Friday, 13 February 2026

Structural Stability for IT Park_Coimbatore

Sl. No.	Description	Information	Notes
1	Site Address	SF. NO. : 964/2C2, 964/2C3, Kalapatti Village (East), Coimbatore District – 641048.	
2	Name of Owner	**RamC Infra Pvt Ltd.**	
3	Name of Registered Architect	**Atelier Nord**	
4	Name of Registered Structural Consultant	**ARM Structures**	
5	Use of Building	Commercial	
6	Number of Stories above ground level (including stories to be added later, if any)	4	
7	Number of Basement below ground level	3	
8	Type of Structure	Ordinary Moment resisting Frame with shear walls.	
9	Soil data Type of Soil Design safe bearing capacity Water Table	 Soft Disintegrated Rock 41.05 T/sq.m. @ 9m depth Not encountered till 20m	IS: 6403-1981
10	Dead Load Earth Water Masonry Plain Cement Concrete Reinforced Cement Concrete Floor finish	 18 kN/m^3 1 kN/m^3 10 kN/m^3 24 kN/m^3 25 kN/m^3 5 kN/m^3	
11	Imposed Load Floor Load Roof Load Basement	 3.0 kN/m^3 1.5 kN/m^3 2. 5 kN/m^3	IS: 875 Part 2
12	Wind Load Speed	 50m/s	IS: 875 Part 3
13	Seismic Load Zone factor Importance factor Response reduction factor Type of Structure Damping ratio	 0.16 1 3 1 0.05	IS: 1893-2002
14	Horizontal floor system Beams Flat Slab with drop	 Around staircase and services area Typical arrangement for remaining slab area	
15	Foundation Recommended type & depth Provided	 Isolated @ 9m depth Raft @ 9m depth	
16	System of Interconnecting foundation	Continuous raft	
17	Grade of Concrete	M30	
18	Grade of Steel	Fe550	
19	Code used for design and analysis	IS: 456-2000	
20	Torsion Included	Yes	
21	Computer software used For Frame analysis For Beam, Slab and raft design	 STAAD PRO Advanced 2024 -Version 24.00.02.354 SAFE – Version 22.1.0	

Software Analysis -

Frame as modelled in STAAD.

