

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**  
"Jnana Sangama" Belagavi – 590010



**PROJECT REPORT ON**  
**"DESIGN OF ZERO ENERGY FOR RESIDENTIAL BUILDING"**

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

**BACHELOR OF ENGINEERING IN**  
**CIVIL ENGINEERING**

**Submitted By**

**BRIAN THOMAS JOHN    4AL20CV001**

**SIDRAM HUGAR            4AL20CV024**

**YESUDAS BASAVARAJ**  
**HANCHINAMANI            4AL20CV027**

**POORNIMA K                4AL21CV400**

**Under the Guidance of**

**Dr . H G UMESHCHANDRA**

**Associate Professor Department of civil engineering**



**DEPARTMENT OF CIVIL ENGINEERING ALVA'S INSTITUTE OF ENGINEERING**  
**& TECHNOLOGY MOODBIDRI – 574 225**

**ALVA'S INSTITUTE OF ENGINEERING AND  
TECHNOLOGY**

**MIJAR MOODBIDRI D.K. -574225 – KARNATAKA.**



**DEPARTMENT OF CIVIL ENGINEERING**

**CERTIFICATE**

Certified that the project work entitled “**DESIGN OF ZERO ENERGY FOR  
RESIDENTIAL BUILDING, DAKSHINA KANNADA DISTRICT**” is a  
Bonafede work carried out by

**BRIAN THOMAS JOHN 4AL20CV001**

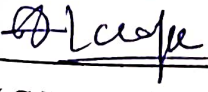
**SIDRAM HUGAR 4AL20CV024**

**YESUDAS BASAVARAJ  
HANCHINAMANI 4AL20CV027**

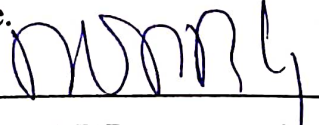
**POORNIMA K A 4AL21CV400**

Are Bonafede students of Department of Civil Engineering of Alva's Institute of Engineering and Technology in partial fulfillment for the award of **BACHELOR OF ENGINEERING in CIVIL ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2023-2024. 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.

  
**H.G Umeshchandra**

**Project Guide**

  
**Prof. B Durgaprasad  
Baliga**

**Head of the Department**

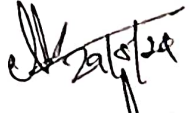
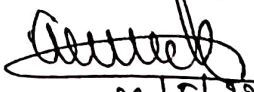
  
**Dr. Peter Fernandes**  
**PRINCIPAL**

**Alva's Institute of Engg. & Technology**  
**MIJAR. MOODBIDRI - 574 225, D.K**  
Signature with

**Name of the Examiners**

**Date**

1. **Ms. Anusha B Rao**
2. **Dr Ganesh mogamul**

  
  
**29/5/2024**

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**“Jnana Sangama” Belagavi – 590010**



**PROJECT REPORT ON  
“HORTON’S INFILTRATION MODEL USING DOUBLE  
RING INFILTROMETER STUDY FOR KARKALA TALUK,  
UDUPI DISTRICT”**

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

**BACHELOR OF ENGINEERING  
IN  
CIVIL ENGINEERING**

**Submitted By**

<b>DHAREPPA S K</b>	<b>4AL20CV002</b>
<b>HRISHIKESH R</b>	<b>4AL20CV003</b>
<b>MANJUNATH I K</b>	<b>4AL20CV009</b>
<b>SANDEEP</b>	<b>4AL20CV021</b>

**Under the Guidance of**

**Dr. H AJITH HEBBAR**

**Associate Professor**

**Department of civil engineering**



**DEPARTMENT OF CIVIL ENGINEERING  
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY  
MOODBIDRI – 574 225.**



**ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY**  
**MOODBIDRI – 574 225**  
(Affiliated to VTU, BELAGAVI)  
**DEPARTMENT OF CIVIL ENGINEERING**


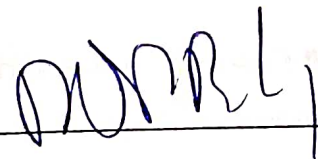

**CERTIFICATE**

*Certified that the project work entitled "HORTON'S INFILTRATION MODEL  
USING DOUBLE RING INFILTROMETER STUDY FOR KARKALA  
TALUK, UDUPI DISTRICT" is Bonafede work*

*carried out by*

<b>DHAREPPA S K</b>	<b>4AL20CV002</b>
<b>HRISHIKESH R</b>	<b>4AL20CV003</b>
<b>MANJUNATH I K</b>	<b>4AL20CV009</b>
<b>SANDEEP</b>	<b>4AL20CV021</b>

in partial fulfillment for the award of BACHELOR OF ENGINEERING in **CIVIL ENGINEERING**  
of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2023–  
2024. 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.

