**HELPFUL TIPS FOR USING THIS AUDIT GUIDE**

1. This Audit Guide is provided as a reference tool for performing internal audits, recording the audit evidence, and audit results.
2. When using this tool for internal audits, be sure to record the dates of the audit(s) and the names of the auditor(s) performing the activity.
3. This audit guide does **NOT** include the criteria listed in the governing Program Requirements for this certification program. Be sure your internal audit includes the specific Program Requirements.
4. You may find it helpful to add a column to your audit table for recording the location of the specific requirement within your QMS documentation.

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| **Requirement** | **Results** | **Audit Notes** | **Results** |
| **Seismic Erection Endorsement (3.2)**For the erection of structures requiring the use of ANSI/AISC 341, *Seismic Provisions for Structural Steel Buildings*, the erector shall have available and **demonstrate** the ability to work to and meet the requirements of:• ANSI/AISC 341 *Seismic Provisions for Structural Steel Buildings*• AWS D1.8 *Structural Welding Code—Seismic Supplement* |  |  |  |
| **Metal Deck Installation Endorsement (3.3)**When the erector’s work includes the installation of metal deck, the erector shall have available and **demonstrate** the ability to work to and to meet the requirements of ANSI/ SDI *QA/QC Standard for Quality Control and Quality**Assurance for Installation of Steel Deck*. Instructions for metal deck installation shall be provided in the erection plan and the safety plan. |  |  |  |
| **Bridge Erection Endorsement (3.4)**For the erection of bridges, the erector shall have available and **demonstrate** the ability to work to and meet the requirements of AWS D1.5, *Structural Welding Code—Bridge Welding Code*. |  |  |  |
| **3.1 General Erection**The erector shall have available and **demonstrate** the ability to work to and meet the requirements of:• ANSI/AISC 360 *Specification for Structural Steel Buildings*• AISC 303 *Code of Standard Practice for Steel Buildings and Bridges*• RCSC *Specification for Structural Joints Using High-Strength Bolts*• AWS D1.1 *Structural Welding Code—Steel* |  |  |  |
| **3.5. Safety**The erector shall provide access to OSHA Part 1926 *Safety and Health Regulations for Construction* or the appropriate state equivalent to employees and others who require access. |  |  |  |
| **5. Management Responsibility**Executive management shall define, document and adopt a commitment to quality and safety. Executive management shall direct and lead the erector to ensure continuous progress towards achieving these commitments.Executive management is responsible for developing and maintaining a quality management system and a safety management system to meet the requirements of this Standard and the requirements of the approved construction documents and referenced standards. Executive managementshall manage the functions detailed in Elements 5 through 20 of this Standard. |  |  |  |
| **5.1 Policy for Quality**The policy for quality shall include:* A commitment to quality that includes a commitment to meet contract requirements.
* A quality management system that provides a framework for establishing, communicating and reviewing quality goals of the erector’s organization.
* A commitment to training.

Executive management shall establish goals to improve quality. Goals must be measurable and documented through objective evidence.As quality goals are achieved, new goals shall be set that **demonstrate** commitment to continuous improvement. New goals can be a new level of achievement of a previous goal, or a new goal that has not been previously identified.Executive management shall ensure that the company’s policy for quality is understood, implemented and maintained. |  |  |  |
| **5.2 Policy for Safety**The policy for safety shall include:* A commitment to safety that includes at a minimum a commitment to meet federal and/or state requirements for construction safety.
* A safety management system that provides a framework for establishing, communicating and reviewing safety goals of the erector’s organization.
* A commitment to safety training.

Executive management shall establish safety goals. Goals must be measurable and documented through objective evidence.As safety goals are achieved, new goals shall be set that **demonstrate** commitment to continuous improvement. New goals can be a new level of achievement of a previous goal or a new goal that has not been previously identified.Executive management shall ensure that the company’s policy for safety is understood, implemented and maintained. |  |  |  |
| **5.3 Periodic Management Review**Executive management is responsible for periodic review of the erector’s quality management system and safety management system at planned intervals, but annually at a minimum.Records from management reviews shall be maintained according to the erector’s record retention policy. The management review shall encompass the following, at a minimum.1. A brief summary of applicable previous management reviews.