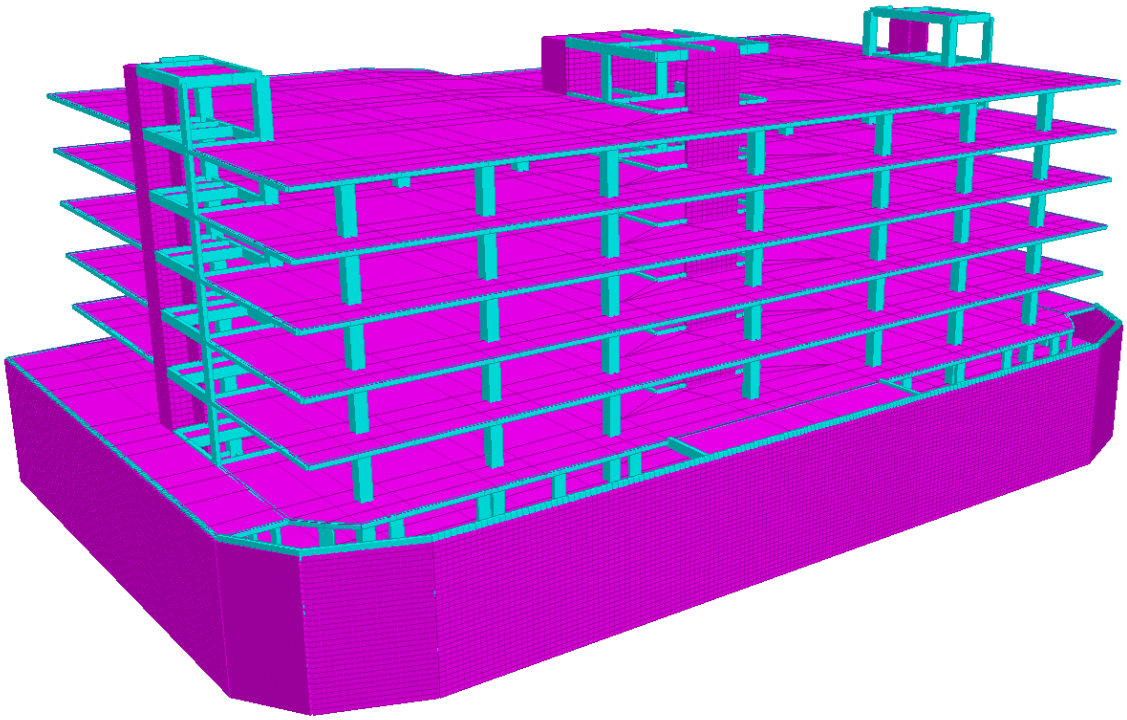


Figure 1 As modelled in Staad

This model in Staad has been used to analyse the frame, determine the adequate column sizes and get reactions for the foundation design.

Upon receiving the results from STAAD adequate SAFE model was developed with loading to design the slab

