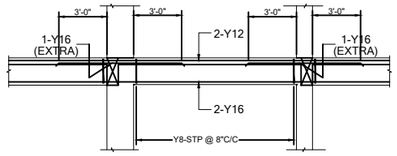
PROJECT NO:
AJ - 3547 - SKYLINE CONTRUCTION-T.NAGAR

DSND	Dr.Alex Jacob
DRN	NIBIN
DATE	14-10-2023
SCALE	1 : 100
FILE NAME	E:\NIBIN\AJ-3388- SKYLINE CONTRUCTION - PILE FOUNDATION DETAIL

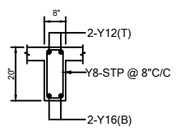




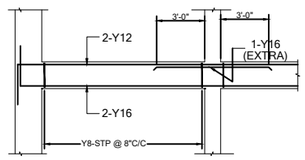
C.S OF FB1



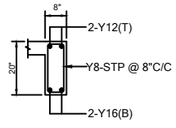
L.S OF FB2



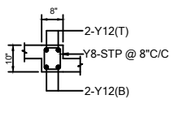
C.S OF FB2



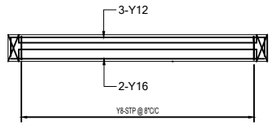
L.S OF FB2A



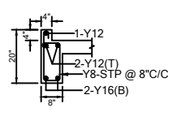
C.S OF FB2A



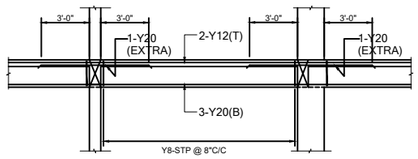
C.S OF FB3



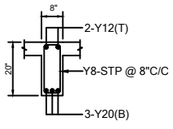
L.S OF FB4



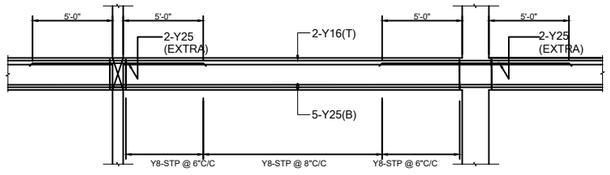
C.S OF FB4



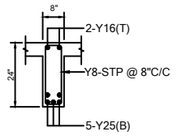
L.S OF FB5



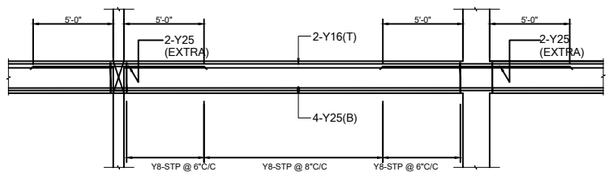
C.S OF FB5



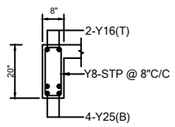
L.S OF FB6



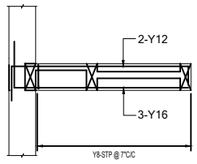
C.S OF FB6



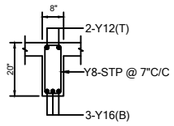
L.S OF FB6A



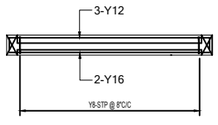
C.S OF FB6A



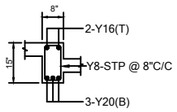
L.S OF FB7



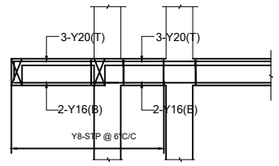
C.S OF FB7



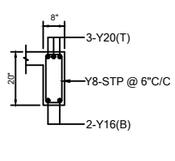
L.S OF FB8



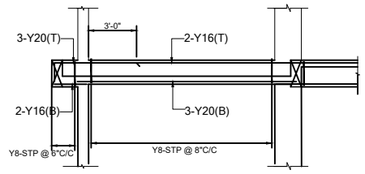
C.S OF FB8



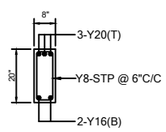
L.S OF CB1 L.S OF CB1



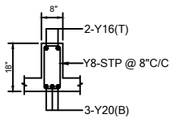
C.S OF CB1



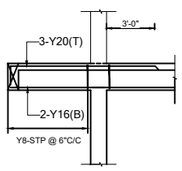
C.S OF CB4 C.S OF FB9



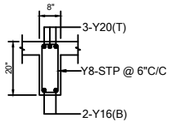
C.S OF CB4



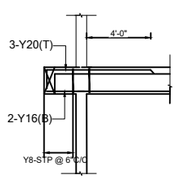
