



CERTIFICATION PROGRAMS

Supplemental Requirements for Fabricators of Steel Bridges (SBR, IBR, ABR)

Preface

The 2019 revision is not a complete revision of the *Supplemental Requirements for Fabricators of Steel Bridges (SBR, IBR, ABR)*. The following changes have been made in this revision:

Preface - New Section Added

Section 1 Before the Site Audit

- BR1.1 - Editorial

Section 2 During the Site Audit

- BR2.6 - Editorial

Section 3 Fabricators of Intermediate Bridges (IBR)

- BR3.3 - Editorial

Section 4 Fabricators of Advanced Bridges (ABR)

- BR4.1 - Editorial
- BR4.2 - Editorial

Scope

This document (hereinafter referred to as *Supplements*) provides the additional requirements for the AISC Certification Program for Fabricators of Steel Bridges (SBR, IBR, ABR) (hereinafter referred to as the *Program*).

Section 1 Before the Site Audit

- BR1.1 Participants/Applicants are required to have available and comply with these *Supplements* and the *Governing Requirements for Certification Programs* (hereinafter referred to as *Requirements*).
- BR1.2 The AISC *Certification Standard for Steel Fabrication and Erection, and Manufacturing of Metal Components—2016* (hereinafter referred to as *Standard*) is the primary normative document for all Certification Programs. Whenever there is a conflict between the *Supplements* and the *Standard*, the *Supplements* govern.
- BR1.3 *Standard* Chapter 1 (General Requirements) and Chapter 4 (Bridge Fabricator Requirements) apply to this *Program*.
- BR1.4 This *Program* will issue certifications as Certified Steel Bridge Fabricator. It includes three categories: Simple Bridge (SBR), Intermediate Bridge (IBR), and Advanced Bridge (ABR). Each facility of a Participant/Applicant can only apply for and be certified under one category. Refer to the *Standard* for descriptions of these categories.



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- BR1.5 Participants/Applicants are eligible to apply for the Sophisticated Painting Endorsement (SPE). For information and requirements concerning this endorsement, refer to the *Requirements* Section 2, “Applying for Certification,” or Section 8, “Making Changes to the Certification Scope,” and the *AISC Supplemental Program Requirements for Applicators of Complex Coatings Endorsement*.
- BR1.6 Participants/Applicants are eligible to apply for the Fracture Critical Endorsement (FC). For information and requirements concerning this endorsement, refer to the *Requirements* Section 2, “Applying for Certification,” or Section 8, “Making Changes to the Certification Scope,” and the *AISC Supplemental Program Requirements for Fracture Critical Endorsement*.
- BR1.7 Applicants to this *Program* must submit an application, payment, and all documents required by the *Application Document Submittal for AISC Certification—Fabricators and Manufacturers*.

Section 2 During the Site Audit (All Categories—SBR, IBR, ABR)

- BR2.1 The Quality Management System (QMS) that this *Program* applies to will be audited. Sample jobs/contracts of steel bridge work will be used to demonstrate capability to meet the *Program* regardless of whether the job/contract requires an AISC-certified bridge fabricator.
- BR2.2 Participants/Applicants are required to have work in the shop at the time of the site audit that can be used to demonstrate compliance with the provisions of the *Program*. This work must be steel bridge work meeting the category. If it is known or suspected that there will not be this type of work in the shop at the time of the site audit, AISC Certification must be contacted at least 30 days prior to the site audit to discuss alternate arrangements.

Solutions may include the performance of mock exercises or using other work of equal complexity that follows the QMS practices to demonstrate capability. Failure to have adequate work in the shop during the site audit could result in an Additional Site Audit fee being required or in a Rescheduled Site Audit fee.

Intermediate bridge fabricators refer to Section 3 below for further details.

Advanced bridge fabricators refer to Section 4 below for further details.

- BR2.3 Section 1.3 of the *Standard* is amended by the following:
- All references must be available in English.
 - Availability of the current editions of the following additional references are required. (*Note:* Other editions may also be required by existing participant contracts.)
 - AASHTO/AWS D1.5M/D1.5, *Bridge Welding Code*
 - SSPC-PA 1, *Shop, Field, and Maintenance Coating of Metals*
 - SSPC-PA- 2, *Paint Application Standard No. 2*
 - AASHTO/NSBA, *Steel Bridge Fabrication QC/QA Guide Specifications*
 - AWS D1.1/D1.1M, *Structural Welding Code—Steel*, is not required.



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- BR2.4 The Certified Welding Inspector (CWI) may be an employee of the Participants/Applicants or contracted. In the case of the latter, contract status and qualifications of the CWI must be demonstrable. The CWI must be available during the site audit.
- BR2.5 Participants/Applicants will be audited and evaluated to ensure compliance with the current AWS D1.5M/D1.5, *Structural Welding Code—Steel*, regardless of whether this is required by the sampled contracts and specifications.
- BR2.6 Bolt test method demonstrations will be required at every Initial Certification (RFN) and Full Certification Renewal (RF) facility audit. The demonstrations shall comply with the current RCSC *Specification for Structural Joints Using High Strength Bolts* Section 7, “Pre-Installation Verification,” and with the Rotational Capacity Test for high-strength bolts from the IAW Federal Highway Administration (FHWA).
- BR2.7 Participants/Applicants shall maintain the following documents in compliance with AASHTO/AWS D1.5M/D1.5, *Bridge Welding Code*, and have them available for review during each site audit.
1. One representative Welding Procedure Specification (WPS)
 2. Supporting Procedure Qualification Record (PQR), when required
 3. Welder Performance Qualification Record (WPQR) maintained current and qualified with records of period of effectiveness

Section 3 Fabricators of Intermediate Bridges (IBR)

- BR3.1 Participants/Applicants applying for Intermediate Bridge Certification shall be required to perform mock exercises during each Initial Certification (RFN) site audit unless there is intermediate bridge work in the shop at the time of the site audit. This is in addition to the eligibility requirements of the *Standard* Chapter 4.I.