 <b>Dr. H Ajith Hebbar</b> Project Guide	 <b>Prof. B. Durgaprasad Baliga</b> Head of the Department	 <b>Dr. Peter Fernandes</b> Principal <b>Alva's Institute of Engg. &amp; Technology,</b> <b>Mijer, MOODBIDRI - 574 225, D.K.</b>
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**EXTERNAL VIVA**

Name of the Examiners

1. Ms. Anusha B. Rao  
2. Dr. Anshu Megam

Signature with date

Dr. Peter Fernandes  
29/5/2024

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**"Jnana Sangama" Belagavi – 590010**



**PROJECT REPORT ON**

**“BRIDGING HORIZONS: A COMPREHENSIVE STUDY  
OF THE PROPOSED KAVOOR CABLE-STAYED  
BRIDGE”**

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

**BACHELOR OF ENGINEERING  
IN  
CIVIL ENGINEERING**

**Submitted By**

<b>KAUSHIK</b>	<b>4AL20CV003<sup>5</sup></b>
<b>M R BHARATH</b>	<b>4AL20CV007</b>
<b>SAHIL SHETTY</b>	<b>4AL21CV402</b>
<b>VIDYANANDA</b>	<b>4AL21CV403</b>

**Under the Guidance of**

**Mr. Surendra P**

**Assistant Professor**

**Department of civil Engineering**



**DEPARTMENT OF CIVIL ENGINEERING  
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY  
MOODBIDRI – 574 225.**

# ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

MIJAR MOOBBIDRI D.K. -574225 – KARNATAKA.



## DEPARTMENT OF CIVIL ENGINEERING

### CERTIFICATE

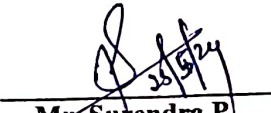
Certified that the project work entitled


#### **"BRIDGING HORIZONS: A COMPREHENSIVE STUDY OF THE PROPOSED KAVOOR CABLE-STAYED BRIDGE"**

Is a Bonafide work carried out by

KAUSHIK	4AL20CV005
M R BHARATH	4AL20CV007
SAHIL SHETTY	4AL21CV402
VIDYANANDA	4AL21CV403

Are bonafide students of Department of Civil Engineering of Alva's Institute of Engineering and Technology in partial fulfillment for the award of BACHELOR OF ENGINEERING in **CIVIL ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2023-2024. 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. Surendra P  
Project Guide

  
Prof. B Durgaprasad Baliga  
Head of the Department


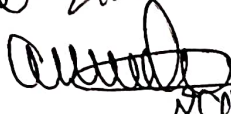
  
Dr. Peter Fernandes  
PRINCIPAL

Alva's Institute of Engg. & Technology,  
Mijar. MOOBBIDRI - 574 225, D.K

Name of the Examiners

1. Ms. Anusha B Rao
2. Dr. Anusha Moghau

Signature with Date

  
29/5/2024  
  
29/5/2024



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**"Jnana Sangama" Belagavi – 590010**



**PROJECT REPORT ON**

**"PREDICTION OF BEHAVIOUR OF SUSTAINABLY  
DEVELOPED BUBBLE DECK SLAB USING ANN"**

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

**BACHELOR OF ENGINEERING**

**IN**

**CIVIL ENGINEERING**

**Submitted By**

**KH. ABDUL RAJAQUE SHAH 4AL20CV006**

**NAOREM PRASANTA SINGH 4AL20CV012**

**PALLAVI VEERAPPA SUDI 4AL20CV014**

**PRIYA H 4AL21CV401**

**Under the Guidance**

**Ms. ANUSHA B RAO**

**Assistant Professor**

**Department of Civil Engineering**



**DEPARTMENT OF CIVIL ENGINEERING**

**ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY**

**MOODBIDRI – 574 225.**

**2023-2024**

**ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY**  
**MOODBIDRI – 574 225**  
(Affiliated to VTU, BELAGAVI)  
**DEPARTMENT OF CIVIL ENGINEERING**

**CERTIFICATE**

*Certified that the project work entitled "PREDICTION OF BEHAVIOUR OF  
SUSTANABLY DEVELOPED BUBBLE DECK USING ANN" is Bonafede work  
carried out by*

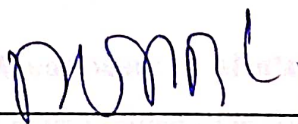
**KH. ABDUL RAJAQUE SHAH**  
**NAOREM PRASANTA SINGH**  
**PALLAVI VEERAPPA SUDI**  
**PRIYA H**

**4AL20CV006**  
**4AL20CV012**  
**4AL20CV014**  
**4AL21CV401**

in partial fulfillment for the award of BACHELOR OF ENGINEERING in **CIVIL ENGINEERING**  
of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2023–  
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requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.



