



SRI VENKATESWARA

COLLEGE OF ENGINEERING AND TECHNOLOGY

Thirupachur-631203, Tiruvallur TK & DT
Approved by AICTE New Delhi & Affiliated to Anna University, Chennai
(A Telugu Minority Institution)

List of Students Under taking Project work/Mini project/ Internship for the Academic Year 2022-2023

Program Name: CIVIL ENGINEERING

MINI PROJECT BATCH LIST 2022-2023

BATCH	REG NUMBER	STUDENT NAME	PROJECT TITLE	INTERNAL GUIDE
1.	112420103304	DEEBANAND N	Planning and Designing and Analysis of Apartment Building	DrV.Varun Kumar
2.	112420103305	DINESH KUMAR V	Prelimery investigation of self Cleaning concrete by adding titanium dioxide	DrV.Varun Kumar
3.	112420103309	KARTHICK M	Planning, Analysis and design of Multi-Storey Apartment	DrV.Varun Kumar
4.	112420103310	KEERTHIVASAN E	Analysis and design of School Building	DrV.Varun Kumar
5.	112420103314	MARAN B	Planning and Designing of modern aesthetic bus stand for dindukal city corporation	DrV.Varun Kumar
6.	112420103315	MURUGAN K M	Planning and design of multistorey residential building	DrV.Varun Kumar
7.	112420103316	NAGABOOSHANAM S	Shopping Mall	DrV.Varun Kumar
8.	112420103331	VASANTHA KUMAR S	Seismic analysis and design of skyscraper building	DrV.Varun Kumar



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Sri Venkateswara College of
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Thirupachur, Thiruvallur - 631 203

**PLANING, DESIGNING AND ANALYSIS OF
APARTMENT BUILDING**

DESIGN PROJECT REPORT

Submitted by

DEEBANAND . N (112420103304)

In partial fulfillment for the award of the degree

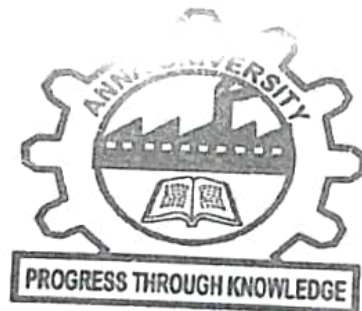
Of

BACHELOR OF ENGINEERING

IN

CIVIL ENGINEERING

**SRI VENKATESWARA COLLEGE OF ENGINEERING AND
TECHNOLOGY, THIRUPACHUR - 631203**



ANNA UNIVERSITY:: CHENNAI 600025

DECEMBER 2023



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ACKNOWLEDGEMENT

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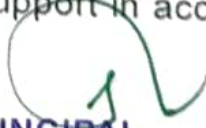
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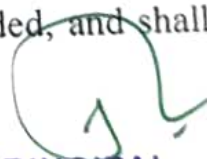

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CHAPTER 1

1.1 INTRODUCTION

- From times im memorial man has been making efforts in improving their standard and living.
- The point of his efforts has been to provide an economic and efficient shelter.
- And the reason is to give feeling of security and responsibility
- The engineer has to keep in mind the municipal conditions, building bye laws, environment, provision of future, aeration, ventilation etc., in suggesting a particular type of plan to any client.
- The aim of the structural design is that structures should be safe, durable, serviceable and economical with respect to initial cost and maintenance cost.
- Computer helps the structural engineers to solve large complex problems with the short interval of time.
- A large number of software package are available which helps structural engineer to carry stress analysis of complex shapes, material properties and with various boundary conditions.
- Hence the analysis and design is carried out by using software's.
- This paper gives information about structure to be constructed must satisfy the need efficiently, for which it is intended, and shall be durable for its desired life span.




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CHAPTER 6: CONCLUSION

This project concludes the planning, analysis and design of apartment building. We can conclude that there is difference between the theoretical and practical work done .

As the scope of understanding will be much more when practical work is done .

Knowing the loads we are designed the slabs depending upon the ratio of longer to shorter span of panel . In this project we have designed slabs as two way slabs depending upon the end condition, corresponding bending moment. The coefficients have been calculated as per IS code methods for corresponding l_y/l_x ratio. The calculations have been done for loads on beams and columns and designed frame analysis by moment distribution method.




