

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
"JNANA SANGAMA", BELGAVI-590018
KARNATAKA



A Project Report on Phase – 02 (18CVP78)

“ANALYSIS AND DESIGN OF MULTI STOREY (G+5)
RESIDENTIAL BUILDING BY USING STAAD PRO”

Submitted in partial fulfilment of the requirements for the award of degree of

BACHELOR OF ENGINEERING IN
CIVIL ENGINEERING

Submitted By: Batch No:10

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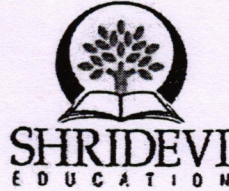
DEPARTMENT OF CIVIL ENGINEERING
SHRIDEVI INSTITUTE OF ENGINEERING AND
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Sira Road ,Tumakuru - 572106

2022-2023

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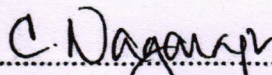
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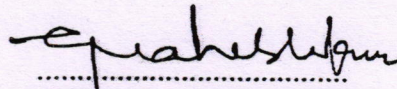
CERTIFICATE

Certified that the project work entitled "*ANALYSIS AND DSEIGN OF MULTI STOREY (G+5) RESIDENTIAL BUILDING BY USING STAAD PRO (18CVP78)*" Carried out by *Batch No : 10* bonafide students of *SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMAKURU 572106*, in partial fulfillment for the award of degree Bachelor of Engineering in *CIVIL ENGINEERING* of *VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI* during the year *2022 - 2023*. It is certified that all corrections / Suggestions indicated for Internal Assessment have been incorporated in the report. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

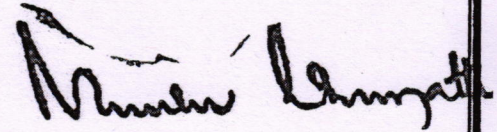

Signature of the

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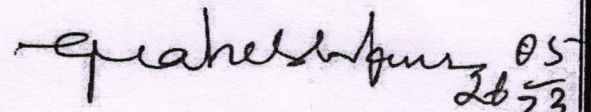
Dr: NARENDRA VISWANATH
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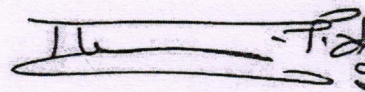
Name of Examiners

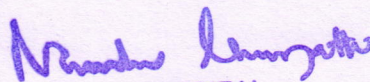
Signature with Date

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T.D.
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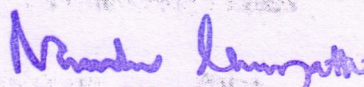

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ABSTRACT

In order to compete in the ever-growing competent market, it is very important for a structural engineer to save time. As a sequel to this an attempt is made to analyze and design a multistoried building by using a software package STAAD Pro. For analyzing a multi storied building one has to consider all the possible loadings and see that the structure is safe against all possible loading conditions. There are several methods for analysis of different frames like Kani's method, cantilever method, portal method, and Matrix method.

Planning of Residential Building is the arrangement of various components or units of a building in a systematic manner so as to form a meaningful and homogeneous structure to meet its functional purpose.

The present project deals with the analysis of a multi storied residential building of G+5 consisting of apartments in each floor was done by using both the manual method of analysis and by using software such as STAAD Pro. The dead load, floor loads & live loads are applied and the design for beams, columns and slab is obtained using STAAD Pro with its new features surpassed its predecessors, and compotators with its data sharing capabilities with other major software like AutoCAD. It was concluded that STAAD. Pro is a very powerful tool which can save much time and is very accurate in Designs and is suitable for the design of a multistoried building.


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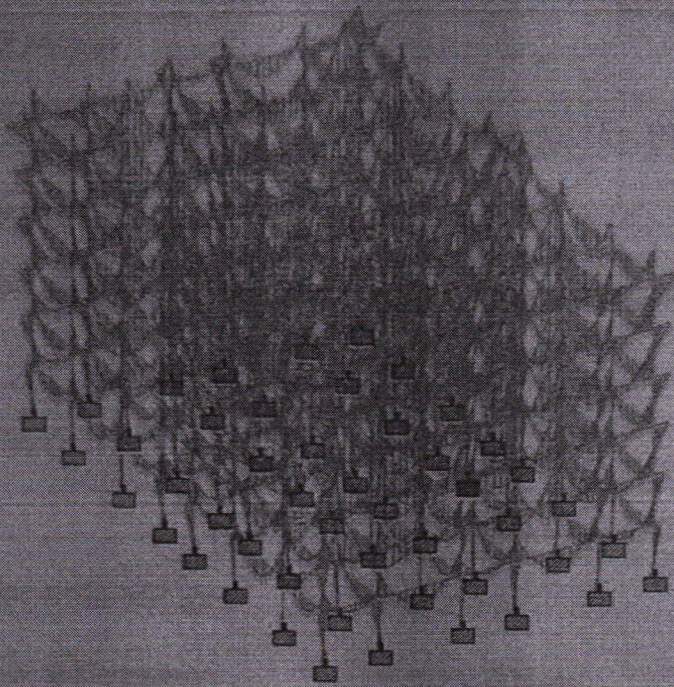
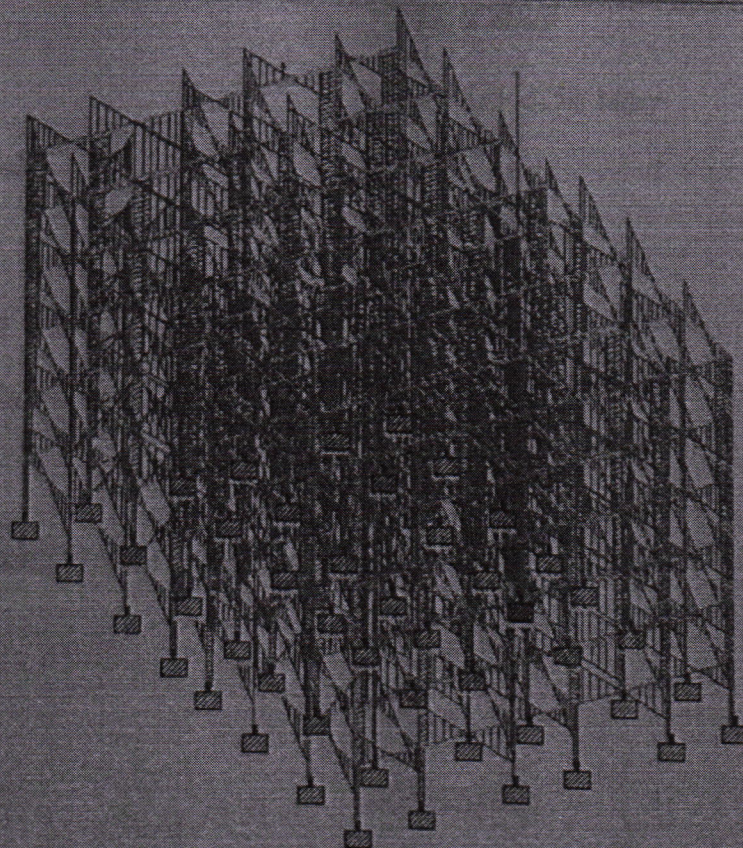


Fig: 5.5 Bending Moment Diagram



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Fig: 5.6 Shear Force Diagram