



Town of Warrenton Special Inspection Guidelines and Procedures

Town of Warrenton Special Inspection Guidelines and Procedures includes the following:

- 1) The responsibilities of the registered design professional responsible for the structural design;
- 2) The role of each member of the building construction team to include the registered design professionals, building owner, contractors, the special inspectors and agents, and local building official;
- 3) The experience and qualifications necessary to supervise and perform special inspections;
- 4) Identification of the required areas of special inspections, and;
- 5) Administrative procedures that include a uniform special inspection form that is accepted by the participating localities, important definitions, reporting requirements, and conflict resolution procedures;

1. Purpose

The purpose of the Town of Warrenton Special Inspection Guidelines and Procedures is to increase awareness of the special inspection requirements. In addition, the procedure should help reduce the problem associated with permitting and performing special inspections. Should you have any questions or suggestions for this document, feel free to contact the Town of Warrenton Building Official.

The provisions for special inspections are intended to provide a higher degree of scrutiny for aspects of construction that, upon failure, would cause significant harm. These aspects of construction include soil suitability analysis, fabrication and installation of structural steel members, certain concrete and masonry construction, fabrication and installation of wood structural elements, pile and pier foundations, sprayed fire-resistant materials, wall panels and veneer systems, EIFS, special cases and smoke control systems as detailed in the International Building Code (IBC).

The IBC as adopted by reference through the Virginia Uniform Statewide Building Code (USBC) intends that an experienced expert be in responsible charge of the inspection of these special types of construction. Town of Warrenton building Official has attempted to implement a uniform procedure for the manner in which the town enforces the special inspection requirements of the USBC and the IBC.



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This includes the standard for experience and qualifications necessary to adequately control the work being performed, duties of the special inspector, reporting requirements, as well as oversight. It specifies the type and manner of work and how it is to be performed and any supervision required. It also clarifies the requirements for reporting the results and record keeping.

This procedure is intended to safeguard public safety and general welfare through structural strength of building materials by:

- 1) Clearly defining the responsibility of all parties involved in the special inspection process and
- 2) Standardizing the necessary qualifications required for Special Inspectors and Laboratories and applying the special inspection provisions of the USBC in a consistent manner.

2. Background

Numerous structural failures occurred during the late 1970's and early 1980's throughout the United States. These failures resulted in personal tragedies and tremendous property damage costs. However, most if not all of these failures, were predicable in nature and centered on one common theme; lack of an adequate construction inspection process.

In August of 1982, the U.S. House of Representatives, Subcommittee on Investigations and Oversight, chaired by Albert Gore, Jr., held investigative hearings to examine the causes of structural failures. This subcommittee was part of the Committee on Science and Technology. In March of 1984, the Committee on Science and Technology's report titled Structural Failures in Public Facilities, House Report 98-621, was presented to the 98th Congress. Two common problems were felt to be the most critical;

- 1) The need for improved organization on construction projects and better communication between participants.
- 2) The need for construction inspection by the Structural Engineer of Record (SER) during the construction of principal structural components



3. Definitions

Words used in this procedure shall have a meaning as defined in the USBC and the IBC. Unless otherwise expressly stated, other words and terms shall have the meaning shown in this procedure. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies.

Agents of Special Inspector (Agents): Qualified individuals or agencies working under the direction of the SI who are providing the inspections and tests necessary to complete the special inspection process.

Approved: See IBC-202

Approved Agency: See IBC-1 702.1

Approved documents: Includes building construction documents as approved by the municipality including all approved revisions; and also fabrication and erection documents as approved by municipality including all approved revisions.

Approved fabricator: See IBC-1 702.1

Architect of Record (AR): The registered design professional (RDP) retained by the owner to design or specify architectural construction in accordance with the USBC and whose signature and seal appears on the approved architectural construction documents.

Building: See USBC-202

Building Official: The local government authority charged with the administration and enforcement of the USBC. This shall include any duly authorized technical assistant as specified in the USBC.

Construction documents: See IBC-202

Contractor: A general contractor licensed in the Commonwealth of Virginia (See Commonwealth of Virginia, Title 54.1)

Fabrication item: See IBC-1 702.1

Fabrication and erection documents: All of the written, graphic, and pictorial documents prepared or assembled after issuance of a building permit and in addition to the municipality approved construction documents, describing the design, location, and physical characteristics of the building components or materials necessary for fabrication, assembly, or erection of the elements of the project. (Examples would include, but are not limited to, concrete reinforcing shop drawings, steel fabrication and erection shop drawings, and metal building fabrication and erection shop drawings.)

Final Report of Special Inspections: A certification by the special inspector which shall indicate that all construction elements subject to special inspections as identified by the jurisdiction approved Statement of Special Inspections (551) for all materials or phases of construction have been inspected prior to concealment, and in the special inspector's professional opinion and knowledge,



the construction project complies with jurisdiction's approved Construction Documents.