**Signature of the Guide**  
**Ms. Anusha B Rao**



**Signature of the H.O.D**  
**Prof. Durgaprasad Baliga**



**Signature of the Principal**  
**Dr. Peter Fernandes**  
**PRINCIPAL**

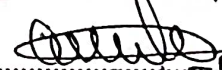
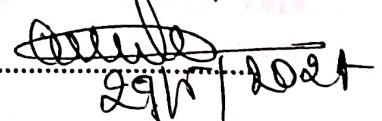
**Alva's Institute of Engg. & Technology,**  
**Mijor. MOODBIDRI - 574 225, D.K**

**EXTERNAL VIVA**

**Name of the Examiners**

1. Ms. Anusha B Rao
2. Dr. Ganesh Moganur

**Signature with date**

29/08/24  
  
29/08/2024  




**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**"Jnana Sangama" Belagavi – 590 010**



**PROJECT REPORT ON**

**“LABORATORY INVESTIGATION ON MUNICIPAL INCINERATOR WASTE AS  
A FILLER MATERIAL IN DENSE BITUMINOUS MIX FOR ROAD  
CONSTRUCTION”**

**Submitted in partial fulfillment of the requirements for the award of degree of**

**BACHELOR OF ENGINEERING**

**IN**

**CIVIL ENGINEERING**

**Submitted By**

**MANGAL THOIBA IRENGBAM**

**4AL20CV008**

**PRAGATI T NAIK**

**4AL20CV015**

**SALAM MARIN SINGH**

**4AL20CV020**

**SHIVAKUMAR K N**

**4AL20CV023**

**Under the Guidance of**

**Prof. Shankargiri K S**

**Assistant Professor**

**Department of Civil Engineering**



**ALVA'S**  
Education Foundation®

**DEPARTMENT OF CIVIL ENGINEERING  
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY  
MOODBIDRI – 574 225.**

**2023-2024**

**ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY**

**MOOBBIDRI - 574 225**

**(Affiliated to VTU, BELAGAVI)**

**DEPARTMENT OF CIVIL ENGINEERING**

**CERTIFICATE**

Certified that the project work entitled  
"LABORATORY INVESTIGATION ON MUNICIPAL INCINERATOR WASTE AS A  
FILLER MATERIAL IN DENSE BITUMINOUS MIX FOR ROAD CONSTRUCTION"  
is Bonafide work carried out by

**MANGAL THOIBA IRENGBAM**

**4AL20CV008**

**PRAGATI T NAIK**

**4AL20CV015**

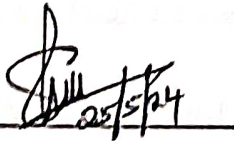
**SALAM MARIN SINGH**

**4AL20CV020**

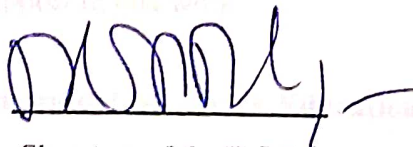
**SHIVAKUMAR K N**

**4AL20CV023**

In partial fulfillment for the award of BACHELOR OF ENGINEERING in **CIVIL ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2023-24. 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.



Signature of the Guide  
**Mr. Shankargiri K S**  
Assistant Professor



Signature of the H.O.D  
**Prof. Durgaprasad Ballga**



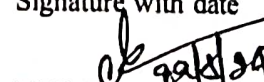

Signature of the Principal  
**Dr. Peter Fernandes**  
**PRINCIPAL**  
**Alva's Institute of Engg. & Technology,**  
**Mijar. MOOBBIDRI - 574 225, D.K**

**EXTERNAL VIVA**

Name of the Examiners

- 1... **Ms. Anusha B Rao**
- 2... **Dr. Ganesh Mogamul**

Signature with date

  
  
**29/5/24**

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**“jnanaSangama” Belagavi – 590018**