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**PRELIMINARY INVESTIGATION OF SELF CLEANING
CONCRETE BY ADDING TITANIUM DIOXIDE**

DESIGN PROJECT REPORT

Submitted by

V. DINESH KUMAR (112420103305)

In partial fulfillment for the award of the degree

of
BACHELOR OF ENGINEERING
IN
CIVIL ENGINEERING

**SRI VENKATESWARA COLLEGE OF ENGINEERING AND
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ANNA UNIVERSITY:: CHENNAI 600025

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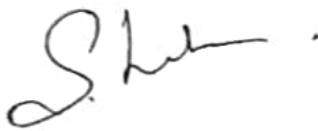


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BONAFIDE CERTIFICATE

This is to certify that this project report on "PRELIMINARY INVESTIGATION OF SELF CLEANING CONCRETE BY ADDING TITANIUM DIOXIDE" is the bonafide work of **V.Dinesh Kumar (112420103305)**, who carried out project work under my supervision in the Department of Civil Engineering, Sri Venkateswara College of Engineering and Technology, Thirupachur, Thiruvallur - 631203 during the academic year 2023 - 2024.



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Dr. V. VARUNKUMAR M.E., Ph. D

HEAD OF THE DEPARTMENT,
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Certified that the candidate was examined by us in the project work viva voce examination held on 23/11/2023 at Sri Venkateswara College of Engineering and Technology, Thirupachur, Thiruvallur - 631203.



INTERNAL EXAMINER



EXTERNAL EXAMINER



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ABSTRACT

Air pollution is an environmental problem that has significant negative health implications for human as well as other living organism and it create deterioration to the structure. Major primary pollutants that are produced by human activity include nitrogen oxides (NOX), Sulphur dioxide and volatile organic compounds (VOCS) which are emitted from combustion at high temperatures. When photo catalytic materials absorb the ultraviolet radiations from the sun, hydroxyl radicals and superoxide anions are created that have the ability to react with pollutants molecules such as NOX , SOX, thus converting to less harmful substance.

In this report we present properties of concrete such as grade of concrete is M-20, W/C ratio is 0.53, we added Tio₂ of 5%,10%,15% by the weight of cement to the concrete. After curing period of the concrete we add ink drop to the concrete block and then we expose the concrete block to sun light for 20 days then we observe self-cleaning efficiency of concrete block.





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SYNOPSIS

This design project named "PLANNING, ANALYSIS AND DESIGN OF MULTI-STOREY APARTMENT" deals with the analysis of a Multi-storey structure under an consequently the design of various structural elements (slabs, beams, columns, footings and staircase). The project report is on the design of the structural elements of a G+3 structure. The design of all the structural elements is due to consideration of dead & imposed load. The site selected is in **Chennai** which comes under "Seismic zone III" as per **IS 1893:2002**. Chennai is an upcoming metro city in India which has crossed the 75lakh population mark. The need for high tech shopping malls in Chennai has increased significantly in last 5 years.

The project is strictly in accordance with IS 456:2000 (Plain and Reinforced Concrete), SP 16 (Design Aids for Reinforced Concrete) and SP 34 (Handbook on Concrete Reinforcement and Detailing). All structural elements are designed as per Limit State of Bending, Shear, Deflection and Development Length according to IS 456:2000. The design procedure and methodology used is similar to what is followed in the industry currently. Load calculation is done using STAAD.Pro and the relevant data is used in the manual design of the specific structural elements.



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PLANNING AND DESIGNING OF MODERN AESTHETIC
BUS STAND FOR DINDIGUL CITY CORPORATION

A DESIGN PROJECT REPORT

Submitted by

B.MARAN (112420103314)

In partial fulfillment for the award of the degree

Of

BACHELOR OF ENGINEERING

IN

CIVIL ENGINEERING



**SRI VENKATESWARA COLLEGE OF ENGINEERING & TECHNOLOGY
THIRUPACHUR-631203**

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NOVEMBER 2023

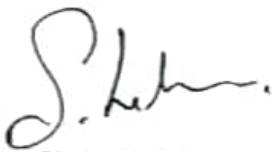
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BONAFIDE CERTIFICATE

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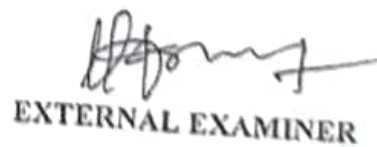
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INTERNAL EXAMINER



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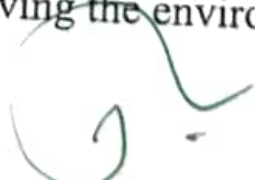



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Thir... 631 203

ABSTRACT

Bus-stand is an essential component of urban transport facilities which defines the being (origin) or end (termination) of the line for the transportation system. It normally requires a size-able land in a strategic part of an urban area. A well planned or managed bus stand will act as catalyst to the social and economic development of the surrounding area. On the other hand, bus-stand is an asset to an area as area as it may act as it may act as catalyst to economic and social development of the surrounding area. However poorly planned and sited stand for buses may generate traffic problems as well as deteriorating the quality of life of the affected surrounding. this project focuses mainly the structural design of whole bus stand. As with engineering and operational aspects of terminal facilities the focus would be on the design to fulfill traffic capacity requirement and operational efficiency for operators and passengers. The proposed for side terminating bus terminal mode which located outside city centre may have added advantages such as reducing unnecessary congestion and improving the environment.