C.S OF FB9



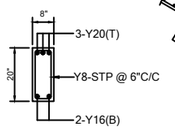
L.S OF CB2



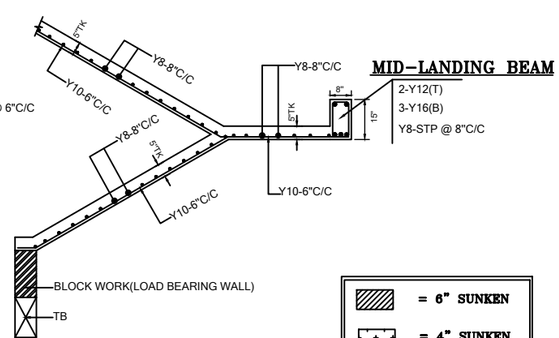
C.S OF CB2



L.S OF CB3

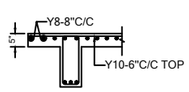


C.S OF CB3



MID-LANDING BEAM

STAIRCASE



SECTION A A

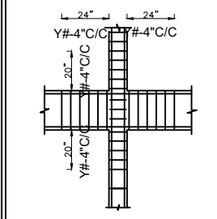
Dr. ALEX JACOB
B.E., M.Tech (Str), Ph.D(Hon),
M.I.E. (Aust), M.I.E. (Ind)
STRUCTURAL ENGINEER,
41/A, BEACH ROAD, KALAKSHETRA COLONY,
CHENNAI - 600 090.
REG No. SE/GR-I/19/02/001
REG No. RSE100392019

= 6" SUNKEN

= 4" SUNKEN

 # DENOTES

8, or 10, or 12mm
WHICH EVER MAX DIA
OF THE STIRUPPS
BAR USED IN BEAMorCOLUMN



TYPICAL SECTION FOR STIRRUPS DETAILS

G+5

NOTES

- CONCRETE MIX SHALL BE M30 FOR COLUMN & M25 FOR ALL OTHER R.C.C WORKS
- ALL REINFORCEMENTS ARE OF Fe500 GRADE.
- CLEAR COVER TO MAIN REINFORCEMENT SHALL BE
  - (i) COLUMN 20mm
  - (ii) ROOF BEAM 40mm
  - (iii) SLAB 30mm
  - (iv) R.C.C.WALL 25mm
- LAP LENGTH SHALL BE 50 x DIA OF THE BAR

R.NO	DATE	DESCRIPTION OF REVISION	REVISED BY

STRUCTURAL CONSULTANT

Dr.ALEX JACOB
CIVIL & STRUCTURAL CONSULTING ENGINEERS.
41/A, BEACH ROAD,
KALAKSHETRA COLONY,
BESANT NAGAR, CHENNAI 600 090
P.H. NO: 044-24910945,24464478
email: alexjacobuc@gmail.com

ARCHITECTS

CLIENTS

M/s. SKYLINE CONSTRUCTION

PROJECT

PROPOSED RESIDENTIAL BUILDING
T.NAGAR

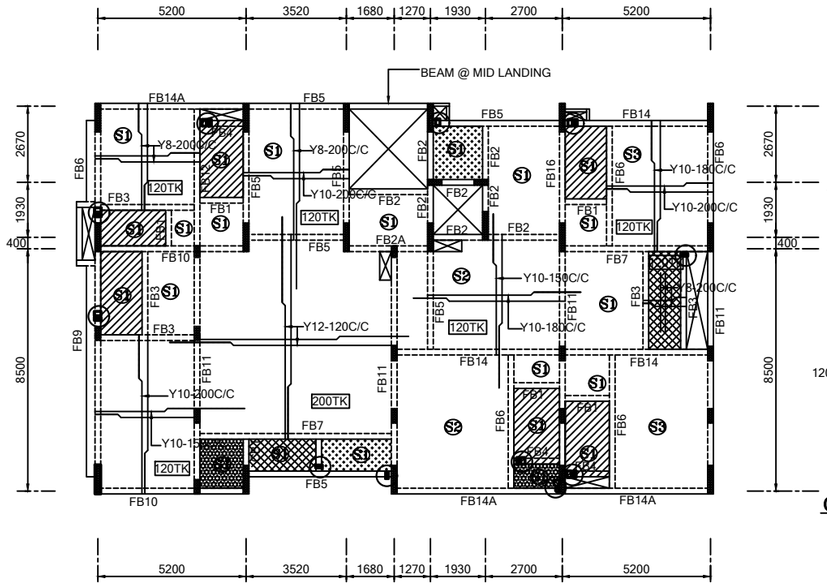
TITLE

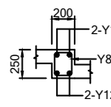
FOURTH FLOOR ROOF DETAIL

PROJECT NO:
AJ - 3547 - SKYLINE CONTRUCTION-T.NAGAR

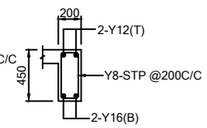
DSND	Dr.Alex Jacob
DRN	KEERTHANA
DATE	09-08-2024
SCALE	1 : 100

