

Airfield Pavement Design, Evaluation & Analysis Workshop

AGENDA

January 22 – 24, 2018 | Baltimore, Maryland

MONDAY, JANUARY 22, 2018

BREAKFAST ON YOUR OWN

- 7:30 – 8:00** **REGISTRATION**
- 8:00 – 8:20** **Course Introduction**
- 8:20 – 9:00** **Overview of Airfield Pavement Design**
Evolution of Airfield Pavement Design
Empirical Procedures
Mechanistic-Empirical Procedures
- 9:00 – 9:50** **Airfield Pavement Types and Pavement Performance**
Overview of Pavement Types (Flexible, Rigid, Composite)
Paving Materials
Base/Subbase Materials
Pavement Performance
- 9:50 – 10:10** **BREAK**
- 10:10 – 11:10** **Subgrade Soils and Granular Materials**
Characterizing Pavement Materials
Evaluating in Place Conditions
Determining Inputs for Pavement Design
Frost Protection Considerations
- 11:10 – 12:00** **Aircraft Traffic**
Gear Types and Naming Conventions
Cumulative Damage Factor (CDF)
Pass-to-Coverage Ratio (P/C)
Characterizing Aircraft Loads in FAARFIELD
- 12:00 – 1:00** **LUNCH**
- 1:00 – 2:00** **Flexible Pavement Design**
Failure Mechanisms
Required Input Variables
Flexible Pavement Design
Using FAARFIELD
- 2:00 – 3:10** **Workshop: Flexible Pavement Design**
- 3:10 – 3:30** **BREAK**
- 3:30 – 4:20** **Rigid Pavement Design**
Failure Mechanisms
Required Input Variables
3-D Finite Element Model
Rigid Pavement Design
Using FAARFIELD
- 4:20 – 4:45** **Update on Advisory Circular 150/5370-10H, Standard Specifications for Construction of Airports**
- 4:45 – 5:00** **Current Airfield Pavement-Related Research**
- 5:00** **Daily Wrap-Up**
- 5:00 – 6:00** **WELCOME RECEPTION**

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TUESDAY, JANUARY 23, 2018

BREAKFAST ON YOUR OWN

8:00 – 8:50 Workshop: Rigid Pavement Thickness Design

8:50 – 10:20 Rigid Pavement Design Details
Slab Size
Joint Considerations (Types, Spacing, Sealant)
Load Transfer
Reinforcing Steel

10:20 – 10:40 BREAK

10:40 – 11:30 Workshop: Rigid Pavement Design Details

11:30 – 12:00 Pavement Design for Airfield Shoulders
Purpose of Shoulders
Material Requirement
Shoulder Design Procedure

12:00 – 1:00 LUNCH

1:00 – 1:50 Overlay Design
HMA over HMA
HMA over Rubblized PCC
HMA over PCC
PCC over PCC
PCC over HMA

1:50 – 3:10 Pavement Evaluation and Overlay Considerations
Pavement Evaluation Process
Analysis of Existing Pavements
Overlay Considerations
Reflection Crack Control Measures

3:10 – 3:30 BREAK

3:30 – 4:50 Workshop: Overlay Design

4:50 – 5:00 Daily Wrap-Up

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WEDNESDAY, JANUARY 24, 2018

BREAKFAST ON YOUR OWN

- 7:30 – 8:50 ACN-PCN Background and Concepts)**
History and Background
Concept, Purpose, and Definitions
FAA Advisory Circular and COMFAA Program
Advisory Circular 150/5335-5C
- 8:50 – 9:00 BREAK**
- 9:00 – 9:30 PCN Approach for Rigid Pavements**
How to Determine PCN for PCC Pavements
PCC Pavement Sample Problems and Solutions
- 9:30 – 10:10 Workshop: PCN Determination for Rigid Pavement**
- 10:10 – 10:20 BREAK**
- 10:30 – 11:00 PCN Approach for Flexible Pavements**
How to Determine PCN for HMA Pavements
HMA Pavement Sample Problems and Solutions
- 11:00 – 11:45 Workshop: PCN Determination for Flexible Pavement**
- 11:45 – 12:00 Wrap-Up Session**