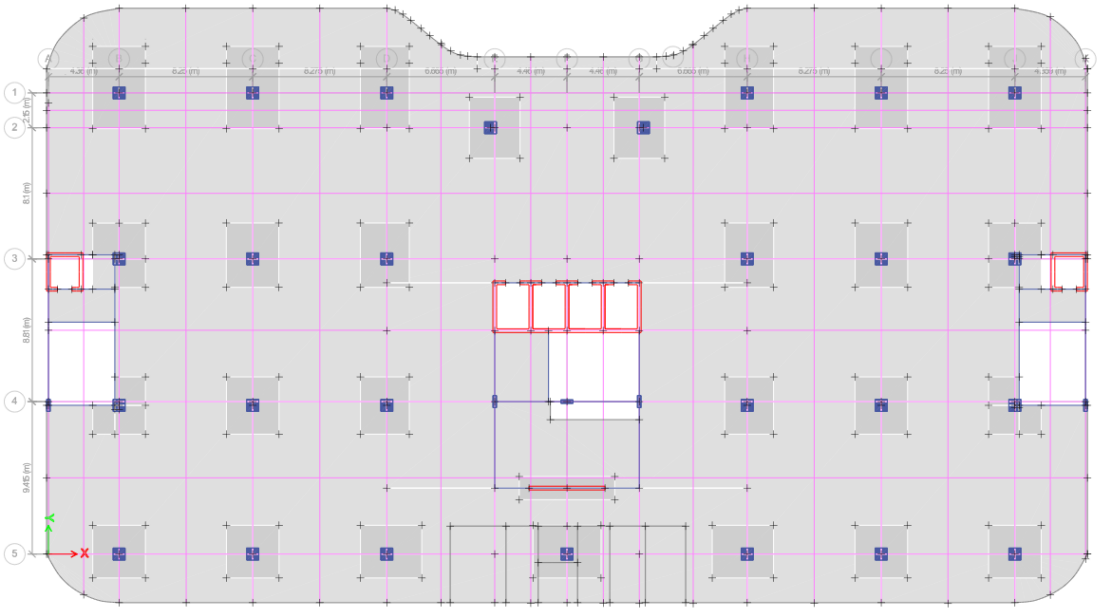


Figure 2 Typical Slab as modelled in SAFE

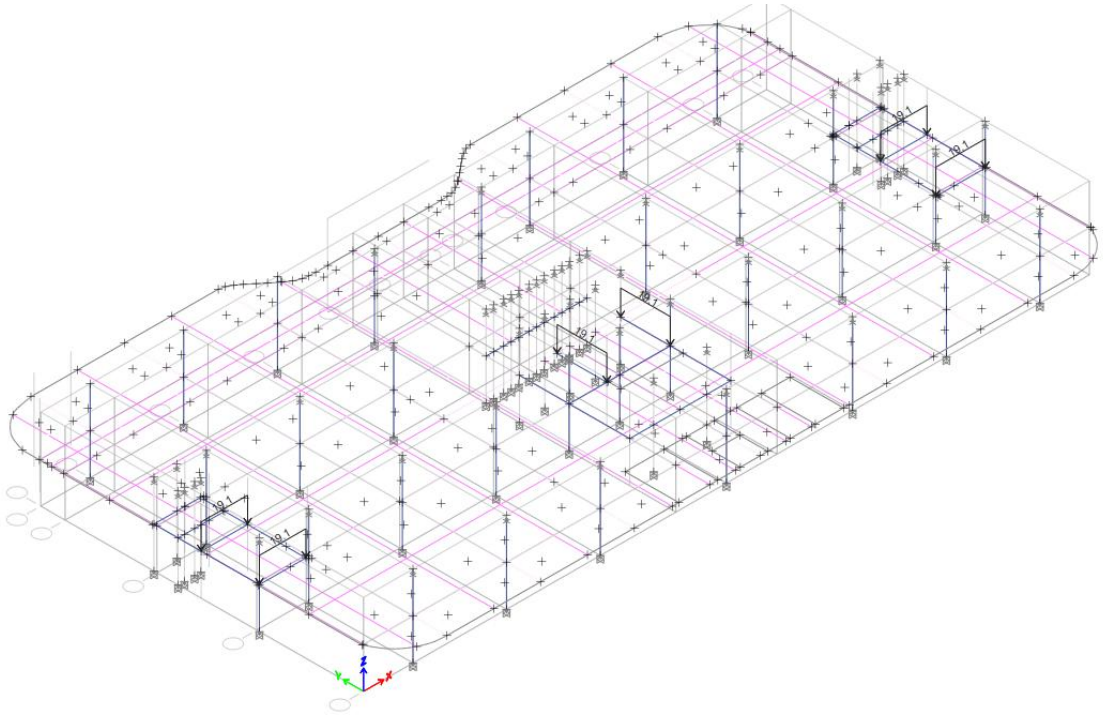


Figure 3 Dead loads as applied in SAFE model