2. Results of any internal and external audits conducted since the previous management review.
3. An assessment of customer feedback and feedback mechanisms, identifying opportunities for improving service quality.
4. An assessment of erected steel nonconformances. Both the number and the severity of nonconformances shall be assessed.
5. An assessment of the erector’s compliance with the documented procedures comprising the quality management system or safety management system.
6. An assessment of the results of equipment inspections, including the adequacy of equipment resources.
7. An assessment of the adequacy of the erector’s training program with respect to the levels of qualification required.
8. An assessment of any proposed or required modifications to the quality management system and safety management system.
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| **5.4 Responsible Quality and Safety Personnel**Executive management shall designate management representatives for quality and safety who shall report directly to (or be a part of) executive management.The designated management representatives for quality and safety may perform other functions within the company, provided that those functions do not conflict with the quality and safety responsibilities.The designated management representative(s) shall have the ability, responsibility and authority to:1. Ensure that documented procedures needed for the quality and safety management systems are established, implemented and maintained in accordance with this Standard.
2. Report to executive management on the performance of the quality management system and safety management system and any need for improvement.
3. Communicate with external parties on matters relating to the quality management and safety management systems.
4. Promote the awareness of customer quality and safety requirements throughout the erector’s organization.
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| **5.5 Resource Management**The erector shall have the resources necessary to comply with the contract documents. Resources shall include, but are not limited to, the resources described below. |  |  |  |
| **5.5.1 Personnel**Personnel performing defined functions shall have the required qualifications and the ability to successfully perform the function. Objective evidence of qualification may be **demonstrated** through biographies, resumes, documented training, and individual licenses or certifications.Personnel may be assigned to more than one function, provided they are qualified and able to perform fully the duties of each position. |  |  |  |
| **5.5.2 Erection Tools and Equipment** The erector shall have under their control the tools and equipment necessary to perform the work. Equipment must be maintained at the level necessary to produce the required quality. |  |  |  |
| **5.6 Quality Management System****5.6.1 General Requirements**The quality management system shall satisfy all of the requirements of this Standard and the requirements of the approved construction documents and referenced standards.The quality management system shall include a quality manual, documented procedures and records as required by this Standard.Requirements may be satisfied in a single document called the quality manual which may incorporate separate documents by reference. |  |  |  |
| **5.6.2 Quality Manual**The quality manual shall contain the following:1. Documented statements of a quality policy and quality objectives as required by this Standard.
2. Documented procedures established for the quality management system (or references to them), along with their associated quality records.
3. Documents needed by the organization to ensure the effective planning, operation, and control of its processes.
4. Organizational chart describing the interrelationship of functional positions that manage, perform, and verify work affecting quality.
