

SPECIAL TESTS AND SPECIAL INSPECTIONS:

GENERAL:

1. **NEW MATERIALS:** NEW BUILDING MATERIALS, EQUIPMENT, SYSTEMS OR METHODS OF CONSTRUCTION NOT PROVIDED FOR IN THE 2012 IBC CODE, AND ANY MATERIAL OF QUESTIONED SUITABILITY PROPOSED FOR USE IN THE CONSTRUCTION OF A BUILDING OR STRUCTURE, SHALL BE SUBJECTED TO THE TESTS PRESCRIBED ON THIS SHEET AND IN THE APPROVED RULES TO DETERMINE CHARACTER, QUALITY AND LIMITATIONS OF USE BY THE AUTHORITY HAVING JURISDICTION.

2. **USED MATERIALS:** THE USE OF SECONDHAND MATERIALS THAT MEET THE MINIMUM REQUIREMENTS OF THE 2012 IBC CODE FOR NEW MATERIALS SHALL BE PERMITTED.

APPROVALS:

1. **APPROVED AGENCY:** AN APPROVED AGENCY HIRED BY THE OWNER SHALL PROVIDE ALL INFORMATION AS NECESSARY FOR THE BUILDING OFFICIAL TO DETERMINE THAT THE AGENCY MEETS THE APPLICABLE REQUIREMENTS.

A. **INDEPENDENT:** AN APPROVED AGENCY SHALL BE OBJECTIVE AND COMPETENT; THE AGENCY SHALL ALSO DISCLOSE POSSIBLE CONFLICTS OF INTEREST SO THAT OBJECTIVITY CAN BE CONFIRMED.

B. **EQUIPMENT:** AN APPROVED AGENCY SHALL HAVE ADEQUATE EQUIPMENT TO PERFORM REQUIRED TESTS. THE EQUIPMENT SHALL BE PERIODICALLY CALIBRATED.

C. **PERSONNEL:** AN APPROVED AGENCY SHALL EMPLOY EXPERIENCED PERSONNEL EDUCATED IN CONDUCTING, SUPERVISING, AND EVALUATING TESTS, AND/OR INSPECTIONS SPECIFICALLY FOR MATERIALS.

2. **WRITTEN APPROVAL:** ANY MATERIAL, EQUIPMENT, SYSTEM OR METHOD OF CONSTRUCTION MEETING THE REQUIREMENTS OF THE 2012 IBC CODE SHALL BE APPROVED IN WRITING AFTER SATISFACTORY COMPLETION OF THE REQUIRED TEST AND SUBMISSION OF REQUIRED TEST REPORTS.

3. **PERFORMANCE:** SPECIFIC INFORMATION CONSISTING OF TEST REPORTS CONDUCTED BY AN APPROVED TESTING AGENCY IN ACCORDANCE WITH STANDARDS REFERENCED IN CHAPTER 35 OF THE 2012 IBC BUILDING CODE, OR OTHER SUCH INFORMATION AS NECESSARY, SHALL BE PROVIDED FOR THE BUILDING OFFICIAL TO DETERMINE THAT THE MATERIAL MEETS THE APPLICABLE CODE REQUIREMENTS.

A. **RESEARCH AND INVESTIGATION:** SUFFICIENT TECHNICAL DATA SHALL BE SUBMITTED TO THE BUILDING OFFICIAL TO SUBstantiate THE PROPOSED USE OF ANY MATERIAL OR ASSEMBLY. IF IT IS DETERMINED THAT THE EVIDENCE SUBMITTED IS SATISFACTORY PROOF OF PERFORMANCE FOR THE USE INTENDED, THE BUILDING OFFICIAL SHALL APPROVE THE USE OF THE MATERIAL OR ASSEMBLY SUBJECT TO THE REQUIREMENTS OF THE 2012 IBC CODE. THE COST OFFSETS, REPORTS AND INVESTIGATIONS REQUIRED UNDER THESE PROVISIONS SHALL BE PAID BY THE PERMIT APPLICANT.

B. **RESEARCH REPORTS:** SUBMITTING DATA, WHERE NECESSARY TO ASSIST IN THE APPROVAL OF MATERIALS OR ASSEMBLIES NOT SPECIFICALLY PROVIDED FOR IN THIS CODE, SHALL CONSIST OF VALID RESEARCH REPORTS FROM APPROVED SOURCES.