Geotechnical Engineer of Record (GER): The RDP retained by the Owner to design or specify earthwork and foundations in accordance with the USBC, and whose seal and signature appear on the jurisdiction approved geotechnical report.

Inspection: The continuous or periodic observation of work and the performance of tests for certain building or structural components to establish conformance with jurisdiction approved documents as required by the USBC and the IBC.

Inspection certificate: See IBC 1702.1

Inspection and Testing agency: An established and recognized agency or agencies, meeting the requirements of ASTM E 329 and accredited, retained by the Owner, independent of the contractors performing the work subject to special inspections, to perform special inspections and materials testing required by the USBC and the BC. See IBC-1 702.1 Approved agency.

Owner: See USBC-202.

Pre-engineered structural elements: Structural elements specified by the SER but which may be designed by a specialty RDP. (Examples are items such as open web steel joists and joist girders; wood trusses; combination wood, metal and plywood joists; pre-cast concrete elements; prefabricated wood or metal buildings; tilt-up concrete panel reinforcement and lifting hardware.)

Primary structural system: The combination of elements which serve to laterally brace and support the weight of the building's structural shell, the applicable live loads based upon use and occupancy, wind, snow, ice, thermal and seismic environmental loads.

Registered Design Professional (RDP): See USBC-202

Registered Design Professional(s) of Record: The RDP whose professional seal and signature appears on the construction documents that require special inspection(s).

Sprayed fire-resistant materials: See IBC 702.1

Structural observation: See IBC-1702.1

Shall: This term indicates mandatory requirements.

Special Inspector (SI): The SI is the RDP who is directly responsible for special inspections, materials testing and related services as described in the approved 551. The SI shall be retained by the Owner, independent of the contractors performing the work subject to special inspection. The SI must be approved by the RDP responsible for the design and the building official.

Statement of Special Inspections (SSI): The 551 is a statement prepared by an RDP and shall be approved by the appropriate RDP(s) of Record and submitted by the permit applicant. The SSI includes the scope (schedule) of the



documents, including those revisions and change orders affecting work to be inspected or tested.

Special Inspector (SI) is responsible for performing, documenting, managing, and coordinating the Special Inspections and the efforts of the various agents. Individual agents may be retained by the owner or by the SI, but they are responsible to the SI. The agents who are responsible for conducting inspections or tests shall be identified in the SSI that is submitted to the building official. The SI shall provide copies of inspection reports to the RDP of Record, Owner, Contractor, and Building Official. All discrepancies shall be brought to the attention of the Contractor for correction. The SI shall report deviations from the approved Construction Documents to the appropriate RDP of Record for their resolution. Uncorrected work shall be reported to the Building Official and the appropriate RDP of Record.

Structural Engineer of Record (SER) shall be responsible for identifying in the Construction Documents the specific structural special inspections to be performed for the product in order to meet the requirements of the USBC and any other requirements specified by the SER.

4. When Special Inspections are Required

The USBC requires special inspections be made in accordance with the IBC. The requirements for special inspections shall be determined prior to and requisite for the issuance of the building permit.

Special inspections are required for building components identified in the IBC when the design of these components is required to be performed by a professional engineer or architect. (See attached Chart A in Appendix B which is taken from Section 54.1-402 of the Code of Virginia.)

Special inspections are not required:

- 1) For work of a minor nature or as warranted by conditions in the jurisdiction as approved by the Building Official/
- 2) Unless otherwise required by the Building Official, for occupancies in Groups R-3, R-4, or R-5 and occupancies in Group U that are accessory to a residential occupancy.

Note: Check the requirements for each component of a building or structure listed in IBC Chapter 17 to determine if the exceptions to the requirement for special inspections of that component are applicable.



5. Special Inspector/ Laboratory Qualifications

special inspection services applicable to a construction project, and the RDPs and inspection and testing agencies that will provide those services. The SSI is required as a condition for permit issuance in accordance with IBC as amended by USBC and must be approved by the building official.

Structural Engineer of Record (SER): The RDP retained by the Owner to design or specify structural documents in accordance with the USBC, and whose signature and seal appear on the jurisdiction approved structural construction documents.

Structure: See USBC-202.

6. Responsibilities

The **Building Official** is responsible for the issuance of the building permit and the Certificate of Occupancy. Prior to issuing the building permit, the Building Official will review and approve the Construction Documents, the SSI, and the qualifications of the SI and the Agents. The Building Official shall review field reports of special inspections as directed by these guidelines and procedures. The Building Official has the authority to issue a stop work order if it is found that the approved special inspectors or laboratories are not being utilized to perform required special inspections. The Certificate of Occupancy or final inspection shall be issued only after the Building Official has received and approved the Final Report of Special Inspections.

