# **GENERAL NOTES** (cont.)

### Special Inspection

1. Special inspection is to be provided in addition to the inspections conducted by the department of building safety and shall not be construed to relieve the owner or his authorized agent from requesting the periodic and called inspections required by the applicable building code. Owner shall engage and pay for a qualified testing agency to perform special inspections.

#### Required Special Inspections

1. In addition to the regular inspections, the following items will also require special inspection in accordance with the applicable building code.

- A. Soils compliance prior to foundation inspection (compacting fill, special grading)
- B. Structural concrete over 2,500 psi
- Structural steel fabrication
- High strength bolts Cold Formed Steel Deck

Field welding

- 2. Special inspector shall meet the qualifications as stated in the applicable building code and shall perform the duties and responsibilities as outlined in the applicable building code. The special inspector shall provide written documentation to the building official demonstrating his or her competence and relevant experience or training. Experience or training shall be considered relevant when the documented experience or training is related in complexity to the same type of special inspection activities for projects of similar complexity and material qualities. These qualifications are in addition to qualifications specified in others sections of the applicable building code.
- 3. Special inspection shall meet the requirements of the applicable building code. Special inspector(s) shall be hired by the owner to perform the required special inspections. The names of persons or firms who are to perform the special inspections shall be forwarded to the building official for approval. The special inspector(s) shall complete and submit all forms required by the building department having jurisdiction.
- 4. Access for special inspection: The construction or work for which special inspection is required shall remain accessible and exposed for special inspection purposes until completion of the required special
- 5. The special inspector(s) shall:
- A. Observe the work assigned for conformance to the approved drawing and specifications. B. Furnish inspection reports to the engineer of record and building department. Discrepancies shall be brought to the immediate attention of the contractor for correction, then, if not corrected to the
- engineer and the building department. C. Submit to the engineer of record and the building department a signed final report stating that the work was in conformance with the approved drawings and specifications and the applicable workmanship provisions of the applicable building code.

## 6. Special Inspection Notes:

- A. Continuous special inspection is always required during the performance of the work unless specifically noted below.
- B. Where fabrication of structural load-bearing members and assemblies is being performed on the premises of a fabricator's shop, continuous special inspection is required during the performance of the work except as allowed in the applicable building code and unless specifically noted below. C. It is the responsibility of the contractor to provide the special inspector(s) with advance notice, no less than one working day, of the initiation of any work required to have special inspections. All work performed without required special inspection will be subject to removal.
- 7. Types of work requiring special inspections are:
- A. Structural steel elements of buildings and structures as required by AISC 360 as referenced in the applicable building code, see Table 1.
- Exceptions include: a. Special Inspection of steel fabrication process shall not be required where the fabricator does not perform any welding, thermal cutting or heating operation of any kind as part of the fabrication process. In such cases, the fabricator shall be required to submit a detailed procedure for material control that demonstrates the fabricator's ability to maintain suitable records and procedures such that, at any time during the fabrication process, the material specification, and grade for the main stress-carrying elements are capable of being determined. Mill test reports shall be identifiable to the main stress-carrying elements required by the approved construction documents.
- B. Cold formed steel deck as required by SDI (Steel Deck Institute) QA/QC as reference in the applicable building code, see Table 2.
- Open web steel joists and joist girders as required per Table 3. D. Special inspection for existing site soil conditions, during site preparation and fill placement, to
- ensure load-bearing requirements in compliance with applicable building code and Table 7 except as allowed in applicable building code.
- E. Fabricated items: where fabrication of structural, load-bearing or lateral load-resisting members or assemblies is being conducted on the premises of a fabricator's shop, special inspection of the fabricated items shall be performed during fabrication. Exceptions include:
  - a. Special inspections during fabrication are not required where the fabricator maintains approved detailed fabrication and quality control procedures that provide a basis for control of the workmanship and the fabricator's ability to conform to approved construction documents and the applicable building code. Approval shall be based upon review of fabrication and quality control procedures and periodic inspection of fabrication practices by the building official.
  - b. Special inspections during fabrication are not required where the work is done on the premises of a fabricator registered and approved to perform such work without special inspection. Approval shall be based upon review of the fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices by an approved agency. At completion of fabrication, the approved fabricator shall submittal certificate of compliance to the owner or the owner's authorized agent for submittal to the building official.