FILE NAME E:\KEERTHANA\AJ-3388- SKYLINE CONTRUCTION - FOURTH FLOOR ROOF DETAIL

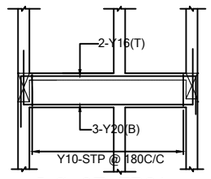




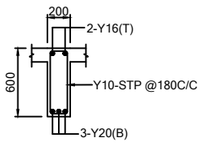
C.S OF FB1



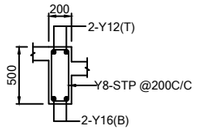
C.S OF FB2



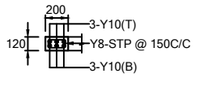
L.S OF FB2A



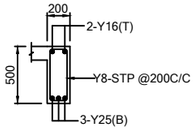
C.S OF FB2A



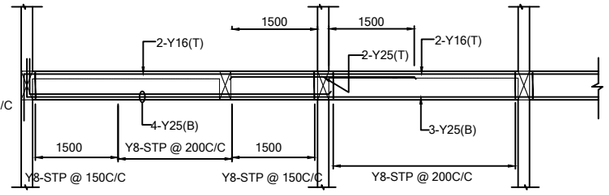
C.S OF FB3



C.S OF FB4

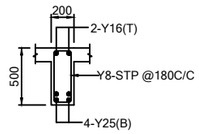


C.S OF FB5

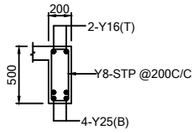


L.S OF FB14A

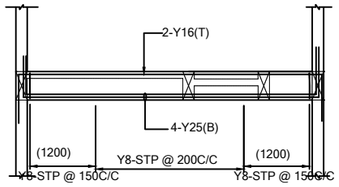
L.S OF FB5



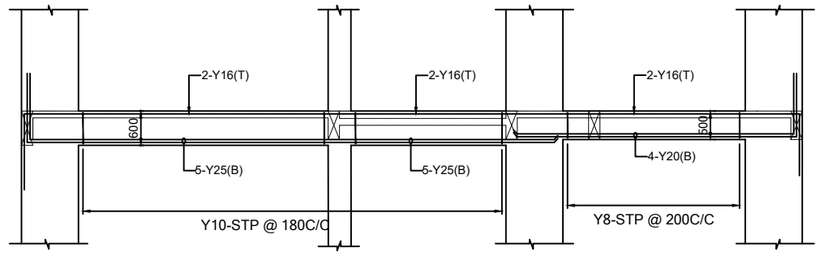
C.S OF FB14A



C.S OF FB7

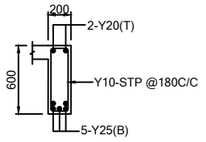


L.S OF FB7

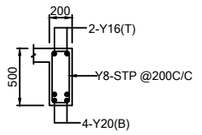


L.S OF FB9

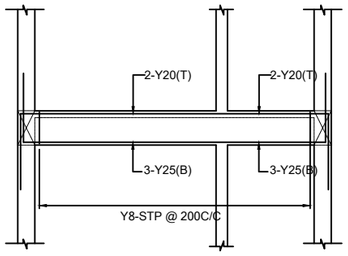
L.S OF FB6



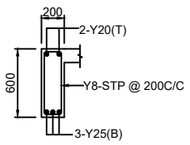
C.S OF FB9



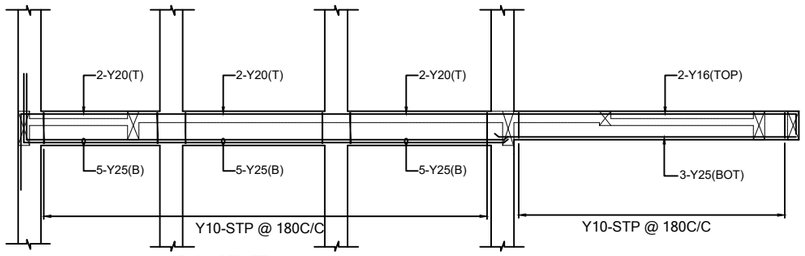
C.S OF FB6



L.S OF FB10

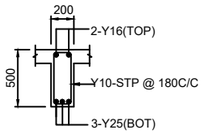


C.S OF FB10

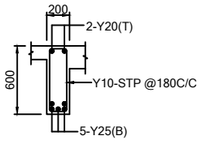


L.S OF FB11

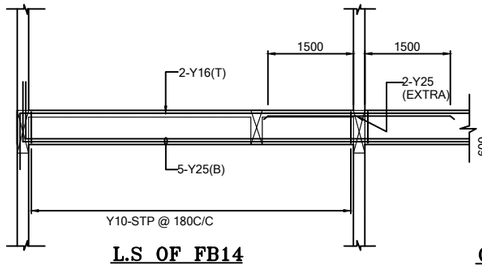
L.S OF FB12



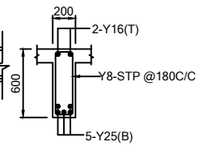
C.S OF FB12



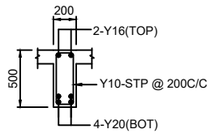
C.S OF FB11



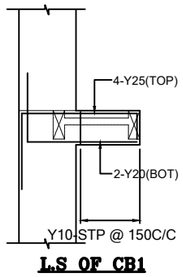
