VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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PROJECT REPORT

on

"ANALYSIS AND DESIGN OF G+30 STOREY RCC BUILDING USING STAAD PRO SOFTWARE"

Submitted by

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In partial fullfillment of the requirements for the degree of

BACHELOR OF ENGINEERING

In

CIVIL ENGINEERING

Under the Guidance of

Mr. Billigraham M Kurian

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DEPARTMENT OF CIVIL ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY,

Moodbidri-574225, Karnataka

2020– 2021

ALVAS INSTITUTE OF ENGINEERING AND TECHNOLOGY

MIJAR, MOODBIDRI D.K. -574225

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CERTIFICATE

Certified that the project entitled **"ANALYSIS AND DESIGN OF G+30 STOREY RCC BUILDING USING STAAD PRO SOFTWARE"** is a bonafide work carried out by

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in partial fulfillment for the award of BACHELOR OF ENGINEERING in **DEPARTMENT OF CIVIL ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020-2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the Bachelor of Engineering Degree.

Mr. BILLIGRAHAM M KURIAN	**Dr. H A JITH HEBBAR**	**Dr. PETER FERNANDES**
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Name of the Examiners **Signature with Date**

1.

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DEPARTMENT OF CIVIL ENGNEERING

DECLARATION

We,

WAHENGBAM ARISTO SINGH
THIYAM CASTRO SINGH
WAREPAM KISHAN SINGH

hereby declare that the dissertation entitled, "*ANALYSIS AND DESIGN OF G+30 STOREY RCC BUILDING USING STAAD PRO SOFTWARE*" is completed and written by us under the supervision of our guide **Mr. Billigraham M Kurian**, Assistant Professor, Department of Civil Engineering, Alva's Institute of Engineering And Technology, Moodbidri, in partial fulfilment of the requirements for the award of the degree BACHELOR OF ENGINEERING in DEPARTMENT OF CIVIL ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the academic year 2020-2021. The dissertation report is original and it has not been submitted for any other degree in any university.

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ABSTRACT

The Aim of present study "ANALYSIS AND DESIGN OF G+30 STOREY RCC BUILDING USING STAAD PRO SOFTWARE" is to define proper technique for creating Geometry, cross sections for column and beam etc, developing specification and supports conditions, types of Loads and load combinations. In this study a 30- storey high rise structure is analysed for dead, live, seismic and wind load combination using STAAD Pro.

Structural planning is an art and science of designing with economical, serviceable and durable structural. This project is generally based on theoretical design and analysis of structural framed building. The entire process of structural planning and design required imaginations, sound knowledge and thinking. Analysis and design of G+4 story residential building structure by using IS Code method. Analysis and of entire structure have been complete by manually design and verifies by STADD Pro. Software. All the drafting and detailing was done by using Auto CAD, also serve as a base for transfer of the structure for analysis and design in STAAD Pro. In this project, the design of slab, beam, column, staircase, etc. is calculated by "Limit State Method" using IS: 456-2000 code book. Different load active on the member are consider according to IS: 875-1987 (part 1, part2, part3). Hence residential building is properly planed in accordance with National Building Code of India.