4. **HERETOFORE APPROVED MATERIALS:** THE USE OF ANY MATERIAL ALREADY FABRICATED OR OF ANY CONSTRUCTION ALREADY ERRECTED, WHICH CONFORMED TO REQUIREMENTS OR APPROVALS HERETOFORE IN EFFECT, SHALL BE PERMITTED TO CONTINUE, IF NOT DETRIMENTAL TO LIFE, HEALTH OR SAFETY TO THE PUBLIC.

5. **EVALUATION AND FOLLOW-UP INSPECTION SERVICES OF "FABRICATED ASSEMBLIES":** WHERE STRUCTURAL COMPONENTS OR OTHER ITEMS REGULATED BY THIS CODE ARE NOT VISIBLE FOR INSPECTION AFTER COMPLETION OF A PREFABRICATED ASSEMBLY, THE PERMIT APPLICANT SHALL SUBMIT A REPORT OF EACH PREFABRICATED ASSEMBLY. THE REPORT SHALL INDICATE THE COMPLETE DETAILS OF THE ASSEMBLY, INCLUDING A DESCRIPTION OF THE ASSEMBLY AND THE ASSEMBLY'S COMPONENTS. THE BASIS UPON WHICH THE ASSEMBLY IS BEING EVALUATED, TEST RESULTS AND SIMILAR INFORMATION, AND OTHER DATA AS NECESSARY FOR THE BUILDING OFFICIAL TO DETERMINE CONFORMANCE TO THE 2012 IBC CODE. SUCH A REPORT SHALL BE APPROVED BY THE BUILDING OFFICIAL.

A. **FOLLOW-UP INSPECTION:** THE PERMIT APPLICANT SHALL PROVIDE FOR SPECIAL INSPECTIONS OF FABRICATED ITEMS IN ACCORDANCE WITH SECTION 1704.2 OF THE 2012 IBC CODE.

B. **TEST AND INSPECTION RECORDS:** COPIES OF NECESSARY TEST AND INSPECTION RECORDS SHALL BE FILED WITH THE BUILDING OFFICIAL.

SPECIAL INSPECTIONS:

1. **GENERAL:** WHERE APPLICATION IS MADE FOR CONSTRUCTION AS DESCRIBED IN THIS SECTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED UNDER "SPECIAL INSPECTIONS". THE SPECIAL INSPECTOR SHALL BE QUALIFIED IN ACCORDANCE TO TABLE 7 ON THIS SHEET.

A. **REPORT REQUIREMENT:** SPECIAL INSPECTORS SHALL KEEP RECORDS TO THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THE WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES WERE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. A FINAL REPORT OF INSPECTIONS DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED PERIODICALLY AT A FREQUENCY AGREED UPON BY THE PERMIT APPLICANT AND THE BUILDING OFFICIAL PRIOR TO THE START OF WORK.

B. **FINAL REPORT STATEMENT FOR SPECIAL INSPECTIONS:** SPECIAL INSPECTION REPORTS AND A FINAL REPORT IN ACCORDANCE WITH SECTION 1704.1.2 OF THE 2012 IBC CODE SHALL BE AVAILABLE AT THE TIME THE BUILDING IS APPROVED FOR OCCUPANCY.

2. **INSPECTION OF FABRICATORS:** WHERE FABRICATION OF STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES IS BEING PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTION OF THE FABRICATED ITEMS SHALL BE REQUIRED BY THIS SECTION AND AS REQUIRED ELSEWHERE IN THE 2012 IBC CODE.

A. **FABRICATION AND IMPLEMENTATION PROCEDURES:** THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR INSPECTION CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. THE SPECIAL INSPECTOR SHALL REVIEW THE PROCEDURES FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE 2012 IBC CODE REQUIREMENTS FOR THE FABRICATOR'S SCOPE OF WORK.

1. **EXCEPTION:** SPECIAL INSPECTIONS LISTED ABOVE SHALL NOT BE REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH THE FOLLOWING STATEMENT:

B. **FABRICATOR APPROVAL:** SPECIAL INSPECTIONS REQUIRED BY THE 2012 IBC CODE 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 SPECIAL INSPECTION AGENCY. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

3. **STEEL CONSTRUCTION:** THE SPECIAL INSPECTION FOR STEEL ELEMENTS OF BUILDINGS AND STRUCTURES SHALL BE AS REQUIRED BY THIS SECTION AND TABLE 1.