L.S OF FB14



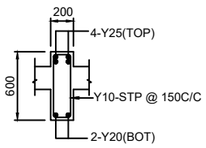
C.S OF FB14



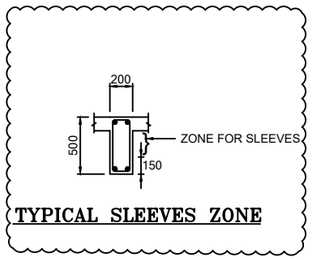
C.S OF FB16



L.S OF CB1



C.S OF CB1



TYPICAL SLEEVES ZONE

Dr. ALEX JACOB
B.E., M.Tech (Str), Ph.D(Hon),
M.I.E. (Aust), M.I.E. (Ind)
STRUCTURAL ENGINEER,
41/A, BEACH ROAD, KALAKSHETRA COLONY,
CHENNAI - 600 090.
REG No. SE/GR-I/19/02/001
REG No. RSE100392019

SCHEDULE OF STRUCTURAL DETAILS:

NOTES G+5

- ALL DIMENSION ARE IN MILLIMETER
- REFER ARCH. DWG. FOR CENTRE LINE DIMENSIONS.
- CONCRETE MIX SHALL BE M35 FOR COLUMN & M25 FOR ALL OTHER R.C.C WORKS,
- ALL REINFORCEMENTS ARE OF Fe500 GRADE.
- CLEAR COVER TO MAIN REINFORCEMENT SHALL BE

(i) SLAB	20mm
(ii) COLUMN	40mm
(iii) BEAM	30mm
(iv) R.C.C WALL	25mm

- LAP LENGTH SHALL BE 50 x DIA OF THE BAR

R.No	Description of Revision	Date	Revised By
R.1	ADDED SEEEVE DETAIL	29.10.24	KEERTHANA

STRUCTURAL CONSULTANT
UNITED CONSULTANTS
Dr. ALEX JACOB
CIVIL & STRUCTURAL CONSULTING ENGINEERS
41/A, BEACH ROAD,
KALAKSHETRA COLONY
BESANT NAGAR, CHENNAI - 600 090.
PH. NO. 044- 2491 09 45
email : alexjacobuc@gmail.com
web site: www.unitedconsultants.in

ARCHITECTS

CLIENT
M/s. SKYLINE

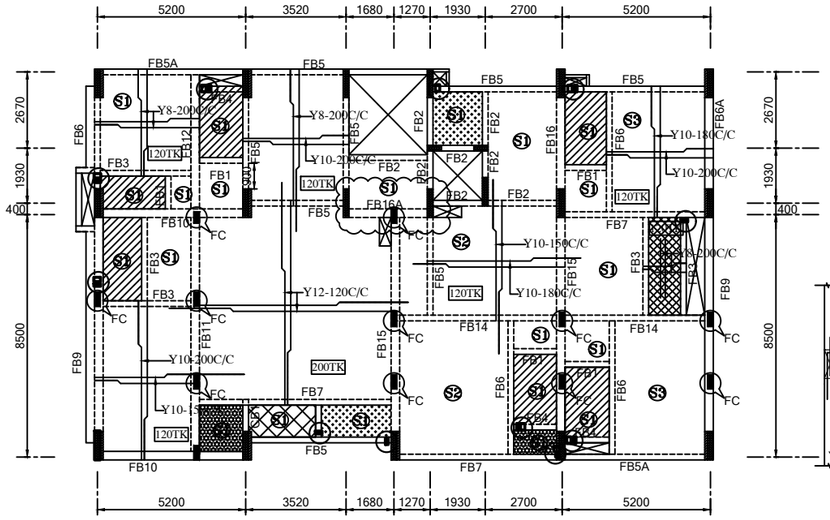
PROJECT TITLE
PROPOSED RESIDENTIAL BUILDING AT GOPALAPURAM, CHENNAI.

