

Transitioning to the New Erector Standard from a Checklist

With the release of the Standard, what does that mean for the industry and you?

AISC Certification will be introducing an updated Erector Certification Program in 2014, which will be based on the new *Program Requirements for Erectors*. This document will be the governing criteria for the program and will reference the 2013 *Standard for Structural Steel Erectors* (AISC 206-13). Both documents can be found at www.aisc.org/certification.

This program update will supersede the former erector checklist criteria and the existing categories (Certified Steel Erector and Advanced Certified Steel Erector). The updated program is designed to ensure that companies have procedures in place and demonstrate that they are following them. AISC's Fabricator QMS Programs have already completed a similar transition.

New erector applicants who apply beginning September 1, 2014 must meet the new program requirements. For currently certified erector participants, the conversion from the current Certified or Advanced Certified Erector Checklists to the new program requirements will begin on August 1, 2015. The conversion is mandatory for all participants and will be completed by August 2016.

This program is part of an ongoing effort to transition AISC Certification programs to a standard-based approach to quality management. The new requirements and standard will better communicate to owners and specifiers exactly what the Erector Certification Program provides. It also continues to offer the industry a valuable means for qualifying firms and serves as an effective way for those firms to communicate their commitment and capability with respect to quality.

"This Erector Program update promotes a standard-based approach to achieving quality in structural steel erection," noted Jacques Cattan, AISC vice president responsible for certification. "Owners, general contractors and engineers who work with AISC-certified steel erectors will benefit because this approach is more economical than the costs that often result from fixing what is found after trying to inspect quality into the product later."

Table 1 outlines the new erector standard and compares it to the erector certification checklists. As always, if you have additional questions or comments, please feel free to contact AISC Certification at certification@aisc.org.

Standard for Structural Steel Erectors—2013 (AISC 206-13)*

Element Number	Description of Element	Standard v. Checklist	Checklist Requirement
1.0	Scope	Not previously in Checklists	
2.0	Not Used	Not previously in Checklists	
3.0	References	Not previously in Checklists	
4.0	Not Used	Not previously in Checklists	
5.0	Management Responsibility	Standard requires more detail	
	5.1 Policy for Quality	Standard requires more detail	AP15 – Is there a corporate policy stating quality goals?
	5.2 Policy for Safety	Standard requires more detail	AP5 – Is there a corporate policy stating safety goals? OP2 – Are personnel aware of the corporate safety policy?
	5.3 Periodic Management Review	Not previously in Checklists	
	5.4 Responsible Quality and Safety Personnel	Standard requires more detail	MG3 – Does applicant have an individual on staff assigned to safety functions? Note: the individual may perform other functions in addition to the duties related to safety. OP9 – Does the applicant assign safety responsibilities on the site to a specific individual?
	5.5 Resource Management	Standard requires more detail	AP2 – Are there job descriptions for positions within the organization? AP3 – Is there biographical information for all key personnel? MG10 – Does applicant have a record of the craft workers who are certified welders? OP24 – Are crane operators CCO certified or equivalently trained and/or experienced? OP46 – Is there a structural engineer on staff or available on a regular basis to address temporary shoring or false work needs and other engineering requirements? AP12 – Is there a procedure for periodic inspection of equipment, particularly lifting equipment (specifically lifting beams, cranes and rigging equipment)? OP22 – Are there records of preventive maintenance? OP26 – Is there a functioning procedure for maintenance of equipment that includes inspections on a regular basis? OP28 – Are proper and adequate tools, power and compressed air available and in use to perform the tasks described in the SSPP and performed on the site?
	5.6 Quality Management System	Standard requires more detail	AP18 – Is there a list of erection equipment? OP25 – Is there a list of all the equipment sent to the job site by the equipment manager or foreman? AP20 – Is there an organization chart showing general office and site supervision and staff with lines defining authority and communication?
	5.7 Safety Management System	Standard requires more detail	AP4 – Does the applicant have a documented safety program?
6.0	Construction Document Review and Communication	Standard requires more detail	MG2 – Does management review project safety and quality requirements prior to the start of erection?
7.0	Not Used	Not previously in Checklists	
8.0	Control of Documents	Standard requires written procedure	OP14 – Are specifications or a summary of specifications and special instructions kept on site?
	8.1 Quality Management System and Safety Management System Documents	Standard requires more detail	OP1 – Are job superintendents and foremen knowledgeable and conversant in the requirements of the company safety manual?