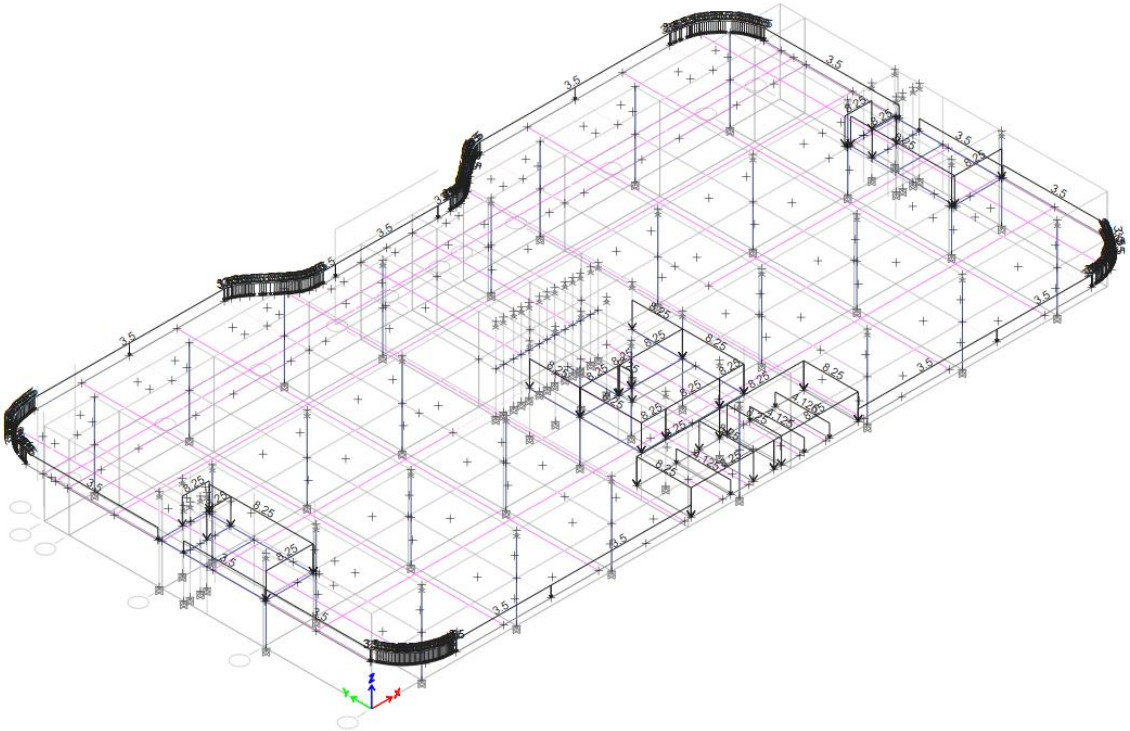


Figure 4 Wall and glazing loads as applied in the SAFE Model 3kn/m

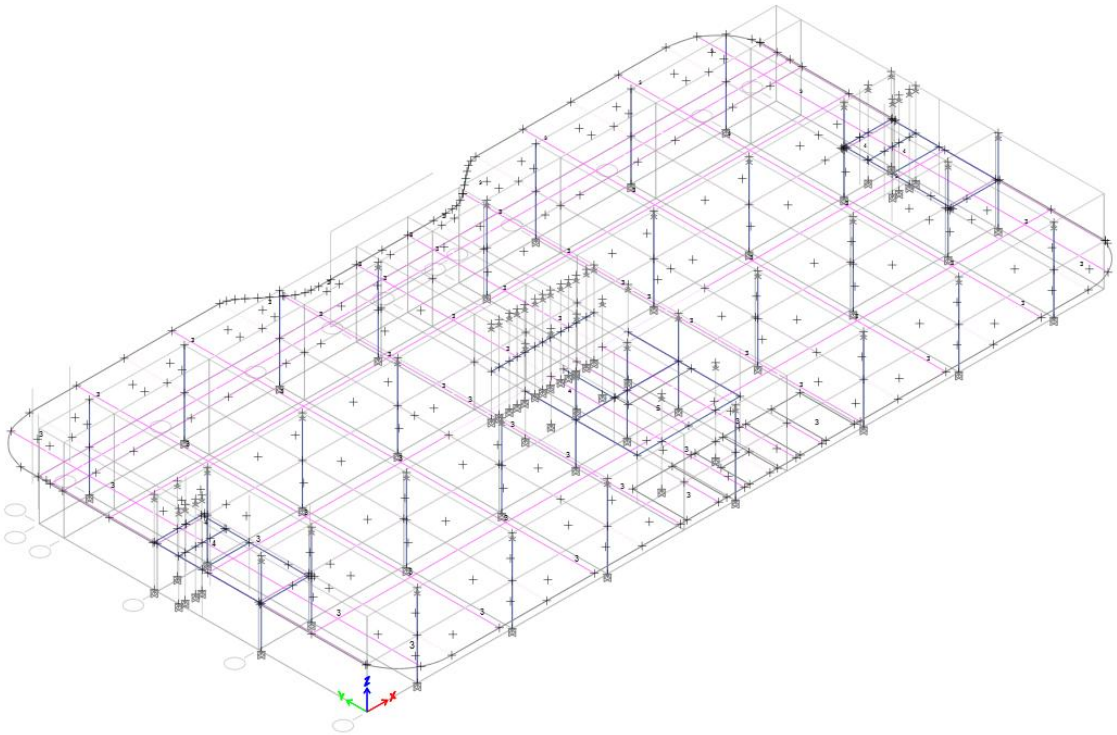


Figure 5 Live Loads as applied in the Safe Model 3kn/sq.m.

