



CENTRE FOR RESEARCH & CONSULTANCY

THE NATIONAL INSTITUTE OF ENGINEERING

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CRC No: 20307

Date: 14/01/19

TECHNICAL REPORT

Client: M/s Principal, Amrita Vidyalayam, Mysore.

Client reference: Letter No. 2745 dated 13/11/18.

Report on: Stability of Amrita Vidyalayam School Building, 2nd Stage Bogadi, Mysore.

Dates of Inspection: 5/12/18 and 26/12/18.

Members present during inspection:

1. Sri Chakardhar, Maintenance Manager
2. Sri. Mahesh, Site Engineer
3. Sri. Mallappa,

The investigation team consists of following members:

1. Dr. N. C. Balaji, Assistant Professor.
2. Dr. Darshan C. Shekar, Assistant Professor.
3. Sri. M. S. Guruprasad, Instructor.
4. Sri Vijay Kumar, Sri Shekar Nayak & Sri. John Vincent, Helpers.

Test performed

- Estimate the compressive strength using "SCHMIDT HAMMER". The tests were conducted as per IS 13311 (Part 2) 1992.
- Standard penetration tests were conducted to determine the penetration resistance value (N) as per IS: 2131-1981.

Observations:

1. Year of Construction: 2000
2. Type of Construction/Building: R.C.C. Framed construction with hollow concrete masonry infill.
3. Number of existing floors: G+3

for Amrita Vidyalayam, Mysore

C.R. Venkata das
Manager

Kirajaminte Chaitanya
PRINCIPAL
AMRITA VIDYALAYAM
No. 114, 7th Cross
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4. Type of Soil: Silty sand
5. SBC of soil: 140 kN/m^2
6. Plan of the building: Refer Fig. 1
7. Details of column footing.
 - (i) Type: RCC isolated sloped footing
 - (ii) Depth of excavation: 1.5m and 2.0m below ground level at footing F1 and F2
 - (iii) Footing Depth: 600 mm at the junction of column and 450 mm at the edge.
 - (iv) Footing size: F1 = 1.63m X 2.533m and F2 = 1.73m X 2.230m
8. Size of column: 230 mm X 533 mm
9. Reinforcement details: 6 - #20 mm diameter.
10. Estimated Compressive strength of Columns concrete as indicated by Schmidt Hammer: 34 Mpa
11. Wall thickness: 8" thick hollow concrete masonry infill
12. No settlement cracks have been observed in the building.
13. No deflection of slabs and beam has been observed.
14. Slab thickness: 125 mm.
15. Reinforcement details: #8 @ 150mm c/c along shorter span.
16. Estimated Compressive strength of Slab concrete as indicated by Schmidt Hammer: 18 Mpa
17. Size of main beam: 230 mm X 600 mm
18. Reinforcement details: 3 - #25 mm diameter, #8 - 2LVS @ 150mm c/c
19. Size of secondary beam: 230 mm X 450 mm
20. Size of edge at end of cantilever: 230 mm X 450 mm
21. Reinforcement details: 2 - #16 mm diameter
22. From the detailed analysis done, the following information is obtained.
 - a) The existing columns and footings are sufficient.
 - b) The RCC Slabs and beams are able to take up the existing floor loads.

Recommendations:

1. The investigated footings and columns are capable of bearing loads due to the existing floors.
2. The Investigated existing RCC slabs and beams are also capable of bearing loads, and are sufficient to carry existing floor loads
3. Based on the analysis and the field data the existing structure is stable enough.
4. It is mandatory to carry out periodic maintenance of the building as per standard practice and no further structural modifications or addition in load over the building is permitted.

R. Balasubramanian
Testing Officer

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Dr. Amrita Vidyalayam, Mysore

C.R. Venkata das
Manager

Prof. & Head

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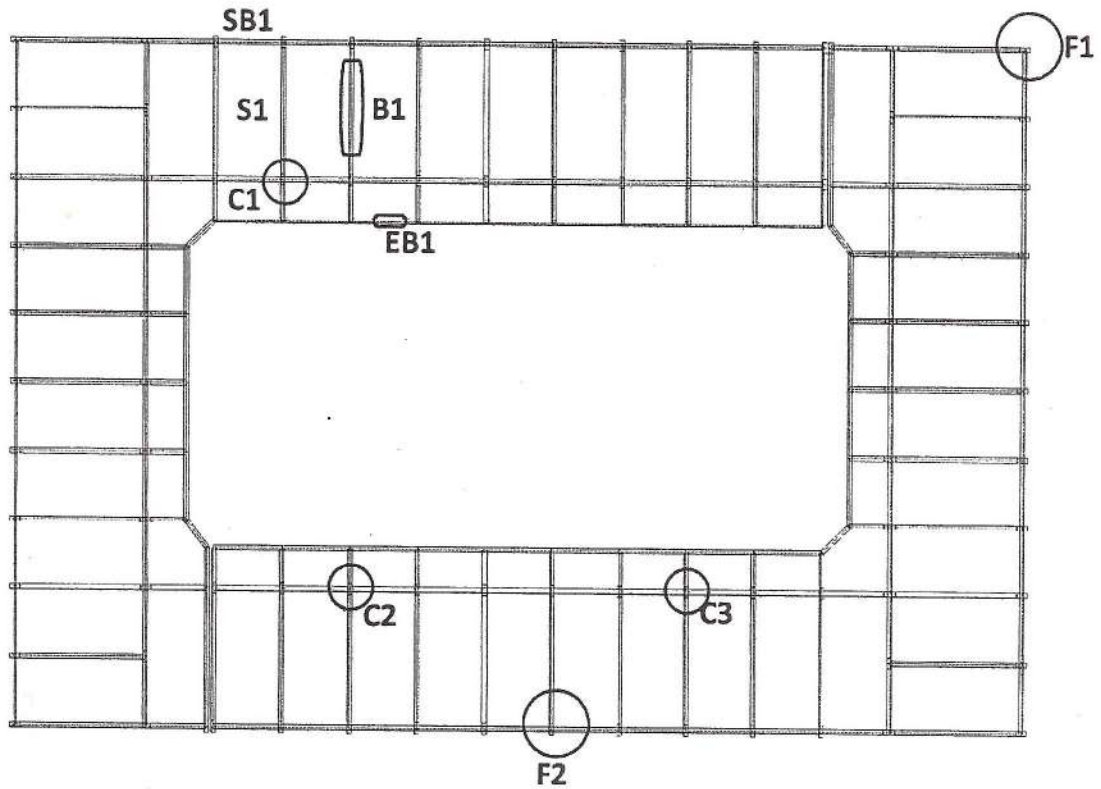


Figure 1: Plan of the building

For Amrita Vidyalayam, Mysore
C.R. Venkatasubramanian
 Manager

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