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4	2061.76	Bituminous Macadam Providing and laying bituminous macadam with Hot mix plant using crushed aggregates of specified grading premixed with bituminous binder (Viscosity Grade- 30), transported to site, laid over a previously prepared surface with paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction, complete as per clause 504 of MORTH Specification - For patch work using Mini hot mix plant	6803.99	CUM	14
5	12128	Prime coat Providing and applying primer coat with bitumen emulsion (SS-I type) on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.70 kg/sqm using mechanical means as per clause 502 of MORTH Specification over WMM	74.16	SQM	8
		total amount			23

CHAPTER-7

CONCLUSION

In dindigul had population of 207225 as per the 2011 census. Is founded by Erode, Tirupur, karur and Trichy district in the north, the sivaganga and tuticorin districts in the east, The Madurai district in the south and theni and Coimbatore



66
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 Thirupachur, Thiruvallur - 631 203

ANALYSIS AND DESIGN OF SCHOOL BUILDING

DESIGN PROJECT REPORT

Submitted by

KEERTHIVASAN E

(112420103310)

In partial fulfillment for the award of the degree

Of

BACHELOR OF ENGINEERING

IN

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**SRI VENKATESWARA COLLEGE OF ENGINEERING AND
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NOVEMBER 2023



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**Sri Venkateswara College of
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Thirupachur, Thiruvallur - 631 203**

BONAFIDE CERTIFICATE

This is to certify that this project report on "ANALYSIS AND DESIGN OF SCHOOL BUILDING" is the bonafide work of KEERTHIVASAN (112420103310), who carried out project work under my supervision in Department of Civil Engineering, Sri Venkateswara College of Engineering and Technology, Thirupachur, Thiruvallur - 631203 during the academic year 2023-2024.



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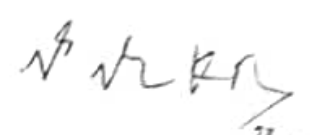
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23-11-23

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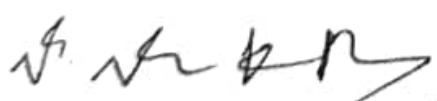
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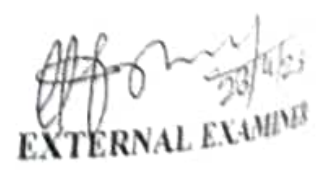


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Sri Venkateswara College of
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ABSTRACT

This project work deals with Design and analysis of School building. The design has been done according to the Limit State Method of design and conforming to the Bureau of Indian Standards BIS456-2000. The slabs are designed as one way and two way slab by limit state method.

The worst effect of the maximum loading condition , maximum bending moment is taken and columns and beams are designed. The beams over external columns are designed as L-beams and the beams over internal columns are designed as T-beams. Square footing is provided for the column foundation. Dog legged staircase is provided for all the floors and lift is provided. The project is generally based on theoretical design and analysis of School building. Planning ,analysis and design G+3 School building structure by IS code method. Hence the School building is properly planned in accordance with the national building code . The reinforced concrete framed structure consisting of G+3 with adequate facilities. All the structure member are designed using limit state method with reference of IS:456 -2000.




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CHAPTER 8

CONCLUSION

The plan and designing for the proposed college building has been prepared.

The building plan and the detailed drawings showing the reinforcements in slabs, beams, columns, staircase and footings are presented in this project report. In this report, planning and designing of an institutional building for the safety purpose people. We have successfully completed the planning and designing for a multi-storey (G+3) Structure. This project provided us good practical and theoretical knowledge which will be improve for our future. It is proposed that to construct the apartment with the Standard Indian codes



A handwritten signature in green ink, consisting of a large, stylized letter 'G' followed by a few loops and a short horizontal line.

