Monday, May 13, 2019 (Workshop begins at 8:00 a.m. and ends at 4:30 p.m.)

PART A: TIMBER BRIDGES

INTRODUCTION

- Terminology
- Materials
- Components
- Loadings

WOOD MECHANICS

- Properties of wood
- Behavior of wood
- Wood deterioration
- Species and grades
- Wood connectors

LOAD RATING

BRIDGE INSPECTION METHODS

- Visual
- Non-destructive testing BRIDGE INSPECTION
- Organization
- Records
- Frequency
- Deck/Timber
- Substructure
- Details

Tuesday, May 14, 2019 (Workshop begins at 8:00 a.m. and ends at 4:30 p.m.)

PART A: TIMBER BRIDGES (CON'T)

MAINTENANCE & REHABILITATION

- Deck, Open/Ballast
- Walkways/Railings
- Stringers
- Caps
- Piles and Posts
- Substructure

PART B: STEEL BRIDGES

INTRODUCTION

- Terminology
- Materials
- Components
- Loadings

PROPERTIES OF STEEL
LOADS AND RATING
FATIGUE AND CORROSION
FASTENERS
BRIDGE COMPONENTS AND

- TYPES Decks
- Rolled Beam Bridges
- Deck Plate Girders
- Floor Systems
- -Through Plate Girders
- Trusses

Wednesday, May 15, 2019 (Workshop begins at 8:00 a.m. and ends at 1:00 p.m.)

PART B: STEEL BRIDGES (CON'T)

BRIDGE INSPECTION

- Frequency
- Substructure
- Details

Piers & Abutments MAINTENANCE & REHABILITATION

PART C: CONCRETE BRIDGES

INTRODUCTION

- Terminology
- Materials
- Components

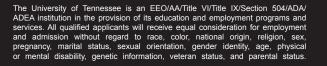
CONCRETE DETERIORATION BRIDGE COMPONENTS AND TYPES

- Reinforced Concrete Bridges
- Prestressed Concrete Bridges
- Abutments and Piers
- Masonry Arches

15 PDHs (Professional Development Hours) are available for those completing the course.

All attendees who successfully finish the course receive a certificate of completion.





Call 865-974-5255 if you are interested in hosting the course in your area. ctr.utk.edu/ttap

Objectives and Benefits

- Present and describe bridge terminology and functions of bridge components.
- Present bridge inspection procedures and a format for documentation of the inspection process.
- Acquire an understanding of the basic maintenance and rehabilitation practices.

Date & Location May 13-15, 2019 (Knoxville, TN)

NTRC (2nd floor meeting room) 2360 Cherahala Blvd. Knoxville, TN 37932

Tel: 865-946-1500 for directions

Who Should Attend?

Persons having bridge inspection and maintenance responsibilities at shortline, regional, and Class I railroads; railroad contractors and consultants; and state and local government officials associated with railroad operation, finance, and regulation will find this workshop beneficial.

Fee

The course registration of \$615 includes course materials and refreshments. Registration fees must be received at least two weeks prior to workshop to guarantee your place in the class. Attendees are responsible for meals and lodging. Registrants will be provided information on available lodging in the course vicinity.

Cancellation

If you cannot attend, notification by April 29, 2019 required. You may enroll a substitute at any time before the course starts. There will be no refunds for no-shows.

Limited Enrollment

To insure that the facilities will comfortably accommodate all participants, this workshop will be limited to 30 participants.

Instructors

Richard M. Bennett, Ph.D., P.E.

Richard M. Bennett is a Professor of Civil and Environmental Engineering and Director of Engineering Fundamentals at the University of Tennessee, Knoxville, where his specialty area is structural engineering. He has won numerous teaching awards, and has been teaching timber and steel bridge inspection for over 20 years. He works closely with the Tennessee Forest Products Center, particularly in the area of nondestructive evaluation of wood. Dr. Bennett is a member of American Society of Civil Engineers. He is a licensed professional engineer in Tennessee.

David B. Clarke, Ph.D., P.E.

Dr. Clarke, is the Director of the Center for Transportation Research. He is a research associate professor in the Department of Civil and Environmental Engineering at the University of Tennessee. His over 30 years of experience encompass a variety of railroad related design, inspection, research and education. He has taught railway related courses including this one, to college students and professionals since 1990. As a practicing civil engineer, Dr. Clarke performs railroad bridge inspections and develops plans and specifications for bridge rehabilitation or repair. Dr. Clarke is a licensed civil engineer in South Carolina and Tennessee and is active in AREMA, ASCE, and TRB.

Register online, mail or fax registration to:

Rail Training (Attn: Diana Webb)

Center for Transportation Research
The University of Tennessee
309 Conference Center
Knoxville, TN 37996-4133

Tel: (865) 974-5255 Fax: (865) 974-3889

ctr.utk.edu

RailRoad Bridge Inspection Knoxville, TN• May 13-15, 2019

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