

STABILITY CERTIFICATE

26-07-2025

The detailed engineering and structure design of the proposed building comprising of Proposed Construction of Group Development of High Rise Commercial Buildings with 2 Blocks in which Block- A: with Extended Basement Floor (meant for parking) + Ground Floor + 1st Floor to 7th Floor (for retail shop use) + 8th Floor & 9th Floor part are for Office use building, Block - B: Basement floor (Stp, Sump & Pump Room) + Stilt Floor (meant for parking) + 1st Floor (Dining Hall) + 2nd Floor to 8th Floor for Dormitory use and Mlcp (9 Level with Car Parking 192 Nos) Abutting C.T.H.Road (Formerly M.T.H. Road) Padi, Chennai - 600 050, Comprised in old S.No:3/1,4/1&2 of Kakapallam Village, T.S.Nos:44/2, 44/3,45/1 & 46/2, Block No:81, Ward - E of Ambattur Town, Ambattur Taluk, Thiruvallur District, within the limits of Greater Chennai Corporation, Zone - Vii, Division – 84 has been done by me/us based on the report of geotechnical investigation (soil test) done by Dr. Ram Prasad Report No 428/GI/19-20 Dated 21/05/20 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 and sound.

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 IS-875 and design of earthquake resistant structure as per IS Code No IS-1893 & IS-13920.

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



Stamp and Signature

Dr. J. SURESH, M.E., MIE., Ph.D.

Structural Engineer

Plot No. 555, VGP Layout, Mullai Street,

Uthandi, Chennai - 600 119.

Reg. No. SE/I/2024/2/0014

Reg. No. RSE100382019

Reg. No. CGI DIST/SE/1/2024/07/005

Encl.: Structural Design Calculation

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*      STAAD.Pro CONNECT Edition
*      Version 22.00.00.15
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*      Date= JUL 24, 2025
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1. STAAD SPACE

INPUT FILE: I:\1.MISCELLANEOUS\STABILITY CERTIFICATE\UC-POTHYS PADI\POTHYS PADI.STD

2. START JOB INFORMATION

3. JOB NAME THE PROPOSED CONSTRUCTION OF GROUP DEVELOPMENT OF HIGH RISE COMMERCIAL
4. *BUILDINGS WITH 2 BLOCKS IN WHICH BLOCK- A: WITH EXTENDED BASEMENT FLOOR (MEANT
5. *FOR PARKING) + GROUND FLOOR + 1ST FLOOR TO 7TH FLOOR (FOR RETAIL SHOP USE) +
6. *8TH FLOOR & 9TH FLOOR PART ARE FOR OFFICE SUE BUILDING, BLOCK - B: BASEMENT
7. *FLOOR (STP, SUMP & PUMP ROOM) + STILT FLOOR (MEANT FOR PARKING) + 1ST FLOOR
8. *(DINING HALL) + 2ND FLOOR TO 8TH FLOOR FOR DORMITORY USE AND MLCP (9 LEVEL
9. *WITH CAR PARKING 192 NOS) ABUTTING C.T.H.ROAD (FORMERLY M.T.H. ROAD) PADI,
10. *CHENNAI - 600 050, COMPRISED IN OLD S.NO:3/1,4/1&2 OF KAKAPALLAM VILLAGE,
11. *T.S.NOS:44/2, 44/3,45/1 & 46/2, BLOCK NO:81, WARD - E OF AMBATTUR TOWN,
12. *AMBATTUR TALUK, THIRUVALLUR DISTRICT, WITHIN THE LIMITS OF GREATER
13. *CHENNAI CORPORATION, ZONE - VII, DIVISION - 84.
14. ENGINEER NAME SURESH
15. CHECKER NAME SURESH
16. APPROVED NAME SURESH
17. ENGINEER DATE 7/24/2025
18. CHECKER DATE 7/24/2025
19. APPROVED DATE 7/24/2025
20. END JOB INFORMATION
21. INPUT WIDTH 79
22. UNIT METER KN
23. JOINT COORDINATES
24. 1 -10.26 -1.45 0; 25 -10.26 -4.45 0; 26 -5.46 -1.45 0; 27 -5.46 -4.45 0
25. 36 -10.26 1.55 0; 37 -5.46 1.55 0; 66 -14.44 -1.45 0; 67 -14.44 -4.45 0
26. 68 -14.44 1.55 0; 69 -19.54 -1.45 0; 70 -19.54 -4.45 0; 71 -19.54 1.55 0
27. 72 -10.26 4.55 0; 73 -5.46 4.55 0; 74 -14.44 4.55 0; 75 -19.54 4.55 0
28. 76 -10.26 7.55 0; 77 -5.46 7.55 0; 78 -14.44 7.55 0; 79 -19.54 7.55 0
29. 80 -10.26 10.55 0; 81 -5.46 10.55 0; 82 -14.44 10.55 0; 83 -19.54 10.55 0
30. 84 -10.26 13.55 0; 85 -5.46 13.55 0; 86 -14.44 13.55 0; 87 -19.54 13.55 0
31. 88 -10.26 16.55 0; 89 -5.46 16.55 0; 90 -14.44 16.55 0; 91 -19.54 16.55 0
32. 92 -10.26 19.55 0; 93 -5.46 19.55 0; 94 -14.44 19.55 0; 95 -19.54 19.55 0
33. 96 -10.26 22.55 0; 97 -5.46 22.55 0; 98 -14.44 22.55 0; 99 -19.54 22.55 0
34. 100 -10.26 25.55 0; 101 -5.46 25.55 0; 102 -14.44 25.55 0; 103 -19.54 25.55 0
35. 104 -10.26 28.55 0; 105 -5.46 28.55 0; 106 -14.44 28.55 0; 107 -19.54 28.55 0
36. MEMBER INCIDENCES
37. 39 1 25; 40 1 26; 41 25 27; 42 26 27; 55 1 36; 56 26 37; 61 36 37; 111 66 67
38. 112 66 1; 113 67 25; 114 66 68; 115 68 36; 116 69 70; 117 69 66; 118 70 67