## Special Inspections (cont.)

TABLE 1
REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION VERIFICATION AND INSPECTION

	VERIFICATION AND INSPECTION	PERFORM	OBSERVE
X 1.	MATERIAL TEST REPORTS AND CERTIFICATIONS AS LISTED IN AISC 360 FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.	X	
2.	INSPECTION PRIOR TO WELDING:		
Х	a. WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE.	Х	
Х	b. MANUFACTURERS CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE.	Х	
X	c. MATERIAL IDENTIFICATION (TYPE/GRADE)		X
X	d. WELDER IDENTIFICATION SYSTEM.		X
	e. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)		
	<ul> <li>JOINT PREPARATION</li> <li>DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE,</li> </ul>		
X	BEVEL) - CLEANLINESS (CONDITION OF STEEL SURFACES)		Х
	- TACKING (TACK WELD QUALITY AND LOCATION)		
	- BACKING TYPE AND FIT (IF APPLICABLE)		
Х	f. CONFIGURATION AND FINISH OF ACCESS HOLES. g. FIT-UP OF FILLET WELDS		X
X	- DIMENSIONS (ALIGNMENT, GAPS AT ROOT)		Х
^	<ul> <li>CLEANLINESS (CONDITION OF STEEL SURFACES)</li> <li>TACKING (TACK WELD QUALITY AND LOCATION)</li> </ul>	-	^
X	h. CHECK WELDING EQUIPMENT.		X
3.	INSPECTIONS DURING WELDING		
Х	a. USE OF QUALIFIED WELDERS		Х
V	b. CONTROL AND HANDLING OF WELDING CONSUMABLES		V
X	- PACKAGING - EXPOSURE CONTROL		Х
Х	c. NO WELDING OVER CRACKED TACK WELDS		Х
Х	d. ENVIRONMENTAL CONDITIONS - WIND SPEED WITHIN LIMITS		
^	- PRECIPITATION AND TEMPERATURE		
	e. WPS FOLLOWED - SETTINGS ON WELDING EQUIPMENT		
	- TRAVEL SPEED		
Х	<ul><li>SELECTED WELDING MATERIALS</li><li>SHIELDING GAS TYPE/FLOW RATE</li></ul>		Х
	- PREHEAT APPLIED - INTERPASS TEMPERATURE MAINTAINED (MIN/MAX.)		
	- INTERPASS TEMPERATURE MAINTAINED (MIN/MAX.) - PROPER POSITION (F, V, H, OH)		
	f. WELDING TECHNIQUES		
X	<ul><li>INTERPASS AND FINAL CLEANING</li><li>EACH PASS WITHIN PROFILE LIMITATIONS</li></ul>		X
	- EACH PASS MEETS QUALITY REQUIREMENTS		
X 4.	INSPECTIONS AFTER WELDING		Х
X	a. WELDS CLEANED     b. SIZE, LENGTH AND LOCATION OF WELDS	 X	
^	c. WELDS MEET VISUAL ACCEPTANCE CRITERIA	Λ	
	- CRACK PROHIBITION - WELD/BASE-METAL FUSION		
x	- CRATER CROSS SECTION	X	<del></del>
	- WELD PROFILES - WELD SIZE		
	- UNDERCUT - POROSITY		
Х	d. ARC STRIKES	Х	<del></del>
Х	e. k-AREA	X	
Х	f. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	Х	
Х	g. REPAIR ACTIVITIES	Х	
Х	h. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	Х	
5.	WHEN REQUIRED BY AISC 360 APPENDIX 3, SECTION N WELDED JOINTS		
Х	REQUIRING WELD SOUNDNESS TO BE ESTABLISHED BY RADIOGRAPHIC OR ULTRASONIC INSPECTION SHALL BE TESTED BY SPECIAL INSPECTOR	X	
	AS PRESCRIBED IN AISC 360.		
6.	INSPECTIONS PRIOR TO BOLTING		
X	a. MANUFACTURERS CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	Х	
