

# SUMMER INTERNSHIP REPORT

## On Bituminous Road construction

A report submitted in partial fulfilment of the requirements of the award of  
degree of

## BACHELOR OF TECHNOLOGY

in

## CIVIL ENGINEERING

Submitted by

**RAHUL SINGH**

ROLL NO. 21024125



GURU GHASIDAS VISHWAVIDYALAYA

BILASPUR- CHHATISGARH

(A CENTRAL UNIVERSITY)

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2024-2025

## INTERNSHIP COMPLITION CERTIFICATE



### Government of Bihar

OFFICE OF THE EXECUTIVE ENGINEER  
NEW CAPITAL ROAD DIVISION, PATNA,  
ROAD CONSTRUCTION DEPARTMENT, PATNA, BIHAR.

Letter No. :- 2001

Date :- 24/06/2024

**This is to certify that**

**RAHUL SINGH S/O- CHANDRAMANI PRASAD SINGH**

**Student of GURU GHASIDAS VISHWAVIDYALAYA**

**(A Central University)**

**Bilaspur (C.G.) -495009**

**Enrollment No.- GGV/21/01025 Roll No.-21024125**

**has completed his Industrial/Vocational Training**

**from Dated :-18.05.2024 to 25.06.2024**

**at NEW CAPITAL ROAD DIVISION,**

**ROAD CONSTRUCTION DEPARTMENT, PATNA, BIHAR.**

**We wish him every success in life.**

  
**Executive Engineer,**  
**New Capital Road Division,**  
**Road Construction Department,**  
**Patna, Bihar.**

## ABSTRACT

Flexible pavements are critical infrastructure components in modern transportation networks, designed to accommodate varying traffic loads and environmental conditions. This abstract explores the fundamental aspects of flexible pavement, focusing on its composition, design principles, and performance characteristics.

The composition of flexible pavement typically includes multiple layers, each serving a specific function such as distributing load, providing structural support, and enhancing durability. Key materials commonly used in flexible pavements include aggregates, bitumen, and stabilizers, each selected based on their engineering properties and performance requirements.

Design considerations for flexible pavements involve complex analyses of traffic volumes, climate conditions, and soil characteristics. Various methodologies such as the American Association of State Highway and Transportation Officials (AASHTO) design method and mechanistic-empirical (M-E) approaches are employed to ensure the pavement meets specified performance criteria over its service life.

Performance evaluation of flexible pavements encompasses aspects such as rutting, cracking, roughness, and moisture susceptibility. Techniques such as pavement condition assessment, non-destructive testing, and modeling are utilized to monitor performance and inform maintenance strategies.

This abstract provides a comprehensive overview of flexible pavements, highlighting their significance in modern infrastructure and the ongoing research efforts aimed at improving their design, construction, and longevity. Understanding these aspects is crucial for developing sustainable transportation systems that can efficiently meet the demands of today's dynamic traffic environments.

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