

# Roadway Upkeep and Inspection

The Expert Approach to Understanding & Preserving Roadways

## Introduction

Highways and roads are essential for facilitating movement between communities and play a significant part in integrating economic activity into daily life. Improving the general quality of road construction is necessary to reduce the amount of time roads are closed for maintenance.

The key components of pavement analysis and design are covered in this Course N Carry training course on the inspection and maintenance of roadways, with an emphasis on the creation of connotations in practical design scenarios. Delegates should be informed about the most recent pavement design approach following the completion of the course.

### **This training session on Course N Carry will emphasize:**

- Comprehending the soil experimental tests for classification
- Recognizing the various pavement kinds' designs
- Recognizing the heated asphaltic mixture's design
- Examining Superpave mix case studies
- Solutions for the majority of pavement issues
- Upkeep and restoration of pavement

## Objectives

All aspects of asphalt technology, including hot mix design, highway pavement construction, maintenance, and rehabilitation, are covered in the Course N Carry training course. It provides a detailed illustration of the superpave method for selecting the right ingredients and creating asphalt mixes that meet the demands of particular road paving projects in terms of weather and traffic. Additionally, it investigates the causes of road degradation and road maintenance techniques.

### **Participants in this Course N Carry training program will have the following skills at the end:**

- Differentiate between the many kinds of pavement
- Sorting the soil by AASHTOO classification
- Create the heated asphalt mixture.
- Oversee the pavement reconstruction and maintenance program.

## Training Methodology

This Course N Carry training session will make use of contemporary and eye-catching tactics that improve comprehension of the content. Every day, case studies, seminars, films, images, and games will be utilized to help reach the goal of drawing attention in an engaging manner.

## Organizational impacts

- By improving the caliber of engineering review, increase the organization's project production.
- Lower the organization's costs by implementing a novel maintenance plan.
- Invest in your organization's future by learning about the newest pavement design technologies.
- Enhance the project's investment by determining how to create a lasting pavement through improved planning, building, or upkeep.

## Personal Impact

- Boost the trainee's capacity to design roads
- Become more knowledgeable about modern, functional roads
- Become more proficient in the maintenance approach
- Become more adept at identifying damaged roads and offering the best fixes.

## Who should attend?

Professionals and engineers attending this Course N Carry Roadway Upkeep and Inspection training session could expect to learn about the most modern approaches to AASHTOO-related soil classification and pavement repair.

Junior or senior civil, structural, and geotechnical engineers will also find it helpful as they require in-depth understanding of pavement kinds, designs, and application throughout the building process.

**This training session on Course N Carry is intended especially for:**

- Civil Engineer
- Engineer for Structures
- Geotechnical Engineer

## Course Outline

### Day 1

## Versatile and Sturdy Pavement Structure

- An Overview of the History of Pavement and an Introduction to its Basics
- The AASHTO Soil Classification for Current Sub-grade Soils with Appropriate Examples
- The Distinction Between Rigid and Flexible Pavement
- Flexible Pavement Design
- The Rigid Pavement's Design

## Day 2

### Hot Asphaltic Mixture Design

- Aggregates and Asphalt Cement: The Physical Properties of the Hot Asphaltic Mixture and How to Prepare the Asphaltic Samples
- The Procedure for Retrieving the Asphalt Samples for Testing
- The Sieve Analysis Test
- Various Hot Mix Types with Various Design Methodologies
- Marshall Mix Design with Detailed Illustrations
- The Pavement Construction Stages
- Recycling Loads' Impact on Pavement

## Day 3

### Terminology, Equipment, and Mix Design Techniques for Superpave Asphalt Volumetric Mix Design to Produce Durable Pavement

- The Principle of Selecting the Correct Materials
- Selecting an Aggregate Structure for Design
- Assess the Design Asphalt Binder Content.
- Superpave Mixture Type
- Superpave Mixtures: RAP
- Enhanced Superpave Mix Design with Resolved Cases

## Day 4

### Soil Mechanics for Pavements

- AASHTOO Classification of Soil: Properties of Soil Mechanics
- Evaluation of Roughness
- Assessment of Structural Capability
- An examination of the life cycle costs of both rigid and flexible pavements

# Day 5

## Reason for Decline in Roadways

- Roadway cracks and rutting
- Roadway Detection Tests
- Take Precautions to Preserve Paved and Unpaved Roads
- Method of Roadway Maintenance Scheme
- Modern and Advanced Pavement Maintenance Technology