

2017 National ABC Conference – Pre-Conference Workshops

W-01: Implementation of the new AASHTO Guide Specifications for Accelerated Bridge Construction

Wednesday, December 6, 2017 – 8:00 a.m. to 12:00 p.m.

Introduction:

This workshop introduces practicing engineers to the new AASHTO Guide Specifications for Accelerated Bridge Construction. These specifications include both design provisions and construction provisions. The guide specification covers all of the most common forms of ABC in use today in the United States. The design portion of the workshop will focus on loads and load factors and design and construction of elements, connections (including seismic), and bridge systems. The construction portion of the workshop will focus on temporary works, assembly planning, and management of tolerances.

Workshop Organizer:

Mike Culmo, P.E., CME Associates, Inc.

Program:

8:00 a.m.	Welcome and Introduction to Workshop	Moderator – Mike Culmo, P.E.
8:15 a.m.	NCHRP 12-102 Project <ul style="list-style-type: none">• Synthesis• Technology Readiness• Specification Development• Integration with NCHRP 12-98	Mike Culmo, P.E.
8:45 a.m.	General Design Provision <ul style="list-style-type: none">• Responsibilities• Load Combinations and Load Factors	Mike Culmo, P.E.
9:15 a.m.	Design of Prefabricated Elements <ul style="list-style-type: none">• Element Design• Non-seismic Connections	Mike Culmo, P.E.
10:00 a.m.	<i>Break</i>	
10:15 a.m.	ABC Seismic Design <ul style="list-style-type: none">• Analysis & Design Methods• Load Path• Systems, Elements, & Sub -Systems• Energy Dissipation and Capacity Protection• Connection Design	Stuart Bennion, P.E.

- General Seismic Connection Design
- Mechanical Connections
- Grouted Ducts
- Pocket Connections
- Socket Connections
- Two Stage Integral Pier Cap

11:00 a.m.	Other Topics Covers	Mike Culmo, P.E.
	<ul style="list-style-type: none"> ● Detailing Requirements ● Durability of ABC Technologies ● Construction Specifications <ul style="list-style-type: none"> ○ Temporary Works ○ Fabrication and Assembly Planning ○ Layout and Tolerance ○ Concrete Structures ○ Steel Structures ○ GRS/IBS 	
12:00 p.m.	Adjourn	

Speakers and Bios:

Mike Culmo, P.E., culmo@cmeengineering.com (Organizer & Moderator)

Mike is Vice President of Transportation and Structures with CME Associates, Inc. He has 34 years of experience in bridge and highway design. Mike has extensive experience in the design of steel, concrete, prestressed concrete and timber bridges, and has been responsible for directing a design team on new expressway bridges, bridge rehabilitation, and related highway structures. Prior to joining CME, he was employed for over 13 years with the Connecticut DOT and, in his last position there, was the assistant State Bridge Engineer. Mike holds a Bachelor’s degree in Civil Engineering and a Master’s degree in Structural Engineering, both from the University of Connecticut. He is a licensed professional engineer in six states.

Stuart Bennion, P.E., stuart.bennion@abam.com

Stuart Bennion is a project manager with BergerABAM. He holds a Bachelor’s degree in Civil Engineering from Washington State University and is a professional and structural engineer in Washington State. Stuart has 16 years of experience in bridge and highway design. His first 10 years were with the Washington State Department of Transportation (WSDOT) Bridge and Structures Office. His areas of emphasis have been with high seismic analysis, construction practices, and technology advancement. Stuart was part of WSDOT’s transition to using both the AASHTO Load and Resistance Factor Design (LRFD) Bridge Design Specifications and the AASHTO Guide Specifications for LRFD Seismic Bridge Design. His last position with WSDOT was as the assistant state construction engineer – structures, where he worked for two years before joining BergerABAM.