The **Contractor** is responsible for the construction of the project in accordance with the approved Construction Documents and the USBC. In addition, the Contractor is responsible for controlling the quality of construction and for providing the SI and agents safe access to the elements that require inspection or testing. The Contractor shall coordinate construction related activities, including scheduling and timely notification of the need for Special Inspections and shall cooperate with the project's design professionals, including the SI and Agents. The Contractor shall make the site available for inspections as necessary and shall deliver samples for testing when needed. The Contractor shall respond promptly when informed of nonconforming work. The special inspection process does not relieve the Contractor of responsibility for quality control.

The **Owner** shall be responsible for the fees and costs related to the performance of special inspection services. The Owner or their authorized agent shall sign the SSI.

The Registered Design Professional (RDP) shall be responsible for informing the Owner of the need to provide for Special Inspections and for assisting the Owner as may be needed to retain the services of an SI. An RDP shall complete a SSI that shall include the special inspector(s) and Agent(s). The RDP shall also review and act upon conditions noted in interim reports. The RDP shall also be responsible for supplying the SI with the necessary copies of current appropriate Construction Documents and approved submittals, fabrication, and erection



Special inspections shall be performed by individuals and agents that are qualified in accordance with this policy and are under the direct supervision of an RDP in responsible charge. The RDP shall ensure that the individuals under their charge are performing only those special inspections that are consistent with their knowledge and training for the specified inspections in accordance with ASTM E329 and the USBC that is in effect at the time of permit issuance.

All laboratory facilities performing testing shall be operated under the direct supervision of an RDP and shall meet the requirements of ASTM E329. Written documentation shall be provided to the building official of the applicable Agency's laboratory accreditation and/or special inspection personal qualification(s) and certification(s).

7.Pre-Construction Meeting

Pre-construction meetings should be held by the SI at the start of the project. The meeting should be attended by the following individuals:

- 1) Special Inspector
- 2) Special Inspection Agent(s) Contractor
- 3) Subcontractor's representatives for each trade of work specified in the SSI
Owner
- 4) RDP(s) of Record for each scope of work specified in the SSI Building Official

The meeting should provide a forum to review and explain the following:

- 1) Work to be reviewed as specified in the SSI.
- 2) Inspections performed by the Building Official.
- 3) Timely notification required by the Contractor to the SI of when the work is ready for inspections during the course of the work.
- 4) Procedures to document, correct, re-inspect, and complete items found to be non-compliant or deficient.
- 5) Contact information of individuals involved with the project.
- 6) Discussion of the inspections and testing to be performed.
- 7) Proper submission and distribution of reports and supplemental information.
- 8) Discussion of coordination of all work to be performed in accordance with the Contract Documents and that no changes shall be permitted unless authorized and approved in writing by the RDP of Record for the work in question.



8. Reports of Special Inspections

The SI shall provide copies of inspection reports to the SER, Owner, Contractor, and Building Official. The SI shall report deviations from the approved Construction Documents to the appropriate RDP for their resolution before proceeding with the inspection of the deficient work. All inspection and test reports shall be submitted within seven (7) working days of the inspection or test performed. In no case shall inspections be performed by the Building Official or staff that would allow the concealment of work required to be inspected by the special inspector unless verification has been received that the special inspection has been successfully performed.

Special inspection and testing reports shall indicate that the specified work has been inspected and found to be in compliance with the approved construction documents unless deficiencies are noted. Reports containing deficiencies or non-compliant work shall describe the nature and specific location of the discrepancies.

At the completion of a project, all recorded non-compliant work shall be documented as having been corrected and approved by the RDPs of Record, as appropriate.

Upon request of the Building Official, the SI shall submit a letter indicating completion of a specific area or phase of special inspections and testing for a particular construction discipline.

Upon completion of all Special Inspections and testing specified on the SSI, the SI shall, after review and approval by the appropriate RDPs, submit a Final Report of Special Inspections to the Building Official for review and approval. The Building Official review and approval is required prior to final building inspection approval or issuance of a Certificate of Occupancy.

9. Completing the Statement of Special Inspection (SSI)

A complete SSI shall be provided with the application for permit. A complete SSI will contain the following:

- 1) The form shall be completed to include original signatures by the parties identified on the SSI.
- 2) The Schedule of Special Inspections shall be included with proper identification of elements requiring special inspections and the associated Agent(s) responsible for inspection and/or testing.
- 3) Agents for special inspections shall be identified to include address, phone number and responsible party. (Agent 1, Agent 2, Laboratory, etc...)

Proper documentation as to appropriate qualifications and certifications as discussed in Section 5.

Changes to the approved special inspector or testing laboratory after a permit has been issued must be submitted in the form of a new Statement and Schedule of Special Inspections and approved by the Building Official prior to resuming special inspections.