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39. 119 69 71; 120 71 68; 121 36 72; 122 37 73; 123 72 73; 124 68 74; 125 74 72
40. 126 71 75; 127 75 74; 128 72 76; 129 73 77; 130 76 77; 131 74 78; 132 78 76
41. 133 75 79; 134 79 78; 135 76 80; 136 77 81; 137 80 81; 138 78 82; 139 82 80
42. 140 79 83; 141 83 82; 142 80 84; 143 81 85; 144 84 85; 145 82 86; 146 86 84
43. 147 83 87; 148 87 86; 149 84 88; 150 85 89; 151 88 89; 152 86 90; 153 90 88
44. 154 87 91; 155 91 90; 156 88 92; 157 89 93; 158 92 93; 159 90 94; 160 94 92
45. 161 91 95; 162 95 94; 163 92 96; 164 93 97; 165 96 97; 166 94 98; 167 98 96
46. 168 95 99; 169 99 98; 170 96 100; 171 97 101; 172 100 101; 173 98 102
47. 174 102 100; 175 99 103; 176 103 102; 177 100 104; 178 101 105; 179 104 105
48. 180 102 106; 181 106 104; 182 103 107; 183 107 106
49. DEFINE MATERIAL START
50. ISOTROPIC CONCRETE
51. E 2.17185E+07
52. POISSON 0.17
53. DENSITY 23.5616
54. ALPHA 1E-05
55. DAMP 0.05
56. END DEFINE MATERIAL
57. MEMBER PROPERTY INDIAN
58. 40 41 61 112 113 115 117 118 120 123 125 127 130 132 134 137 139 141 144 146 -
59. 148 151 153 155 158 160 162 165 167 169 172 174 176 179 181 -
60. 183 PRIS YD 0.6 ZD 0.2
61. MEMBER PROPERTY INDIAN
62. 39 42 55 56 111 114 116 119 121 122 124 126 128 129 131 133 135 136 138 140 -
63. 142 143 145 147 149 150 152 154 156 157 159 161 163 164 166 168 170 171 173 -
64. 175 177 178 180 182 PRIS YD 0.6 ZD 0.2
65. CONSTANTS
66. MATERIAL CONCRETE ALL
67. SUPPORTS
68. 25 27 67 70 FIXED
69. DEFINE 1893 LOAD
70. ZONE 0.16 RF 3 I 1 SS 2 ST 1 DM 0.5
71. MEMBER WEIGHT
72. 39 TO 42 55 56 61 111 TO 183 UNI -14.5
73. DEFINE WIND LOAD

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*** 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.