5. Job descriptions outlining responsibilities, authority and required qualifications for key positions.
6. Qualification evidence and biographies for individuals in key positions/functions.
7. Equipment list.

Executive management shall define additional documented procedures, drawings or other documents that are required beyond the minimum requirements set by this Standard to meet the needs of the erector’s organization and its customers. |  |  |  |
| **5.6.2.1 Organization**The quality manual shall include a page showing the current revision date and the name and address of the erector. |  |  |  |
| **5.6.2.2 Approval**The highest ranking member of executive management shall sign and date the quality manual. |  |  |  |
| **5.7 Safety Management System** See Element 20. |  |  |  |
| **6. Construction Document Review and Communication**The erector shall develop a documented procedure for contract and project specification review requiring completion of these reviews for each project performed. The review shall begin no later than the erector’s acceptance of responsibility for performing the work. |  |  |  |
| **7. NOT USED** |  |  |  |
| **8. Control of Documents**The erector shall develop documented procedures to control documents related to the quality management system and safety management system.The erector shall also develop documented procedures to control project documents. |  |  |  |
| **8.1.1 Review and Approval**Documents shall be reviewed and approved by the same function and authority level that authorized the original document. |  |  |  |
| **8.1.2 Revision Control**Revisions shall be clearly identifiable and there shall be a method for monitoring and identifying the latest revision.Revisions shall be reviewed for adequacy and approved by the same function and authority level that authorized the original document.Documents shall be legible. |  |  |  |
| **8.1.3 Access**Documents shall be available and readily accessible to all personnel responsible for performing functions affecting the quality of the completed work and all personnel affected by the safety management system. |  |  |  |
| **8.1.4 Communication**Changes and revisions shall be clearly communicated to all personnel responsible for performing functions affecting the quality of the completed work and all personnel affected by the safety management system. |  |  |  |
| **8.2 Project Documents**Documents covered by this section shall include, but not be limited to, contract documents, revised contract documents, shop drawings, erection drawings, RFIs, and quality assurance reports. |  |  |  |
| **8.2.1 Receipt**Contract documents and changes to the contract documents, including but not limited to revised contract documents, change orders, and RFIs, shall be tracked in an orderly manner.Tracking information shall indicate, at a minimum, date of receipt, summary of issue, and ultimate disposition of the change. |  |  |  |
| **8.2.2 Revision Control**The documented procedure shall include provisions to prevent inadvertent use of obsolete documents. Revisions shall be clearly identifiable and there shall be a method for monitoring and identifying the latest revision.Documents shall remain legible. |  |  |  |
| **8.2.3 Access**Documents shall be available and readily accessible to all personnel responsible for performing functions affecting the quality of the completed work and all personnel affected by the safety management system.  |  |  |  |
| **8.2.4 Communication**A transmittal system shall be established to record the distribution of information to personnel, subcontractors and suppliers. Transmittals shall indicate the status of approval and release for erection. |  |  |  |
| **9. Control of Quality Records**The erector shall develop documented procedures for the control of quality records, including quality control records and quality assurance inspection records that provide for record identification, storage, retrieval, retention and disposition. All quality control records, including records of final inspections, shall be reviewed by the quality control inspector. |  |  |  |
| **9.1 Storage**Quality records shall be stored in a manner that minimizes damage, deterioration or loss. |  |  |  |
| **9.2 Retrieval**Quality records shall be accessible in a reasonable time frame. |  |  |  |
| **9.3 Retention**Quality records shall be subject to an established retention policy. The retention period will be, at a minimum, through the acceptance of the work described in Section 7.13.3 of the AISC *Code of Standard Practice*. |  |  |  |
| **9.4 Disposition**The documented procedure for the control of quality records shall contain provisions for the disposition of the records at the end of the retention period. |  |  |  |
| **10. Purchasing**The erector shall develop documented procedures to ensure that subcontractors and suppliers provide contracted services and materials conforming to project requirements. |  |  |  |
| **10.1 Purchasing Data**The erector shall clearly describe subcontracted work and the purchased materials, and services ordered in written purchasing documents. This shall include but not be limited to:a. The type of service, material, class, grade, and other unique identification.b. The applicable specifications, drawings, process requirements, and inspection instructions and any witness points.c. Delivery instructions and date.d. Required quality reports, certified test reports, and certificates of compliance/conformance of purchased materials.e. Safety Data Sheets |  |  |  |