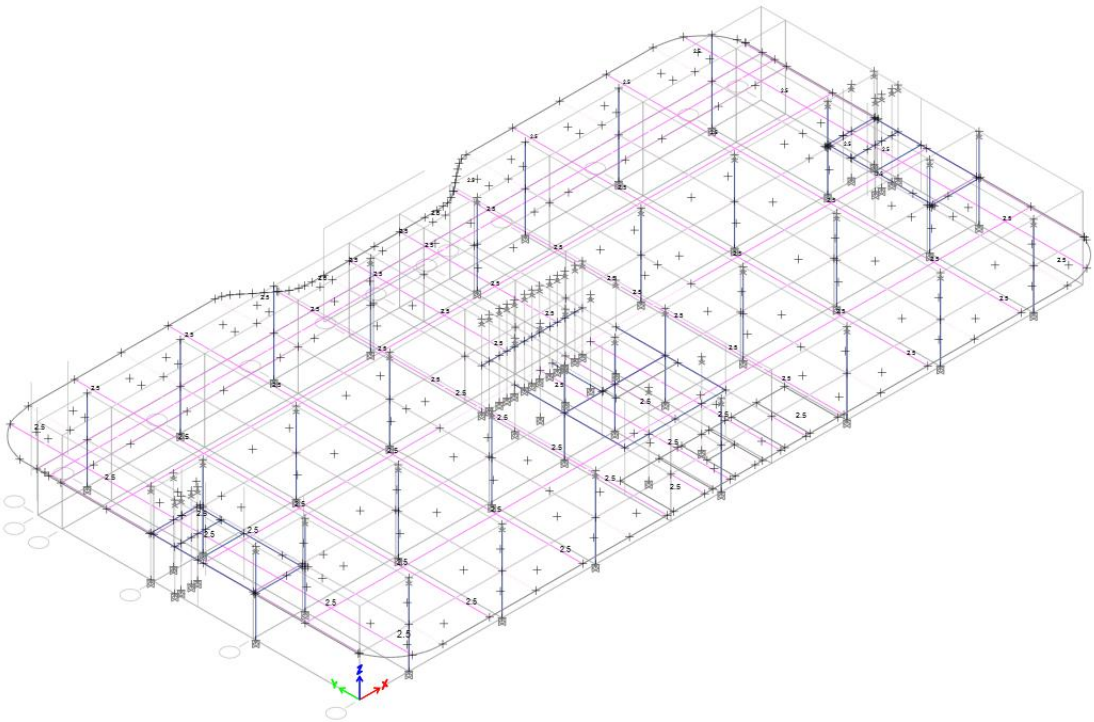


Figure 6 Floor finish and ceiling plaster load as defined in the SAFE model 2.5kn/sq.m.