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74. TYPE 1
75. INT 0.673 1.03335 1.3537 1.65375 HEIG 10 30 50 100
76. EXP 1 JOINT 1 25 TO 27 36 37 66 TO 83
77. LOAD 1 LOADTYPE NONE TITLE SLX1
78. 1893 LOAD X 1
79. LOAD 2 LOADTYPE NONE TITLE SLZ1
80. 1893 LOAD Z 1
81. LOAD 3 LOADTYPE DEAD TITLE DL
82. SELFWEIGHT Y -1
83. MEMBER LOAD

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84. 40 61 112 115 117 120 123 125 127 130 132 134 137 139 141 144 146 148 151 -
 85. 153 155 158 160 162 165 167 169 172 174 176 179 181 183 UNI GY -25
 86. LOAD 4 LOADTYPE LIVE TITLE LL
 87. MEMBER LOAD
 88. 40 61 112 115 117 120 123 125 127 130 132 134 137 139 141 144 146 148 151 -
 89. 153 155 158 160 162 165 167 169 172 174 176 179 181 183 UNI GY -15
 90. LOAD 7 LOADTYPE WIND TITLE WLZ1
 91. WIND LOAD Z 1 TYPE 1
 92. LOAD 8 LOADTYPE WIND TITLE WLZ2
 93. WIND LOAD Z -1 TYPE 1
 94. LOAD COMB 9 1.5(DL+LL)
 95. 3 1.5 4 1.5
 96. LOAD COMB 10 1.2(DL+LL+SLX)
 97. 3 1.2 4 1.2 1 1.2
 98. LOAD COMB 11 1.2(DL+LL+SLZ)
 99. 3 1.2 4 1.2 2 1.2
 100. LOAD COMB 14 1.2(DL+LL+WLZ1)
 101. 3 1.2 4 1.2 7 1.2
 102. LOAD COMB 15 1.2(DL+LL+WLZ2)
 103. 3 1.2 4 1.2 8 1.2
 104. LOAD COMB 16 1.5(DL+SLX)
 105. 3 1.5 1 1.5
 106. LOAD COMB 17 1.5(DL+SLZ)
 107. 3 1.5 2 1.5
 108. LOAD COMB 20 1.5(DL+WLZ1)
 109. 3 1.5 7 1.5
 110. LOAD COMB 21 1.5(DL+WLZ2)
 111. 3 1.5 8 1.5
 112. LOAD COMB 22 0.9DL+1.5SLX
 113. 3 0.9 1 1.5
 114. LOAD COMB 23 0.9DL+1.5SLZ
 115. 3 0.9 2 1.5
 116. LOAD COMB 26 0.9DL+1.5WLZ1
 117. 3 0.9 7 1.5
 118. LOAD COMB 27 0.9DL+1.5WLZ2
 119. 3 0.9 8 1.5
 120. PERFORM ANALYSIS

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

NUMBER OF JOINTS	48	NUMBER OF MEMBERS	80
NUMBER OF PLATES	0	NUMBER OF SOLIDS	0
NUMBER OF SURFACES	0	NUMBER OF SUPPORTS	4



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Using 64-bit analysis engine.