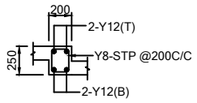
DRAWING TITLE
FIRST & SECOND FLOOR ROOF DETAIL

PROJECT NO
AJ/ 3583 - SKYLINE - GOPALAPURAM

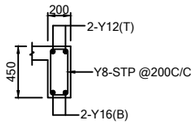
DSND	Dr.ALEX JACOB
DRN	KEERTHANA
DATE	29-07-2024
SCALE	1 : 100

FILE NAME E:\KEERTHANA\3583 - SKYLINE - GOPALAPURAM - TYPICAL FLOOR ROOF DETAIL

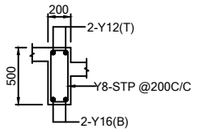




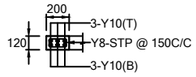
C.S OF FB1



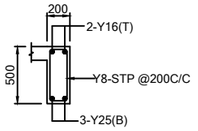
C.S OF FB2



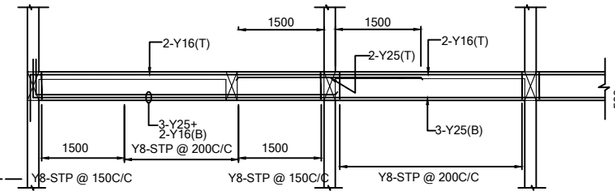
C.S OF FB3



C.S OF FB4

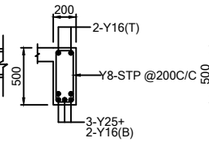


C.S OF FB5

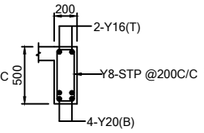


L.S OF FB5A

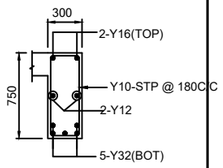
L.S OF FB5



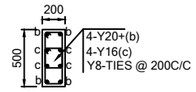
C.S OF FB5A



C.S OF FB6

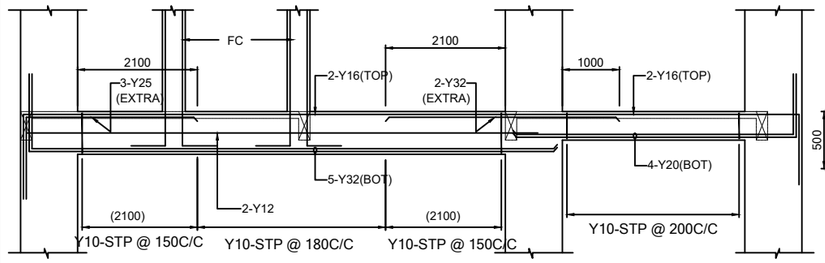


C.S OF FB9



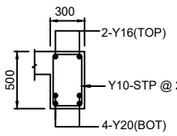
TYPICAL SLEEVES ZONE

FC DETAIL

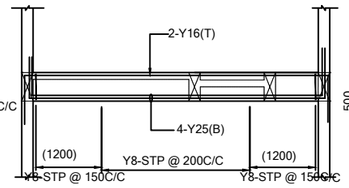


L.S OF FB9

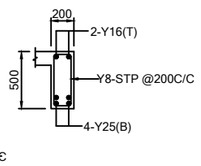
L.S OF FB6A



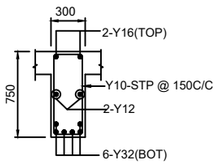
C.S OF FB6A



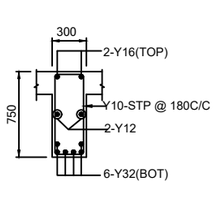
L.S OF FB7



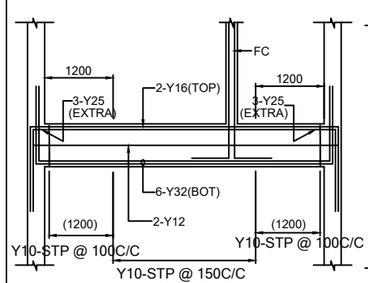
C.S OF FB7



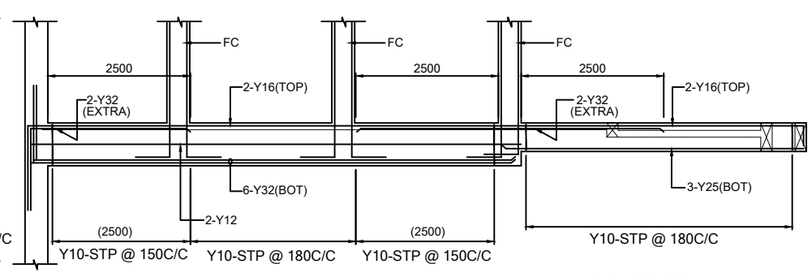
C.S OF FB10



C.S OF FB11