| **10.2 Selection of Subcontractors and Suppliers**The erector shall evaluate and select subcontractors and suppliers on the basis of their ability to meet subcontract requirements, the erector’s quality management system, the requirements of this Standard, and the requirements of the approved construction documents and referenced standards.The erector shall develop a documented procedure that describes how the erector conducts initial and ongoing evaluation of all subcontractors and suppliers.Management shall determine:a. Evaluation criteria.b. Reevaluation interval.c. Personnel involved in the evaluation process.The erector shall evaluate subcontractors and suppliers via an audit or documented acceptable past experience. As a minimum, quality of the final products and timely, proper delivery of services or products shall be part of the evaluation. |  |  |  |
| **10.3 Verification of Purchased Product, Materials, and Services**The erector shall establish and implement the inspection or other activities necessary for ensuring that purchased products, materials and services meet project requirements. Purchasing documents, subcontractor and supplier qualification records, and records of the periodic evaluation of subcontractors and suppliers shall be maintained as indicated in Element 9. |  |  |  |
| **10.4 Control of Supplied Material**If materials are supplied by others, the erector shall verify, store and maintain materials in an appropriate fashion. Verification shall include confirmation that the material meets the requirements of the approved construction documents and referenced standards. Supplied material shallbe protected to prevent use for other than its intended purpose. Any such product that is lost, damaged, or is otherwise unsuitable for use shall be recorded and reported as appropriate. |  |  |  |
| **11. Material Identification** The erector shall develop a documented procedure for identification of materials purchased by the erector. Records that provide a basis for material identification shall be maintained as defined for quality control records by Element 9. |  |  |  |
| **12. Erection Process Control**The erector shall develop documented procedures for erection processes necessary to produce a consistent acceptable level of quality of the completed work in accordance with applicable codes and project requirements. |  |  |  |
| **12.1 Welding** The erector’s documented procedures for welding shall meet the requirements of AWS and the requirements of approved construction documents and referenced standards. |  |  |  |
| **12.2 Bolt Installation**The erector’s documented procedures for bolting shall meet the requirements of the RCSC *Specification for Structural Joints Using High-Strength Bolts* and the requirements of approved construction documents and referenced standards. |  |  |  |
| **13. Inspection**The erector shall develop a documented procedure for inspection activities to verify that the completed work meets the requirements of the approved construction documents and referenced standards.The documented procedure shall be consistent with Chapter N of the AISC *Specification for Structural Steel Buildings*.  |  |  |  |
| **PR12** The participant must **demonstrate** that its QCI (as defined in Chapter N in ANSI/AISC 360-2010) are qualified per all applicable codes for erection functions. All QCI qualifications, experience and training requirements must be defined in the participant’s quality manual. |  |  |  |
| **14. Calibration of Inspection, Measuring, and Test Equipment**The erector shall establish a documented procedure to calibrate its inspection, measuring and testing equipment. The documented procedure shall include provisions for:1. A unique identifier for each piece of equipment
2. An equipment list
3. Calibration or adjustment instructions in accordance with the manufacturer’s recommendations
4. Frequency of calibration or adjustment
5. Tracking calibrations, adjustments and repairs
6. Storage and handling

Calibration or adjustment history shall be available.**Rented or borrowed** equipment must be accompanied by a valid calibration certificate and is subject to the requirements of this Element.For equipment that is damaged, dropped, knocked over or functioning improperly, the documented procedure shall include provisions for prominently marking or tagging such equipment to preclude usage and removing the equipment from service until it can be re-calibrated, adjusted or repaired.The precision required of any piece of equipment shall be sufficient to satisfy the acceptance standards of the project specifications or industry standards. |  |  |  |
| **15. Control of Nonconformances**The erector shall develop a documented procedure to identify and control nonconformances. These nonconformances may be identified by the erector’s quality management system, during external audits, or by quality assurance inspections. |  |  |  |
| **15.1 Nonconformance with the Quality Management System**A nonconformance related to the performance of the quality management system shall be documented to the detail level described by the documented procedure. |  |  |  |
| **15.2 Nonconforming Work**The documented procedure for nonconforming work shall provide for identification, documentation, evaluation, treatment of nonconforming work, and notification of the relevant functions concerned. Nonconforming work may also be identified in a quality assurance inspection report. These reports, when received, become quality assurance inspection records. The erector’s procedure shall provide for the disposition of quality assurance inspection records.Nonconforming work shall be clearly marked as soon as practical after it is discovered. Records shall be kept of the pieces affected, the nature of the nonconformance, the treatment selection, authorization, and re-inspectionresults if applicable.The treatment of nonconforming work may include:1. Redesign and rework, as approved.