From Standard Chapter 4.I:

“The fabricator shall have either:

- (a) Supplied plate girder spans with field splices for highway or railroad bridges within the last five years, or*
- (b) Established a documented training program for the purpose of communicating intermediate bridge work functions to the work forces, and demonstrated capability to fabricate intermediate bridges.”*

- BR3.2 Participants renewing their Intermediate Bridge Certification shall be required to perform mock exercises during each Renewal Certification (R1, R2 or RF) site audit unless there is intermediate bridge work in the shop at the time of the site audit or intermediate bridge work has been completed within the past two years. This is in addition to the eligibility requirements of the *Standard* Chapter 4.I.
- BR3.3 Participants/Applicants renewing or applying for Intermediate Bridge Certification shall demonstrate that training has been performed at least annually for the communication of the requirements for Intermediate bridge work unless intermediate bridge work has been performed within the past year. This training must be documented and available during the site audit. This is in addition to the eligibility requirements of the *Standard* Chapter 4.I.



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- BR3.4 Participants/Applicants shall maintain the following documents in compliance with AASHTO/AWS D1.5M/D1.5, *Bridge Welding Code*, and have them available for review during each site audit.
1. One representative SAW Welding Procedure Specification (WPS)
 2. Supporting Procedure Qualification Record (PQR)
 3. Welder Performance Qualification Record (WPQR) maintained current and qualified with records of period of effectiveness

Section 4 Fabricators of Advanced Bridges (ABR)

- BR4.1 Participants/Applicants applying for Advanced Bridge Certification shall be required to perform mock exercises during each Initial Certification (RFN) site audit unless there is advanced bridge work in the shop at the time of the site audit. This is in addition to the eligibility requirements of the *Standard* Chapter 4.A.
- BR4.2 Participants renewing their Advanced Bridge Certification shall be required to perform mock exercises during each Renewal Certification (R1, R2 or RF) site audit unless there is advanced bridge or intermediate bridge work in the shop at the time of the site audit or advanced bridge work has been completed within the past two years. This is in addition to the eligibility requirements of the *Standard* Chapter 4.A.
- BR4.3 Participants/Applicants renewing or applying for Advanced Bridge Certification shall demonstrate that training has been performed at least annually for the communication of the requirements for advanced bridge work unless advanced bridge work has been performed within the past year. This training must be documented and available during the site audit. This is in addition to the eligibility requirements of the *Standard* Chapter 4.A.
- BR4.4 Participants/Applicants shall maintain the following documents in compliance with AASHTO/AWS D1.5M/D1.5, *Bridge Welding Code*, and have them available for review during each site audit.
1. One representative SAW Welding Procedure Specification (WPS)
 2. Supporting Procedure Qualification Record (PQR)
 3. Welder Performance Qualification Record (WPQR) maintained current and qualified with records of period of effectiveness

COMMENTARY Provided for clarification of criteria in the *Standard* and includes references to the appropriate section(s) of the *Standard*.

- C1 1.6 **Contract Review** This section requires a “documented procedure” for contract review. As a part of this review, there will be required sign-offs, checksheet completion, or other means of determining that the bid offered is meeting the contract and that any special considerations found in the contract documents have been considered and planned for. During the audit, the auditor will be looking for evidence in the form of records of the outcome of the contract review process.
- C2 1.10.3 **Receipt Inspection** The term “receiving inspection” is not used in the *Standard*. It has been replaced by 1.10.3, where “verification of purchased product, materials and services” is



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used. This verification or inspection can be performed as part of the purchasing or inspection procedure depending on how the company is structured. Section 1.13.2 does mention that “materials shall be inspected before work begins,” which is indicative of an inspection of materials, but if it is done as part of the in-process inspection and a defect is found requiring replacement of the material, then the delay could have a greater impact on the project than if the inspection is performed at or near receipt of material.

- C3 1.12 **Process Control** This section requires “documented procedure(s)” for those fabrication and erection processes that affect quality. A list of minimum required procedures is provided, but what are the procedures that affect quality? The answer to this question is found in the Glossary of the *Standard* by referring to the definition of Fabrication and Erection.
- C4 1.13 **Inspection Sampling** Section 1.13 requires “documented procedure” to ensure that the completed work meets contract documents.
- C5 1.10.2 **Subcontracted Fabrication/Erection** When a Certified company needs to subcontract fabrication/erection, the criteria of 1.10.2 require subcontractors to be evaluated on their ability to meet the requirements of approved construction documents. If the approved construction documents require a Certified Fabricator/Erector, then the subcontractor needs to meet the requirement. When an approved construction document is not met or needs to be changed/deviated from, 1.8.2 for control of construction documents is followed for requesting changes and approval.
- C6 1.14 **Calibration or Adjustment History** These types of quality records provide evidence that the calibration was performed and traceable to a national or international standard, identification of the equipment that was calibrated, to who performed the calibration, to the date of the calibration, and the date the calibration expires or the next calibration is due. The calibration record would also provide evidence of any adjustments that were performed during the calibration process.
- C7 **Quality Control Records** This term is used throughout the *Standard* to identify this type of record. These records are controlled by referring to *Standard* Section 1.9.