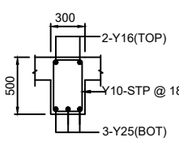


L.S OF FB10

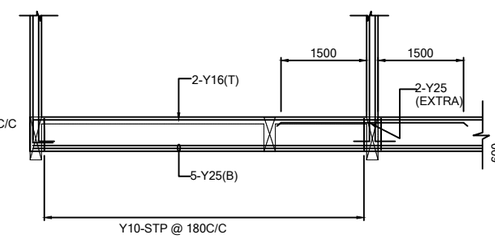


L.S OF FB11

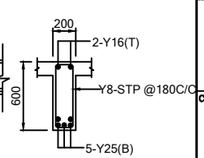
L.S OF FB12



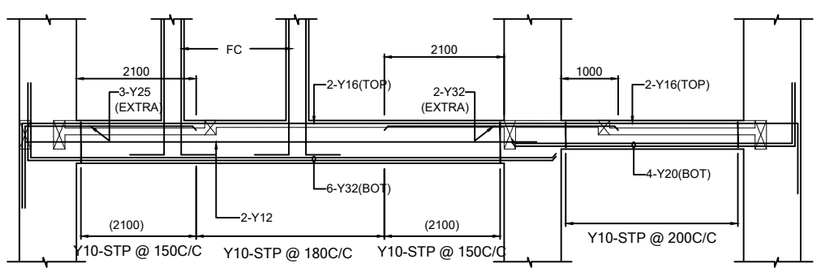
C.S OF FB12



L.S OF FB14

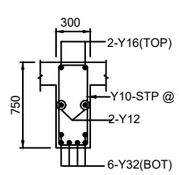


C.S OF FB14

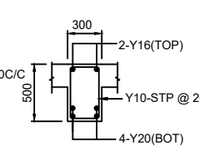


L.S OF FB15

L.S OF FB16A

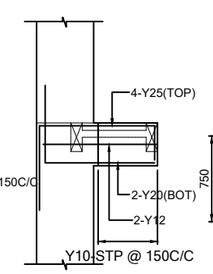


C.S OF FB15

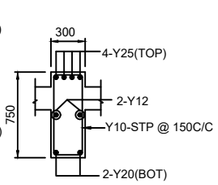


C.S OF FB16

Dr. ALEX JACOB
B.E., M.Tech (Str), Ph.D(Hon),
M.I.E. (Aust), M.I.E. (Ind)
STRUCTURAL ENGINEER,
41/A, BEACH ROAD, KALAKSHETRA COLONY,
CHENNAI - 600 090.
REG No. SE/GR-I/19/02/001
REG No. RSE100392019



L.S OF CB1



C.S OF CB1

SCHEDULE OF STRUCTURAL DETAILS:

NOTES G+5

- ALL DIMENSION ARE IN MILLIMETER
- REFER ARCH. DWG. FOR CENTRE LINE DIMENSIONS.
- CONCRETE MIX SHALL BE M35 FOR COLUMN & M25 FOR ALL OTHER R.C.C WORKS,
- ALL REINFORCEMENTS ARE OF Fe500 GRADE.
- CLEAR COVER TO MAIN REINFORCEMENT SHALL BE

(i) SLAB	20mm
(ii) COLUMN	40mm
(iii) BEAM	30mm
(iv) R.C.C WALL	25mm

- LAP LENGTH SHALL BE 50 x DIA OF THE BAR

R.2	ADDED FC DETAIL ,SEEEVE DETAIL	29.10.24	KEERTHANA
R.1	REVISED CLOUDIED AREA	22.07.24	KEERTHANA
R.No	Description of Revision	Date	Revised By