2. Repair, as approved.
3. Use as-is, as approved.
4. Scrap.

If the treatment is rework or repair, the result will be inspected per project requirements, as well as the erector’s quality control process. Correction of minor misfits as defined in Section 7.14 of the AISC *Code of Standard**Practice* does not constitute nonconforming work. |  |  |  |
| **16. Corrective Action**The erector shall develop a documented procedure for corrective action. Any corrective action taken shall be to the degree appropriate to the magnitude of problems and commensurate with the risks to erection quality and safety.The documented procedure shall include periodic review of records or summaries of nonconformances and of internal and external quality and safety audit reports for determination and initiation of corrective actions.Corrective action shall be applied when:1. There is a nonconformance that is repetitive in nature as identified by periodically reviewing nonconformance reports or summaries for negative trends.
2. Process nonconformances are found during the internal and external quality and safety audits indicating that the quality management system or safety management system may not be implemented and functioning as stated in the quality manual or safety manual.
3. Nonconformance with the quality management system or safety management system is found during the day-today execution of the system.
4. Nonconformance is unacceptable due to cost or severity.
5. A customer complaint has been received.

The corrective action procedure shall address these steps:1. Document a corrective action request (CAR) that includes the nonconformance to be addressed by the corrective action and the requirement that has not been met. The corrective action procedure shall define the functional positions authorized to issue a CAR and initiate the corrective action process.
2. Assign responsibility and establish a time frame for the response to a CAR.
3. Investigate and document the scope of the nonconformance, root causes, corrective measures taken, and list the actions to be taken to prevent recurrence.
4. Communicate the corrective action request and resolution to the management team and appropriate members of the organization.
5. Follow up the corrective action taken with periodic monitoring to assure the corrective action is implemented and is effective.
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| **17. Handling, Storage and Delivery of Product and Materials**Material shall be stored to avoid damage and deterioration as required by the AISC *Code of Standard Practice*. Material shall be protected to prevent use in other than its intended purpose. Any such material that is lost, damaged, or is otherwise unsuitable for use shall be recorded and reportedas appropriate. |  |  |  |
| **18. Training**Personnel responsible for functions that affect quality or safety, including but not limited to, project managers, inspectors, welding personnel, riggers, signal persons and crane operators, shall receive appropriate initial and periodic documented training. Training records are quality recordscontrolled as required in Element 9.Personnel providing training shall have appropriate training or experience in the subject they are teaching. Training course outlines include the subject and the key points.Refer to Element 20 for safety-related training. |  |  |  |
| **19. Internal Audit**The erector shall perform an internal audit of each element of the quality management system and safety management system at least once a year to evaluate their compliance and the effectiveness of implementation. Different parts of the quality management system and safety management systemmay be audited at different times and different frequencies, as long as all elements of the quality management system and safety management system are audited annually. Audits shall be scheduled based on the importance of the area being audited.The management representative for quality or for safety or a qualified individual, independent of the function being audited, shall perform the audit and produce a written record of the audit result from each Element. |  |  |  |
| **20 Safety Management System****20.1 Documentation Requirements** |  |  |  |
| **20.1.1 Safety Manual**The safety manual shall contain the following information at a minimum:1. Safety policy statement
2. Identification of the individual responsible for the safety management system.
3. Safety and health inspections
4. Incident investigation
5. Hazard prevention and control
6. Safety and health training
7. Personal protective equipment
8. Hazard communication
9. Lockout/tag out procedure
10. Respiratory protection
11. Fall protection
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| **20.1.2 Erection Plan**The erector shall prepare an erection plan for every project. The erection plan, in whole or in part, may be described graphically or in text. The erection plan shall include the following information as appropriatefor the project:1. Project name and location.