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	8.2	Project Documents	Standard requires more detail	<p>OP12 – Are a complete set of erection drawings and shop detail drawings maintained at the job site?</p> <p>OP38 – Are requests for information necessary to resolve discrepancies and variations from contract requirements documented?</p> <p>OP15 - Is there a procedure at the job site for processing revised and voided drawings?</p> <p>OP18 – Is there a record of an anchor bolt survey?</p> <p>OP20 – Does the erector have records to demonstrate that he proceeds with erection only after receiving contractor’s notification to proceed after concrete has sufficiently cured and that anchor rods, if modified, have the approval of the EOR (engineer of record)?</p>
9.0	Control of Quality Records		Standard requires written procedure	MG14 – Are records kept of daily/weekly/monthly safety checks as may be required in the various safety procedures of the company?
	9.1	Storage	Not previously in Checklists	
	9.2	Retrieval	Not previously in Checklists	
	9.3	Retention	Not previously in Checklists	
	9.4	Disposition	Not previously in Checklists	
10.0	Purchasing		Standard requires written procedure	MG13 – If applicant purchases items such as, but not limited to, field bolts, weld wire, flux, fabrications, paint, etc., are these items ordered per the applicable specifications called for in the contract documents?
	10.1	Purchasing Data	Standard requires more detail	OP39 – In the event the applicant purchases weld wire, steel material, paint, etc., are the manufacturer’s test reports or certificates of compliance on file at the location where the material is being utilized?
	10.2	Selection of Subcontractors and Suppliers	Standard requires written procedure	<p>MG15 – Is there a graduate engineer on staff or available on a contract basis to provide guidance on engineering matters for the company? (The company may employ consultants for specific projects or established procedures to supplement the staff engineering requirement.)</p> <p>MG21 – In the event the applicant is the prime contractor, are procedures in place to evaluate whether fabrication (including machining castings, galvanizing, etc.) is furnished in accordance with the contract documents?</p>
	10.3	Verification of Purchased Product, Materials and Services	Standard requires more detail	OP40 – Have controls been established to monitor the receipt of incoming material?
	10.4	Control of Supplied Material	Standard requires more detail	OP40 – Have controls been established to monitor the receipt of incoming material?
11.0	Material Identification		Standard requires written procedure	
12.0	Erection Process Control		Standard requires written procedure	<p>OP29 – Have qualified personnel been assigned the responsibility of bolting and welding joints in accordance with applicable specifications?</p> <p>OP31 – Has the person responsible for bolting or welding of joints implemented a procedure to verify that connections are made to a specific sequencing plan?</p> <p>OP32 – Does the erector have hole-making equipment at the job site that allows holes to be made in accordance with the plans and specifications?</p>

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	12.1	Welding	Standard requires more detail	AP17 – Are representative weld procedures submitted? OP33 – Are welders qualified per AWS D1.1 or D1.5? OP34 – Do welders understand, comply with, and check their welds to the workmanship and technique requirements of AISC, AWS or other requirements specified by the contract? OP35 – Are flux and rod ovens adequate and close enough to where the work is being performed and are they operating per the latest AWS requirements?
	12.2	Bolt Installation	Standard requires more detail	AP16 – Is there a bolt installation procedure? OP30 – Are written bolt-tightening procedures understood by supervision and the bolting crews and available for employees performing the bolting? Is there evidence that the procedures are being followed?
13.0	Inspection		Standard requires written procedure	MG16 – If welding is required, is a competent welding technician (such as a CWI) employed by the applicant? MG17 – If utilized or required by contract, are testing service personnel qualified in accordance with SNT TC1-A? OP13 – Are job site superintendents and foremen conversant with current workmanship requirements such as those contained in AWS, AREMA, AISC or other specifications? OP31 – Has the person responsible for bolting or welding of joints implemented a procedure to verify that connections are made to a specific sequencing plan? OP44 – Is a quality control program in effect to allow management to assess whether work is being performed according to specifications?
14.0	Calibration of Inspection, Measuring and Test Equipment		Not previously in Checklists	
15.0	Control of Non-Conformances		Standard requires more detail	AP19 – Is there a Non-Conformance Procedure? OP45 – Is there a functioning written procedure for the correction of non-conforming material or work in process?
	15.1	Non-conformance with the Quality Management system	Not previously in Checklists	
	15.2	Non-conforming Work	Not previously in Checklists	
16.0	Corrective Action		Standard requires written procedure	
17.0	Handling, Storage and Delivery of Product and Materials		Not previously in Checklists	
18.0	Training		Standard requires more detail	MG4 – Does applicant have documented training for both supervisory and hourly personnel on their internal safety procedures? MG5 – Does applicant have records of craft workers involved in ongoing training courses? MG6 – Is training conducted and documented on what constitutes perimeter and hole protection? MG7 – Is fall hazard training conducted? MG8 – Is Multiple Lift rigging training conducted as appropriate? MG9 – Is Connector Procedures training conducted? MG10 – Does applicant have a record of the craft workers who are certified welders? OP36 – Is there a record of training of aerial lift operators?
19.0	Internal Audit		Standard requires written procedure	