**PROJECT REPORT ON**

**“DEVELOPMENT OF HIGH EARLY STRENGTH CONCRETE BY  
USING INDUSTRIAL WASTE BY-PRODUCT”**

**Submitted in partial fulfillment of the requirements for the award of degree of**

**BACHELOR OF ENGINEERING**

**IN**

**CIVIL ENGINEERING**

**Submitted By**

**NANDINI S**

**4AL20CV011**

**ROHIT I KATTIMANI**

**4AL20CV018**

**SHASHANK GOWDA**

**4AL20CV022**

**Under the Guidance of**

**Mr. Santhosh K**

**ASSISTANT PROFESSOR**

**DEPARTMENT OF CIVIL ENGINEERING**



**DEPARTMENT OF CIVIL ENGINEERING**

**ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY**

**[A Unit of Alva's Education Foundation @]Mijar, Moodbidri – 574225, DK, Karnataka**

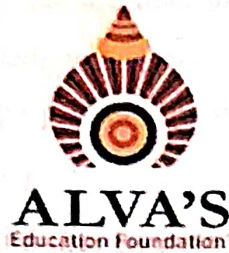
**2023-24**



# ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

[A Unit of Alva's Education Foundation, Moodbidri]

## DEPARTMENT OF CIVIL ENGINEERING



### CERTIFICATE

Certified that the work entitled "DEVELOPMENT OF HIGH EARLY STRENGTH CONCRETE BY USING INDUSTRIAL WASTE BY-PRODUCT" is a bonafide work carried out by Nandini S (4AL20CV011), Rohith I Kattimani (4AL20CV018), Shashank gowda (4AL20CV022), in partial fulfillment for the award of *Bachelor of Engineering in Civil Engineering* of the Visvesvaraya Technological University, Belagavi during the year 2023-24. It is certified that all corrections / suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the department library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said Degree.

Date

Signature of the Guide

Mr. Santhosh K

Signature of the H.O.D

Prof. Durgaprasad Baliga

Signature of the Principal

Dr. Peter Fernandes  
Principal  
Alva's Institute of Engg. & Technology,  
Moor. MOODBIDRI - 574 225, D.K.

Name of the Examiners

1. Mr. Anusha B Rao

2. Dr. Ganesh Mogawar

Signature with date

Signature with date

Signature with date

# **VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

JNANA SANGAMA, BELAGAVI- 590 018, KARNATAKA, INDIA.



## **PROJECT REPORT ON**

### **“ANALYSIS OF DIFFERENT SLOPE FAILURE ALONG THE ROAD SECTION OF SAKLESHPUR, KARNATAKA USING ROCK MASS CLASSIFICATION AND KINEMATIC ANALYSIS APPROACH”**

**Sponsored by Karnataka State Council for Science and Technology**

**Indian Institute of Science Campus, Bengaluru - 560012**

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

## **BACHELOR OF ENGINEERING IN CIVIL ENGINEERING**

**Submitted by**

**Nongmaithem Borish Singh - 4AL20CV013**

**Priyanka Malagitti - 4AL20CV016**

**Rahul Leimapokpam - 4AL20CV017**

**Sadvini K P - 4AL20CV019**

**Under the Guidance of  
Dr. H. G. UMESHCHANDRA  
Associate Professor**



**ALVA'S  
Education Foundation\***

**DEPARTMENT OF CIVIL ENGINEERING  
ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY MIJAR –  
574 225  
KARNATAKA, INDIA  
AY 2023-24**





**ALVA'S INSTITUTE OF ENGINEERING TECHNOLOGY**

**MOODBIDRI-574 225**

**(Affiliated to VTU, BELAGAVI)**

**DEPARTMENT OF CIVIL ENGINEERING**

## **CERTIFICATE**

Certified that the project work entitled "ANALYSIS OF DIFFERENT SLOPE FAILURE ALONG THE ROAD SECTION OF SAKLESHPUR, KARNATAKA USING ROCK MASS CLASSIFICATION AND KINEMATIC ANALYSIS APPROACH" is a bonafide work carried out by

**Nongmaithem Borish Singh**

**4AL20CV013**

**Priyanka Malagitti**

**4AL20CV016**

**Rahul Leimapokpam**

**4AL20CV017**

**Sadvini K P**

**4AL20CV019**

in partial fulfilment for the award of Bachelor of Engineering in civil engineering of **Visvesvaraya Technological University**, Belagavi during the academic year 2023-2024, it is certified that all corrections and 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 requirement in respect of the project work prescribed for the said degree.

Signature of the Guide

**Dr. H G UMESHCHANDRA**

Signature of HOD

**Prof. B DURGAPRASAD  
BALIGA**

Signature of the Principal

**DR. PETER FERNANDES  
PRINCIPAL**

**Alva's Institute of Engg. & Technology,  
Mijar, MOODBIDRI - 574 225, D.K.**

### **EXTERNAL VIVA**

Name of the Examiners

1. Ms. Anusha Rao

2. Dr. Ganesh Moganur

Signature with Date

29/5/24  
29/5/2024