



**COLLEGE OF ENGINEERING TRIVANDRUM**  
**DEPARTMENT OF CIVIL ENGINEERING**

**Structural Engineering Division**

**Report**

**CET/ITC&SR No: 871/21-22**

**Date: 08/09/2021**

Sub: Building Fitness Certificate for Sree Chithira Thirunal Residential Central School, Kunnathukal, Thiruvananthapuram – reg.

Ref: Letter no. SCTRCS/KKL/ADM/M-1/1/2021/850 dated 02/08/2021 of Manager & Secretary, Sree Chithira Thirunal Residential Central School, Kunnathukal, Thiruvananthapuram.

As per the reference cited above, Manager & Secretary, Sree Chithira Thirunal Residential Central School, Kunnathukal, Thiruvananthapuram has requested for issuing Building Fitness Certificate of the school building for submitting the same to DEO and CBSE to obtain recognition from the Department of Education as part of CBSE affiliation.

It was decided to take up the consultancy work through Centre for Industrial Training Consultancy and Sponsored Research (ITC&SR) of College of Engineering, Trivandrum. Dr. Girija K, Professor, Department of Civil Engineering, College of Engineering Trivandrum, Thiruvananthapuram visited the site on 2<sup>nd</sup> September 2021 in the presence of officials of the school.

**Observations**

Sree Chithira Thirunal Residential Central School, Kunnathukal, Thiruvananthapuram had been constructed during the period from 1999 to 2012 in stages including buildings with RC framed structures and load bearing single storied building and covered mini hall etc. The school is located in Kunnathukal Village, Neyyattinkara Taluk in Thiruvananthapuram District.

Centre for Industrial Training Consultancy and Sponsored Research, CET

Inward No: 801

Dated: 16/09/2021.

By: ✓



There are four academic blocks in the campus. The main academic block named after Sree Chithira Thirunal is with G+2 floors in reinforced concrete framed structure with RC roof slab of second floor covered with temporary roof. The second building is also a framed structure with G+2 floors, has three blocks with one administrative block and two academic blocks. The academic blocks are named after Prem Nazir and P. Govinda Pillai. The third academic block, named as Thankamma block is G+1 RC framed structure and also with an additional floor with temporary roof. The academic block named Sree Chithira Thirunal Centenary building is with G+2 RC framed structure with RC roof slab of second floor covered with temporary roof. The hostel block is with G+2 floors in RC framed structure with a floor with temporary roof. The client has submitted the architectural drawings of buildings. However no structural drawings were available with the client.

Since no structural drawings were available with the client, the foundation provided for the school building was not able to be inspected. However, the superstructure elements like columns, beams and slabs were visually inspected and is noticed that they are of adequate size for static load conditions (dead load and live load conditions). No cracks in any of the structural elements were noticed.

**All the rooms in the buildings have been physically verified and the column, beam, slab network provided is found to be adequate for the dead and live loads acting on it. No spalling of concrete and any formation of cracks were noticed anywhere in the building. No sort of distress is seen in any of the structural elements.**

**So, it can be stated that the structural elements of the school building, Sree Chithira Thirunal Residential Central School, Kunnathukal Thiruvananthapuram is structurally stable and fit based on the visual inspection done for the loads (dead and live loads) for which it is intended.**

It is recommended to inspect the building and renew the structural stability report after five (5) years. If in future, any distress has been noticed, it has to be repaired according to CPWD maintenance manual. Periodic maintenance always has to be performed per year to maintain the good condition of the structure.

## **BUILDING FITNESS CERTIFICATE**

Based on the visual inspection conducted on 2<sup>nd</sup> September 2021, it is certified that the buildings of Sree Chithira Thirunal Residential Central School, Kunnathukal Thiruvananthapuram District, functioning as school buildings are Structurally Safe, Sound and Fit.



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