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20.0	Safety Management System	Not previously in Checklists	
	20.1 Documentation Requirements	Standard requires more detail	<p>NAP8 – Is there a lock-out/tag-out program? AP9 – Is there a procedure for control of protection of openings? AP10 – Is there a procedure for fall protection? AP11 – Is there a procedure for defining the use of personal protective equipment? MG11 – Does executive management receive safety reports per a written procedure from each job site? MG14 – Are records kept of daily/weekly/monthly safety checks as may be required in the various safety procedures of the company? MG22 – Is there a procedure for rivet removal? Does the company have a training program for personnel on jobs with substantial rivets to be removed? MG23 – Does the company have a lead exposure procedure? Is periodic testing documented? Are written records available? MG24 – Are there procedures to identify and deal with fume, smoke and dust?</p> <p>OP3 – Are all accidents reported to Executive Management? OP6 – Are MSDS available to the workers? OP7 – Is there a first aid/safety station available and is emergency response accessible? OP37 – Is there evidence that the lock-out/tag-out program is used? OP47 – Does the company have a Hazardous Material Communication training program? AP7 – Is there a procedure for rivet removal? AP14 – Is there a procedure to use in preparing a Project Specific Erection Plan as defined in the Program Guidelines? MG1 – Are Project Specific Erection Plan, Project Specific Safety Plan available for a selected sample of projects on the project listing? MG20 – Are erection requirements (such as adjustments, erection aids, delivery sequencing and similar items) reviewed between the erector and the fabricator to allow adjustments to be incorporated into subsequent shop detail drawings? MG25 – When jacking is required, are jacking procedures in place? OP8 – Is the Project Specific Erection Plan being implemented and communicated in the field? OP16 – Is there a specific person at the site responsible for structure stability/ erection bracing? OP17 – Is the stability provision of the Project Specific Erection Plan being effectively implemented? OP21 – Is a specific person responsible at each job site for the hoisting of materials? OP23 – Is there evidence that critical lifts have been controlled in accordance with the Project Specific Erection Plan? OP41 – Are there procedures in place to control “capacity” lifts? OP42 – Is there a record indicating that lines and grades have been checked and controlled? AP13 – Is there a procedure to use in preparing a Project Specific Safety Plan as defined in the Program Guidelines? MG1 – Are Project Specific Erection Plan, Project Specific Safety Plan available for a selected sample of projects on the project listing? OP10 – Is there evidence, and are there records that perimeters and openings are protected? OP11 – Are fall protection practices periodically monitored and recorded by a person trained in fall protection and authorized to require corrections as needed? OP18 – Is there a record of an anchor bolt survey? OP20 – Does the erector have records to demonstrate that he proceeds with erection only after receiving contractor’s notification to proceed after concrete has sufficiently cured and that anchor rods, if modified, have the approval of the EOR (engineer of record)?</p>

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	20.2	Safety Training	Standard requires more detail	OP4 – Does applicant hold a safety meeting on the site per their documented safety plan? OP5 – Is there evidence of safety orientation for newly hired workers?

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