

# **Structural Audit of residential Towers (D, E, F, G & H) of Phase-I of Group Housing Project, Chintels Paradiso, Sector-109, Gurugram, Haryana (SSP 922)**

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**Period: February 2023 to July 2025**

## **Abstract**

M/s Chintels India Private Limited, a construction business firm approached CSIR-CBRI, Roorkee, for a structural audit of 9 residential towers within A group housing Society Chintels Paradiso, Sector - 109, Gurugram having a total site area of 12.306 acres. There is a total of 9 towers of which 4 towers are G+17 floors, 1 tower is G+14 floors, 2 towers are G+13 floors and 2 towers are G+12 floors. These towers are built using RCC framed structures including a lift core in all the towers. The total built-up area of all the 9 towers is approx. 84,093 SQM and a common basement area for all the towers is around 26,200 SQM.

M/s Chintels India Pvt Ltd further proposed to carry out the structural audit in two phases i.e. 5 towers in Phase 1 and the remaining 4 towers in Phase 2 in their communication. Further, based on the sources the construction of these towers was started in 2011 in a phased manner, and the early construction of Phase 1 commenced which comprises Tower D, E, F, G, and H followed by Phase II comprised of Tower A, B, C, and J. In this Project a detailed structural assessment of Chintels Paradiso Phase 1 commenced which comprises Tower D, E, F, G, and H were conducted.

## **Objectives**

Following are the main scope of the work for the project.

1. Detailed visual investigation of the site.
2. Review on the design of structural system and structural analysis, design basis report.
3. Review of the geotechnical investigation report, foundation design review, stability check and QA/QC test reports.
4. Non-Destructive Evaluation (UPV, Rebound hammer, GPR)
5. Defect identification and mapping.
6. Chemical analysis of samples collected from the site
7. Assessment of the structural stability of the residential towers based on the above investigation and information including recommendations.
8. Recommendations for strengthening including material specifications, if at all feasible.
9. Report submission. CSIR-CBRI will suggest suitable strengthening measures for structurally inadequate elements if any such situation noticed after analyzing the findings in the Report.