CLASS: Bridge Construction Inspection Certification
DATES: Monday, January 27 – Friday, February 7, 2020 (10 days)

DESCRIPTION: This is an advanced two-week course taught in the classroom and designed for Bridge Construction Inspectors. Students receive instruction in bridge staking, excavation and embankment, foundations, steel reinforcement, sub structures, structural steel, forms and false work, prestressed beams, deck expansion joints, superstructures, deck drainage, bridge utilities, deck wearing courses, timber bridges, special structures, slope protection, documentation, approach panels, reconstruction, widening, and safety practices. This course is recommended for those involved in any type of structural construction. This is the only Bridge Construction Inspection course.

LEARNING OBJECTIVES: After the completion of this course:

• Identify and name of all types of bridges, and know the features that define those types of structures.
• Describe and know the function of all the various bridge elements, and the terminology used.
• Understand the need for certified materials, know how to document, test, and pay for materials used in bridge construction.
• Know the PPE required to be worn around bridge construction activities, and the potential hazards to be aware of while inspection bridge construction.
• Describe the information provided in a bridge plan, and know how to find where that information is located in the plan.
• Recognize the need for a stable foundation, and the various methods employed to achieve it, including driving pile. Know the different types of pile, the conditions that identify what type to use where, and how to compute when a pile has adequate bearing.
• Know the purpose and function of forms and falsework, the need for the inspector to take an active role in inspecting it.
• Know how to compute how much concrete and reinforcement are required for each element of a bridge.
• Know how much clearance is needed for reinforcement located in various parts of the bridge, and be able to recognize the spacing and diameter of reinforcement called out in the plans.
• Understand the importance of the superstructure, and all the elements that make it up – including bearing assemblies, concrete beams or steel girders, the deck, barriers, medians, sidewalks, railings, drainage elements, lighting, utility conduits, and expansion devices.
• Perceive the importance of other structures associated with bridges, such as slope paving, approach panels and retaining walls, know their functions and how they should be constructed.
• List the conditions that necessitate repair and rehabilitation of bridges, and understand the methods that are used to perform those repairs.

PREREQUISITES: Participants must have completed Aggregate Production; Certified in Concrete Field 1, Concrete Field 2, and Grading and Base 1 PRIOR TO receiving the BCI certification.

IMPORTANT: ***NEW IN 2019*** The following AASHTO eLearning is also required:

• Construction Inspection of Structures Series: Subsurface - AT-TC3CN053-17-T1
• Construction Inspection of Structures Series: Substructures - TC3CN054-17-T1
• Construction Inspection of Structures Series: Superstructures - TC3CN055-17-T1
• Construction Inspection of Structures Series: Rehabilitation and Maintenance of Structures - AT-TC3MN032-17-T1
The following AASHTO eLearning is strongly recommended:

- Concrete Series: Basics of Cement Hydration - TC3MS009-15-T1
- Concrete Series: Fresh Properties - TC3MS010-15-T1
- Math Basics Series for Highway Technicians: Introductory Math Concepts - AT-TC3ED004-17-T1

**AUDIENCE:** Employees affiliated with Bridge Construction operation who are certified in Aggregate Production, Concrete Field 1, Concrete Field 2, and Grading and Base 1.

**CLASS DETAILS:**

- Monday, January 27, 2020 – Friday, February 7, 2020; 8:00 a.m. – 4:30 p.m. (10 days)
- MnDOT Training and Conference Center (1900 W County Rd I, Shoreview MN 55126)

**BRING TO CLASS:**

- A calculator (not on your phone)
- Notepaper
- Number 2 pencils
- Highlighter

**CLASS FEE:** $1,800.00 - Meals will not be provided.

**REGISTRATION PROCEDURES:**

Follow your organization’s external training registration procedure then register by following LSC’s process. MnDOT Employees do NOT register yourself with LSC’s registration system. Your Training and Development Specialist (TDS)/Training Representative will register you with LSC. If you register with LSC and attend or just show up to this training without encumbering funds with an EIOR you will be required to complete a Purchasing Violation form.

**CANCELLATION PROCEDURES:**

**LSC Cancellation Policy:**

Cancellations and class changes must be made in writing and received by the Lake Superior College (LSC) Registration Office at least seven (7) calendar days prior to the class. No refunds will be issued after that time. If a student misses a class, they are required to re-register and resubmit the class fee. Cancellations may be mailed to the address on the brochure cover. If faxing, it is your responsibility to make sure the transmission is confirmed.

**CLASS INFO:**

For registration questions: Shannon Wark, Shannon.wark@lsc.edu, 218-733-5959

Content Expert: Mark Spafford, Mark.Spafford@state.mn.us

**ADDITIONAL INFO:**

For additional information visit the Technical Certification Program website at http://www.dot.state.mn.us/const/tcp/.

Individuals who need a reasonable accommodation to participate in this event, please contact Janet Miller, Disability Programs Coordinator, MnDOT Office of Equity and Diversity, 395 John Ireland Boulevard, St. Paul, MN 55155, or send an e-mail to janet.rae.miller@state.mn.us