

# INTRODUCTION TO ASPHALT

## Class Description and Outline

This class is a one-day comprehensive introduction into the complex world of hot-mix asphalt (HMA). The class will provide attendees with a straightforward understanding of the terminology, materials, production, paving and testing of asphalt and the foundation to move onto higher education asphalt classes. The class is designed for DOT, County, City, Consulting and Contractor personnel that have need of improved knowledge of asphalt to advance their education and career opportunities.

### **Class Outline**

#### **1. Asphalt Basics**

- A. Introduction to Asphalt
- B. Terminology and Acronyms
- C. Class Outline and Goals
- D. Safety

#### **2. Asphalt Materials and Production**

- A. Asphalt Materials and Asphalt Binders
- B. Properties of Asphalt Binders
- C. Recycled Asphalt Materials (RAP/RAS)
- D. Asphalt Production Plant
- E. Warm-Mix Asphalt
- F. Asphalt Plant Safety

#### **3. Asphalt Paving**

- A. Asphalt Paving Equipment
- B. Quality Asphalt Paving
- C. Asphalt Compaction
- D. Asphalt Milling Operations
- E. Asphalt Paving Safety

#### **4. Testing of Asphalt Materials**

- A. Introduction to the Asphalt Lab
- B. Asphalt Lab Safety Procedures
- C. Roles of Contractor/Agency in QC/QA
- D. Proper Method to Cutting Cores
- E. Obtaining and Securing Hot Box Samples
- F. Testing Hot Box Samples

#### **5. Asphalt Rehabilitation Operations**

- A. Milling
- B. Cold-in-Place Recycling
- C. Interlayer
- D. HIPRO Thin Overlay
- E. Full-Depth Reclamation
- F. Safety

#### **6. Asphalt Maintenance Operations**

- A. Crack Sealing
- B. Chip Sealing
- C. Fog Sealing
- D. Microsurfacing

#### **7. Work Zone Safety Operations**

- A. Traffic Control
- B. Flaggers
- C. Iowa DOT Road Standards

#### **8. Class Review and Question and Answers**