Х	b. FASTENERS MARKED IN ACCORDANCE WITH ASTM		X
	c. PROPER FASTENERS SELECTED FOR THE JOINT DETAIL		^
Х	(GRADE, TYPE, BOLT LENGTH, IF THREADS ARE TO BE		Х
	EXCLUDED FROM SHEAR PLANE)		v
Х	d. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL e. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE		Х
Х	FAYING SURFACE CONDITION AND HOLE PREPARATION, IF		Х
	SPECIFIED, MEET APPLICABLE REQUIREMENTS  f DDE INSTALLATION VEDICION TESTING BY INSTALLATION		
X	f. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER		X
	ASSEMBLIES AND METHODS USED.		
X	g. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS		X
7.	INSPECTIONS DURING BOLTING		
Х	a. FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN		V
a 1	ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	<del></del>	Х
	b. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO		Х
X			
Х	THE PRE-TENSIONING OPERATION  c. FASTENER COMPONENT NOT TURNED BY THE WRENCH		
			Х
X X	c. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING  d. FASTENERS ARE PRE-TENSIONED IN ACCORDANCE WITH THE	 	
Х	c. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING		x
x x x	c. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING      d. FASTENERS ARE PRE-TENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM		
x x x	c. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING      d. FASTENERS ARE PRE-TENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TO THE FREE EDGES.  INSPECTIONS AFTER BOLTING      a. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED	  X	
X X X X 8. X	C. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING  d. FASTENERS ARE PRE-TENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TO THE FREE EDGES.  INSPECTIONS AFTER BOLTING  a. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS  INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION	  X	
X X X X 8. X	c. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING      d. FASTENERS ARE PRE-TENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TO THE FREE EDGES.  INSPECTIONS AFTER BOLTING      a. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	  X	
X X X X 8. X	C. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING  d. FASTENERS ARE PRE-TENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TO THE FREE EDGES.  INSPECTIONS AFTER BOLTING  a. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS  INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION	  X	
X X X 8. X	C. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING  d. FASTENERS ARE PRE-TENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TO THE FREE EDGES.  INSPECTIONS AFTER BOLTING  a. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS  INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT		