STRUCTURAL CONSULTANT

UNITED CONSULTANTS
Dr. ALEX JACOB
CIVIL & STRUCTURAL CONSULTING ENGINEERS
41/A, BEACH ROAD,
KALAKSHETRA COLONY
BESANT NAGAR, CHENNAI - 600 090.
PH. NO. 044- 2491 09 45
email : alexjacobuc@gmail.com
web site: www.unitedconsultants.in

ARCHITECTS

CLIENT

M/s. SKYLINE

PROJECT TITLE

PROPOSED RESIDENTIAL BUILDING AT GOPALAPURAM, CHENNAI.

DRAWING TITLE

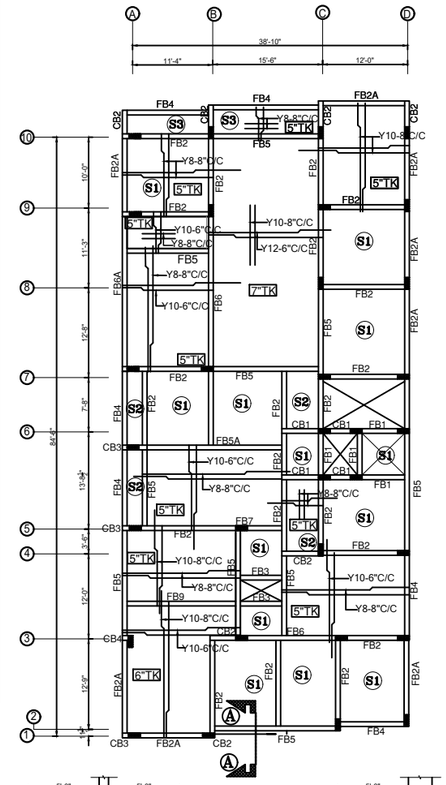
GROUND FLOOR ROOF DETAIL

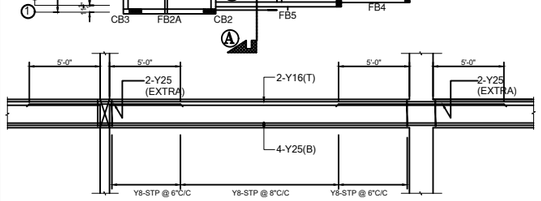
PROJECT NO

AJ/ 3583 - SKYLINE - GOPALAPURAM

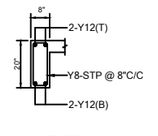
DSND	Dr.ALEX JACOB
DRN	LAVANYA
DATE	24-06-2024
SCALE	1 : 100