A. EXCEPTIONS:

1. SPECIAL INSPECTION OF THE 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, GRADE AND MILL TEST REPORTS FOR THE MAIN STRESS-CARRYING ELEMENTS ARE CAPABLE OF BEING DETERMINED.

2. THE SPECIAL INSPECTOR NEED NOT BE CONTINUOUSLY PRESENT DURING WELDING OF THE FOLLOWING ITEMS, PROVIDED THE MATERIALS, WELDING PROCEDURES AND QUALIFICATIONS OF WELDERS ARE VERIFIED PRIOR TO THE START OF THE WORK; PERIODIC INSPECTIONS ARE MADE OF THE WORK IN PROGRESS; AND A VISUAL INSPECTION OF ALL WELDS IS MADE PRIOR TO COMPLETION OR PRIOR TO SHIPMENT OF SHOP WELDING.

- a. SINGLE PASS FILLET WELDS NOT EXCEEDING 5/16 INCH IN SIZE.
- b. FLOOR AND DECK WELDING.
- c. WELDED STUDS WHEN USED FOR STRUCTURAL DIAPHRAGM.
- d. WELDED SHEET STEEL FOR COLD-FORMED STEEL FRAMING MEMBERS SUCH AS STUDS AND JOISTS.
- e. WELDING OF STAIRS AND RAILING SYSTEMS.

B. **WELDING:** WELDING INSPECTION SHALL BE IN COMPLIANCE WITH AWS D1.1 THE BASIS FOR WELDING INSPECTOR QUALIFICATION SHALL BE AWS D1.1.

C. **DETAILS:** THE SPECIAL INSPECTOR SHALL PERFORM AN INSPECTION OF THE STEEL FRAME TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE APPROVED CONSTRUCTION DOCUMENTS, SUCH AS BRACING, STIFFENING, MEMBER LOCATION AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.

D. **HIGH-STRENGTH BOLTS:** INSTALLATION OF HIGH-STRENGTH BOLTS SHALL BE PERIODICALLY INSPECTED IN ACCORDANCE WITH RISC SPECIFICATIONS.

- 1. **GENERAL ALTERNATIVE-DESIGN FASTENER INSPECTION** SHALL BE IN ACCORDANCE WITH INSTRUCTIONS PROVIDED BY THE MANUFACTURER AND APPROVED BY THE BUILDING OFFICIAL.
- 2. **PERIODIC MONITORING:** MONITORING OF BOLT INSTALLATION FOR PRE-TENSIONING IS PERMITTED TO BE PERFORMED ON A PERIODIC BASIS USING THE TURN-OF-NUT METHOD WITH MATCH MARKING TECHNIQUES, THE TWIST-TURN INDICATOR METHOD, OR THE TWIST-OFF BOLT METHOD. JOINTS DESIGNATED AS SN1, SN2, SN3, SN4, SN5, SN6, SN7, SN8, SN9, SN10, SN11, SN12, SN13, SN14, SN15, SN16, SN17, SN18, SN19, SN20, SN21, SN22, SN23, SN24, SN25, SN26, SN27, SN28, SN29, SN30, SN31, SN32, SN33, SN34, SN35, SN36, SN37, SN38, SN39, SN40, SN41, SN42, SN43, SN44, SN45, SN46, SN47, SN48, SN49, SN50, SN51, SN52, SN53, SN54, SN55, SN56, SN57, SN58, SN59, SN60, SN61, SN62, SN63, SN64, SN65, SN66, SN67, SN68, SN69, SN70, SN71, SN72, SN73, SN74, SN75, SN76, SN77, SN78, SN79, SN80, SN81, SN82, SN83, SN84, SN85, SN86, SN87, SN88, SN89, SN90, SN91, SN92, SN93, SN94, SN95, SN96, SN97, SN98, SN99, SN100, SN101, SN102, SN103, SN104, SN105, SN106, SN107, SN108, SN109, SN110, SN111, SN112, SN113, SN114, SN115, SN116, SN117, SN118, SN119, SN120, SN121, SN122, SN123, SN124, SN125, SN126, SN127, SN128, SN129, SN130, SN131, SN132, SN133, SN134, SN135, SN136, SN137, SN138, SN139, SN140, SN141, SN142, SN143, SN144, SN145, SN146, SN147, SN148, SN149, SN150, SN151, SN152, SN153, SN154, SN155, 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