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**SEISMIC ANALYSIS AND DESIGN OF
SKYSCRAPER BUILDING
DESIGN PROJECT REPORT**

Submitted by

VASANTHA KUMAR S (112420103331)

In partial fulfillment for the award of the degree

Of

BACHELOR OF ENGINEERING

IN

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**SRI VENKATESWARA COLLEGE OF ENGINEERING AND
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DECEMBER 2021

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BONAFIDE CERTIFICATE

This is to certify that this project report on "SEISMIC ANALYSIS AND DESIGN OF SKYSCRAPER BUILDING" is the bonafide work of VASANTHA KUMAR S (112420103331), who carried out project work under my supervision in the Department of Civil Engineering, Sri Venkateswara College of Engineering and Technology, Thirupachur, Thiruvallur - 631203 during the academic year 2023 - 2024.

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INTERNAL EXAMINER

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ABSTRACT

- The aim of the project is to plan, design and seismic analysis of Skyscraper building using Manual calculation.
- A layout plan and plan of the proposed building is drawn by using AUTO CADD 2010. The structure consists of ground floor and first floor.
- The planning is done as per Indian standard code provisions.
- Using this manual calculation of bending moment, shear force, deflection, end moments and foundation reactions are calculated.
- Using the calculated bending moment, shear force and reactions, the beams, columns and footings are designed. The R.C.C designs are carried out by limit state method.

Detailed structural drawings for critical and typical R.C.C. members are also drawn co-ordinates for all structural members are tabulated for ready reference.





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CONCLUSION

- In this project a Skyscraper building is designed.
- Since the entire building is considered as a framed structure.
- Seismic Analysis is done for the building for entire frame structure.
- Using these manual calculations of Bending moment, shear force, deflections, End moments and foundation reactions are calculated.
- Bending moments, shear force and reactions, the beams, columns, footings are designed manually.
- The frame is analysed by STAAD-Pro.
- Detailed drawings of all R.C.C. members such as slabs, beams, columns, and footings are also shown.
- The knowledge gained from this project will help us to take up similar projects with courage and confidence in future course of actions



PR. 
Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

PLANNING AND DESIGN
OF MULTISTOREY RESIDENTIAL BUILDING
DESIGN PROJECT

Submit

MURUGAN K M 112420103315

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

In

CIVIL ENGINEERING



SRI VENKATESWARA COLLEGE OF ENGINEERING &
TECHNOLOGY

THIRUVALLUR – 631 203

ANNA UNIVERSITY: CHENNAI 600 025

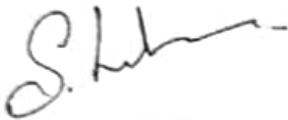
November 2023




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Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

BONAFIDE CERTIFICATE

This is to certify that this project report on "PLANING & DESIGNING OF MULTI STORY RESIDENTIAL BUILDING" is the bonafide work of K.M. MURUGAN (112420103315), who carried out project work under my supervision in the Department of Civil Engineering, Sri Venkateswara College of Engineering and Technology, Thirupachur, Thiruvallur - 631203 during the academic year 2023 - 2024.



SIGNATURE

Mrs. S. LEKA. M.E.
ASSISTANT PROFESSOR,
DEPARTMENT OF CIVIL ENGG.,
SVCET,
THIRUPACHUR - 631203.



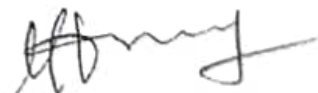
SIGNATURE

Dr. V. VARUNKUMAR M.E., Ph. D
HEAD OF THE DEPARTMENT,
DEPARTMENT OF CIVIL ENGG.,
SVCET,
THIRUPACHUR- 631203

Certified that the candidate was examined by us in the project work viva voce examination held on 23/11/23 at Sri Venkateswara College of Engineering and Technology, Thirupachur, Thiruvallur - 631203.



INTERNAL EXAMINER



EXTERNAL EXAMINER



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ACKNOWLEDGEMENT

We express our gratitude to our beloved Chairman Dr. S. K. Purushothaman M.E., Ph.D., and the management team for providing us with splendid infrastructure qualified and experienced faculty, and adequate laboratory facilities throughout our study.


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ABSTRACT

This Project work deals with design of "MULTISTOREY RESIDENTIAL BUILDING" the design as be done according to the limit state method of design & conforming to Bureau of Indian standards BIS 456-2000. The work effect of the maximum loading condition & maximum bending moment is taken & columns and beams are designed. The beams over external columns are designed as L-beams and the beams over internal columns are designed as T-beams rectangular footing is provided for the column foundation. Dog legged stair case & lift is providing for all the flours, Lintel is designed for all Door & Window opening & Drawing are drawn by using **Auto CAD**.




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