SOLVER USED IS THE OUT-OF-CORE BASIC SOLVER

ORIGINAL/FINAL BAND-WIDTH= 8/ 5/ 36 DOF
 TOTAL PRIMARY LOAD CASES = 6, TOTAL DEGREES OF FREEDOM = 264
 TOTAL LOAD COMBINATION CASES = 13 SO FAR.
 SIZE OF STIFFNESS MATRIX = 10 DOUBLE KILO-WORDS
 REQD/AVAIL. DISK SPACE = 12.2/***** MB

**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.

 * UNITS - KN METE *
 * TIME PERIOD FOR X 1893 LOADING = 1.03263 SEC *
 * SA/G PER 1893= 0.659, LOAD FACTOR= 1.000 *
 * VB PER 1893= 0.0176 X 4363.92= 76.63 KN *
 * *****

 * UNITS - KN METE *
 * TIME PERIOD FOR Z 1893 LOADING = 1.03263 SEC *
 * SA/G PER 1893= 0.659, LOAD FACTOR= 1.000 *
 * VB PER 1893= 0.0176 X 4363.92= 76.63 KN *
 * *****

121. FINISH

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

*** DATE= JUL 24,2025 TIME= 16:38:53 ***



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By Suresh

Date 7/26/2025

Chd Suresh

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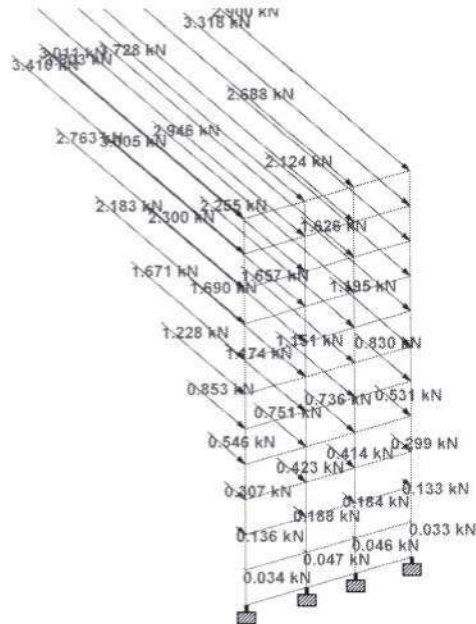
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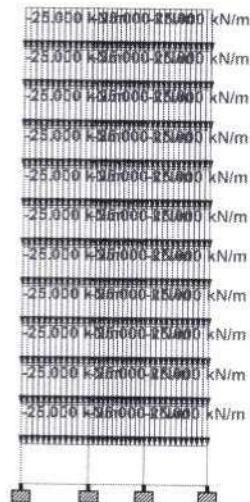
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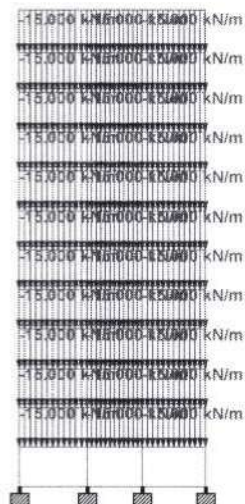
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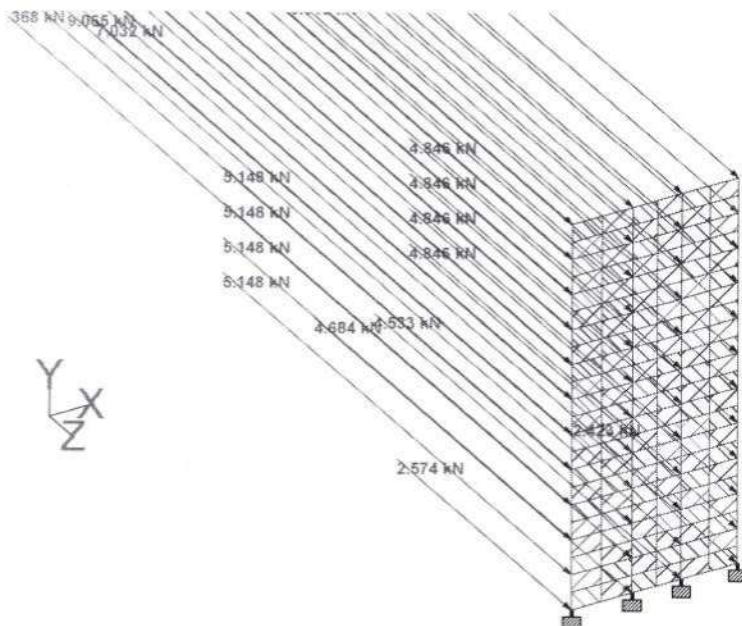
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