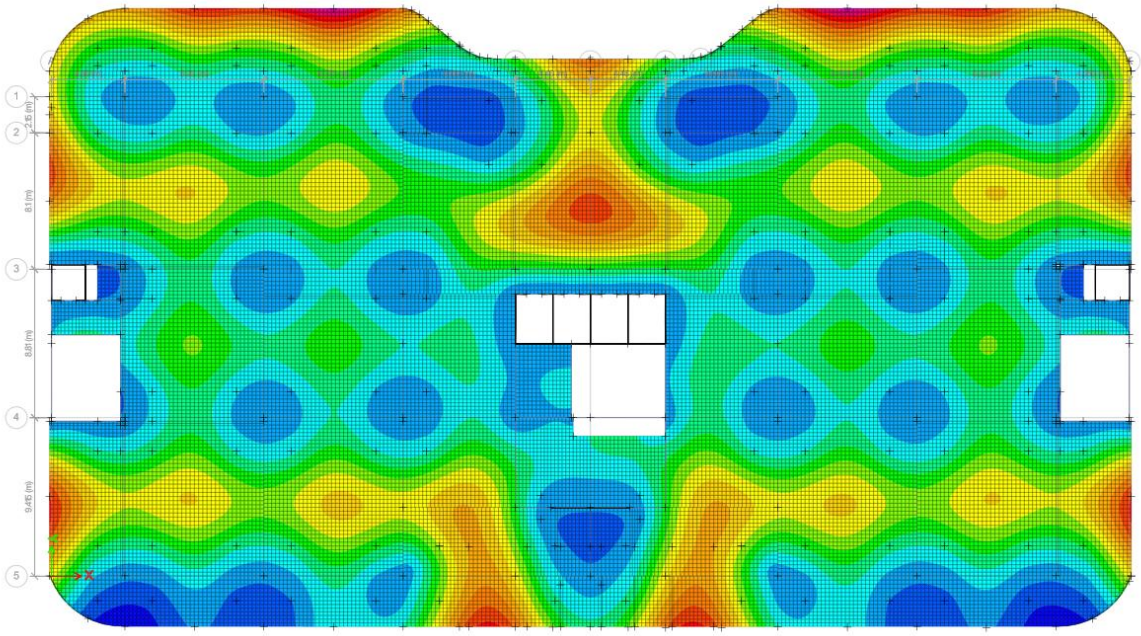


Figure 7 Final deflections observed as in SAFE model is 9.6mm

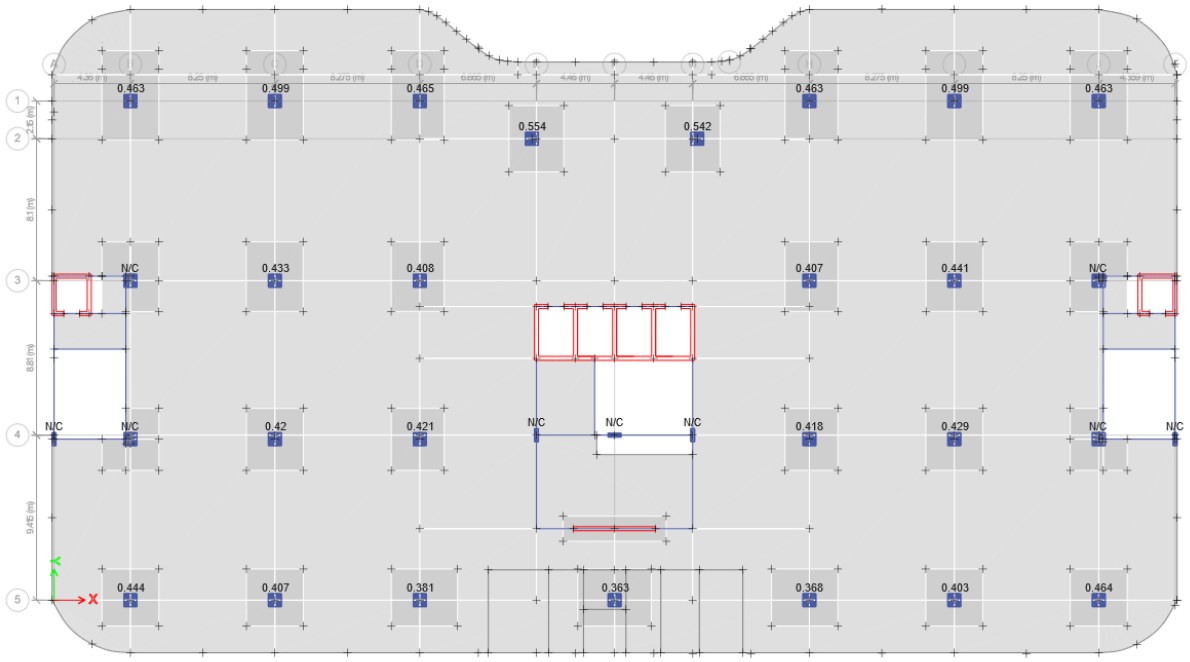


Figure 8 Punching shear values for all column <1

Based on the analysis the final deflections observed is 9.6mm < 20mm, maximum allowable. Similarly the punching shear and shear values are within safe limit, hence the slab design is safe.

Conclusion: After analysis and design, ***the structure is stable and serviceable for the intended use***. Respective detailing has been done based on design and shared along with the Structural Drawings.