• 'OBSERVE' SHALL MEAN TO INSPECT THESE ITEMS ON AN INTERMITTENT BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS. FREQUENCY OF OBSERVATIONS SHALL BE ADEQUATE TO CONFIRM THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE APPLICABLE DOCUMENTS. IN THE EVENT THAT OBSERVATIONS DETERMINE THAT THE MATERIALS AND/OR WORKMANSHIP ARE NOT IN CONFORMANCE WITH THE APPLICABLE DOCUMENTS, ADDTIONAL INSPECTIONS SHALL BE PERFORMED TO DETERMINE THE EXTENT OF NON-CONFORMANCE.

• 'PERFORM' SHALL MEAN TO PERFORM THESE TASKS PRIOR TO FINAL ACCEPTANCE FOR EACH ITEM OR ELEMENT.

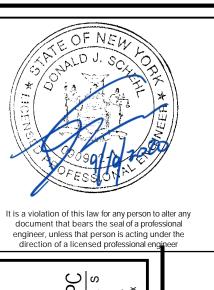
TABLE 2
REQUIRED VERIFICATION AND INSPECTION OF COLD FORMED STEEL DECK

APPLICABLE TO PROJECT	VERIFICATION AND INSPECTION	PERFORM	OBSERVE
	INSPECTION OR EXECUTION TASKS PRIOR TO DECK PLACEMENT:		
Х	a. VERIFY COMPLIANCE OF MATERIALS (DECK AND DECK ACCESSORIES) WITH CONSTRUCTION DOCUMENTS, INCLUDING PROFILES, MATERIAL PROPERTIES, AND BASE METAL THICKNESS.	X	
Х	b. DOCUMENT ACCEPTANCE OR REJECTION OF DECK AND DECK ACCESSORIES.	X	
	2. INSPECTION OR EXECUTION TASKS AFTER DECK PLACEMENT:		
Х	a. VERIFY COMPLIANCE OF DECK AND ALL DECK ACCESSORIES INSTALLATION WITH CONTRUCTION DOCUMENTS	Х	
Х	b. VERIFY DECK MATERIALS ARE REPRESENTED BY THE MILL CERTIFICATIONS THAT COMPLY WITH THE CONSTRUCTION DOCUMENTS.	Х	
х	c. DOCUMENT ACCEPTANCE OR REJECTION OF INSTALLATION OF DECK AND DECK ACCESSORIES.	Х	
	3. INSPECTION OR EXECUTION TASKS AFTER DECK PLACEMENT:		
Х	a. WELDING PROCEDURE SPECIFICATION (WPS) AVAILABLE		Х
Х	b. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE		Х
Х	c. MATERIAL IDENTIFICATION (TYPE / GRADE)		х
X	d. CHECK WELDING EQUIPMENT		Х
	4. INSPECTION OR EXECUTION TASKS DURING WELDING:		1
Х	a. USE OF QUALIFIED WELDERS		Х
Х	b. CONTROL AND HANDLING OF WELDING CONSUMABLES		X
X	c. ENVIRONMENTAL CONDITIONS (WIND SPEED, MOISTURE, TEMPERATURE)		X
X	d. WPS FOLLOWED		X
	5. INSPECTION OR EXECUTION TASKS AFTER WELDING:		
X	a. VERIFY SIZE AND LOCATION OF WELDS, INCLUDING SUPPORT,	X	
X	b. WELDS MEET VISUAL ACCEPTANCE CRITERIA	X	
X	c. VERIFY REPAIR ACTIVITIES	X	-
X	d. DOCUMENT ACCEPTANCE OR REJECTION OF WELDS	X	
	INSPECTION OR EXECUTION TASKS PRIOR TO MECHANICAL FASTENING:     a. MANUFACTURER INSTALLATION INSTRUCTIONS AVAILABLE FOR		
Х	MECHANICAL FASTENERS.		X
X	b. PROPER TOOLS AVAILABLE FOR FASTENER INSTALLATION		Х
X	c. PROPER STORAGE FOR MECHANICAL FASTENERS		Х
	7. INSPECTION OR EXECUTION TASKS DURING MECHANICAL FASTENING		1
X	a. FASTENERS ARE POSITIONED AS REQUIRED		Х
Χ	b. FASTENERS ARE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS		X
	8. INSPECTION OR EXECUTION TASKS DURING MECHANICAL FASTENING		
Х	a. CHECK SPACING, TYPE, AND INSTALLATION OF SUPPORT FASTENERS	Х	
Х	b. CHECK SPACING, TYPE, AND INSTALLATION OF SIDELAP FASTENERS	Х	
Х	c. CHECK SPACING, TYPE, AND INSTALLATION OF PERIMETER FASTENERS	Х	
Х	d. VERIFY REPAIR ACTIVITIES	Х	
Х	e. DOCUMENT ACCEPTANCE OR REJECTION OF MECHANICAL	X	

NON-CONFORMANCE.

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• 'PERFORM' SHALL MEAN TO PERFORM THESE TASKS PRIOR TO FINAL ACCEPTANCE FOR EACH ITEM OR ELEMENT.



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GENERAL NOTES

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