2. Indication of access for material delivery and equipment delivery, including lay-down, shakeout, and field-assembly areas.
3. Sequence of erection.
4. Dimensions and locations of cranes or other lifting equipment.
5. Required site conditions for the crane location and confirmation of adequate base support for the crane.
6. Sizes, model names or numbers, and capacity charts for lifting equipment.
7. Information regarding the heaviest lift and its radius; the longest radius and its lift weight; and the boom configuration for each at every location of the lifting equipment.
8. Indicate critical lifts, if any, and include the critical lift protocol or procedure
9. Requirements for multi-lift rigging.
10. Types of slings to be used and, if more than one type, the locations in which they will be used.
11. Rigging information for atypical lifts (weight, geometry, center of gravity, etc.) such as slings and hardware, rated lifting beams, beam clamps (including catalog cuts), as applicable to the lift.
12. Designation of crane paths from position to position, indicating load travel paths, swing restrictions, and personnel exclusion zones.
13. Designation of space required for field assembly prior to erection.
14. Identification of special fastening sequences and/or methods.
15. Identification of special or atypical connections.
16. Traffic control notes.
17. Identification of specification requirements for erection, such as plumbing tolerances smaller than those stipulated in the AISC *Code of Standard Practice*.
18. The stability of the structure and individual members during erection shall be checked in accordance with the AISC *Code of Standard Practice* Section 7.10.3.
19. Falsework requirements and corresponding design calculations.
20. Jacking layout and jacking procedure
21. Notation of special problems due to overhead restrictions, underground utilities, barriers to crane tail swing, etc.
22. Documentation covering welding and bolting QCI qualifications in Chapter N of the AISC *Specification for Structural Steel Buildings and Bridges*.
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| **20.1.2 Continued**The erection plan shall be reviewed before the start of erection by the erector’s project management team and be available to all employees assigned to the project. All revisions shall be approved by the site superintendent and communicated to affected personnel at the time of the revision. |  |  |  |
| **20.1.3 Safety Plan**The erector shall prepare a safety plan for every project. The safety plan may be combined with the erection plan only when the erection plan has been prepared in text format.A safety plan shall consider known or reasonably anticipated hazards relating to the project site and construction activities. The safety plan shall include a pre-task analysis for each steel erection activity that occurson the project site, a list of all hazardous materials on the project site, an emergency evacuation plan, and requirements for regularly scheduled safety inspections.The safety plan shall include the following information as appropriate for the project:1. Project name and location.
2. The erector’s emergency contacts on-site and offsite.
3. Fall protection requirements that differ from those in the safety manual.
4. Required personal protective equipment.
5. Protection for openings and perimeters.
6. Special procedures required, such as but not limited to, lockout/tagout, confined space training and lead exposure mitigation.
7. Special training required.
8. Medical services available on site, contact information for emergency services, and emergency evacuation procedures.
9. Employee drug-testing requirements.
10. Requirements for work attire.

The safety plan shall be reviewed before the start of erection by the erector’s project management team and be available to all employees assigned to the project. All revisions shall be approved by the individual responsible for the safety management system and communicated to affected personnel at the time of the revision. |  |  |  |
| **20.1.4 Other Project-Specific Requirements**In accordance with OSHA Subpart R, the AISC *Code of Standard Practice,* and contract documents, prior to the start of erection the erector shall have documentation or other evidence that required site conditions have been met.In accordance with the AISC *Code of Standard Practice* and contract documents, the erector shall have documentation or other evidence that the required information in the AISC *Code of Standard Practice* Section 7.10 has been provided. |  |  |  |
| **20.2 Safety Training**Safety training shall include weekly safety training talks and an initial safety orientation for each employee. Safety training shall include the requirements of OSHA 1926 as applicable. |  |  |  |