FILE NAME E:\PUNITHA\3583 - SKYLINE - GOPALAPURAM - TYPICAL FLOOR ROOF DETAIL

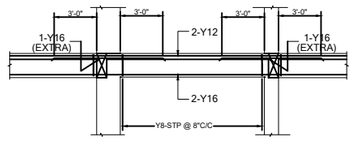




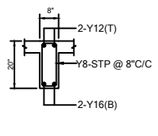
L.S OF FB6A



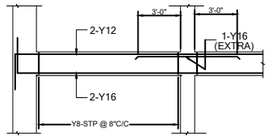
C.S OF FB1



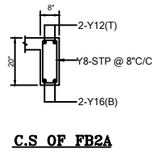
L.S OF FB2



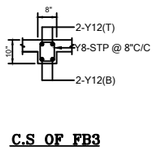
C.S OF FB2



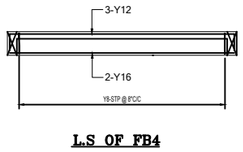
L.S OF FB2A



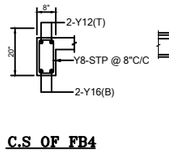
C.S OF FB2A



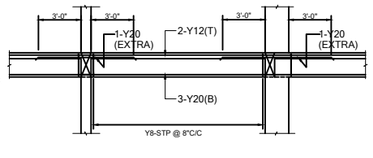
C.S OF FB3



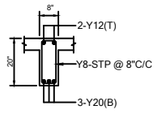
L.S OF FB4



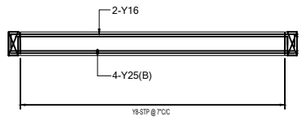
C.S OF FB4



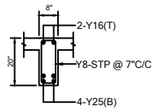
L.S OF FB5



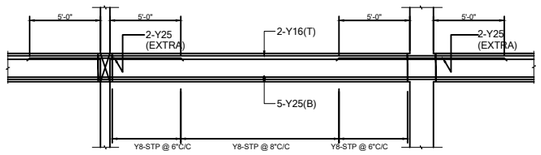
C.S OF FB5



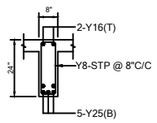
L.S OF FB5A



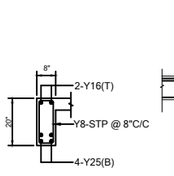
C.S OF FB5A



L.S OF FB6

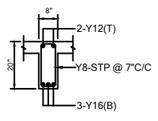


C.S OF FB6

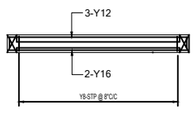


L.S OF FB7

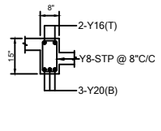
C.S OF FB6A



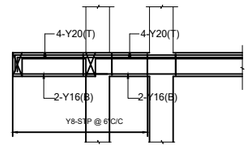
C.S OF FB7



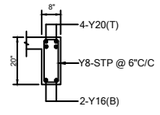
L.S OF FB8



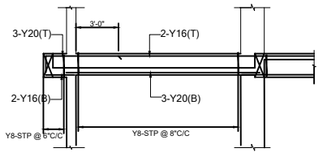
C.S OF FB8



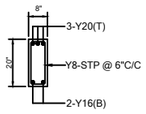
L.S OF CB1 L.S OF CB1



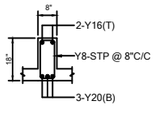
C.S OF CB1



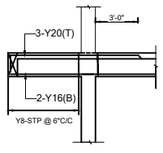
C.S OF CB4 C.S OF FB9



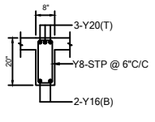
C.S OF CB4



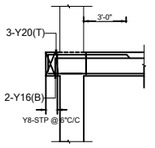
C.S OF FB9



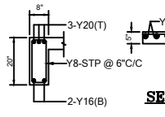
L.S OF CB2



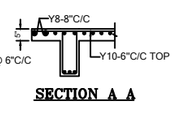
C.S OF CB2



L.S OF CB3



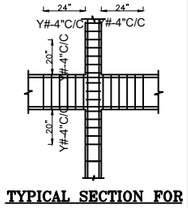
C.S OF CB3



SECTION A A

 # DENOTES

8, or 10, or 12mm
WHICH EVER MAX DIA
OF THE STIRUPPS
BAR USED IN BEAMorCOLUMN



TYPICAL SECTION FOR
STIRRUPS DETAILS

Dr. ALEX JACOB
B.E., M.Tech (Str), Ph.D(Hon),
M.I.E. (Aust), M.I.E. (Ind)
STRUCTURAL ENGINEER,
41/A, BEACH ROAD, KALAKSHETRA COLONY,
CHENNAI - 600 090.
REG No. SE/GR-I/19/02/001
REG No. RSE100392019

TERRACE FLOOR DETAIL

NOTES

G+5

- CONCRETE MIX SHALL BE M30 FOR COLUMN & M25 FOR ALL OTHER R.C.C WORKS
- ALL REINFORCEMENTS ARE OF Fe500 GRADE.
- CLEAR COVER TO MAIN REINFORCEMENT SHALL BE

(i) COLUMN	20mm
(ii) ROOF BEAM	40mm
(iii) SLAB	30mm
(iv) R.C.C.WALL	25mm

- LAP LENGTH SHALL BE 50 x DIA OF THE BAR

R.NO	DATE	DESCRIPTION OF REVISION	REVISED BY

STRUCTURAL CONSULTANT

Dr.ALEX JACOB
CIVIL & STRUCTURAL CONSULTING ENGINEERS.
41/A, BEACH ROAD,
KALAKSHETRA COLONY,
BESANT NAGAR, CHENNAI 600 090
P.H. NO: 044-24910945,24464478
email: alexjacobuc@gmail.com

ARCHITECTS

CLIENTS

M/s. SKYLINE CONSTRUCTION

PROJECT

PROPOSED RESIDENTIAL BUILDING
T.NAGAR

TITLE

TERRACE FLOOR DETAIL

PROJECT NO:
AJ – 3547 – SKYLINE CONTRUCTION–T.NAGAR

DSND	Dr.Alex Jacob
DRN	KEERTHANA
DATE	13-09-2024
SCALE	1 : 100

FILE NAME E:\KEERTHANA\AJ-3388- SKYLINE CONTRUCTION -TERRACE FLOOR ROOF DETAI

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.