



## SPECIAL INSPECTION AND TESTING AGREEMENT



To permit applicants of project requiring special inspection and/or testing per Section 1704 of the International Building Code (IBC).

**Project Address:** \_\_\_\_\_ **Permit Number:** \_\_\_\_\_

**BEFORE A PERMIT CAN BE ISSUED:** The owner, or the engineer or architect of record, acting as the owner’s agent, shall complete two copies of this agreement and the attached Special-inspection and Testing Schedule, including the required acknowledgments. A pre-construction conference with the parties involved may be required to review the special-inspection requirements and procedures.

**APPROVAL OF SPECIAL INSPECTORS:** Special inspectors may have no financial interest in the projects for which they provide special inspections. Special inspectors shall be approved by the building department prior to performing any duties. Special inspectors shall submit their qualifications and are subject to personal interviews for pre-qualification. Special inspectors shall display approved identification, as stipulated by the building official, when performing the function of special inspector.

Special inspection and testing shall meet the minimum requirements of the *International Building Code* Section 1704. The following conditions are also applicable:

### A. Duties and Responsibilities of the Special Inspector

1. **Signify presence at job site.** Special inspectors should notify contractor personnel of their presence and responsibilities at the job site. If required by the building official, they shall sign in on the appropriate form posted with the building permit.
2. **Observe assigned work.** The special inspector shall observe assigned work for conformance with the building department approved (stamped) design drawings, specifications, and applicable workmanship provisions of the *International Building Code*. Architect/engineer-reviewed shop drawings may be used only as an aid to inspection.

For continuous special-inspection, the special inspector shall be on site at all times observing the work requiring special inspection. Periodic inspections, if any, must have prior approval based on a separate written plan reviewed and approved by the building department and the engineer or architect of record.

3. **Report nonconforming items.** The special inspector shall bring nonconforming items to the immediate attention of the contractor and note all such items in the daily report. If any item is not resolved in a timely manner or is about to be incorporated in the work, the special inspector shall immediately notify the building department by telephone or in person, notify the engineer or architect, and post a discrepancy notice.
4. **Provide timely reports.** The special inspector shall complete written inspection reports for each inspection visit and provide the reports on a timely basis determined by the building official. The special inspector or inspection agency shall furnish these reports directly to the building official, engineer or architect of record, and others as designated. [IBC Sec. 1704.1.2] These reports should be organized on a daily format and may be submitted weekly at the option of the building official. These reports should include:
  - a. Description of daily inspections and tests made with applicable locations,
  - b. Listing of nonconforming items,
  - c. Report on how nonconforming items were resolved or unresolved as applicable,
  - d. Itemized changes authorized by the architect, engineer, and building official if not included in nonconforming items.

**5. Provide Final Inspection Report.** The special inspector shall submit a written final report documenting required special inspections and correction of any discrepancies noted in the inspections prior to the final building inspection.

**B. Owner Responsibilities.** The project owner, the engineer or architect of record, or an agent of the owner is responsible for employing special-inspection services. The special inspector\agency shall *not* be in the employ of the contractor, subcontractor or material supplier. [IBC Sec 1704.1] In case of an owner\contractor, the special inspector\agency shall be employed as specified by the building official.

**C. Engineer or Architect of Record Responsibilities**

- 1. Prepare special inspection program.** The engineer or architect of record shall list the items for which special inspection is required; and shall indicate any items for which the IBC or the building official approves periodic inspection and the frequency of such inspections.
- 2. Respond to field discrepancies.** The engineer or architect of record shall respond to uncorrected field discrepancies in design, material, or workmanship observed by the special inspector.
- 3. Review shop drawings and submit design changes.** The engineer or architect of record shall acknowledge and review for conformance with the construction drawings those shop drawings that may detail structural information, shall submit to the building official and to the special-inspection agency written documentation of any verbally authorized deviations from the approved construction documents, and shall submit revised documents for building official approval as required.

**D. Contractor Responsibilities**

- 1. Notify the special inspector.** The contractor is responsible for notifying the special inspector or agency regarding individual inspections for items listed on the attached schedule and as noted on the building department approved plans. Adequate notice shall be provided so the special inspector has time to become familiar with the project.
- 2. Provide access to approved plans.** The contractor is responsible for providing the special inspector access to approved plans.
- 3. Retain special inspection records.** Upon request, the contractor is also responsible for retaining, at the job site, all special inspection records completed by the special inspector.

**E. Inspection of Fabricators**

- 1. Fabrication of structural assemblies and members.** Where fabrication of structural load-bearing members and assemblies is being performed on the premises of a fabricator's shop, IBC Section 1704.2 shall require special inspection of the fabricated items.
- 2. 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 reference standards. The special inspector shall review the procedures for completeness and adequacy relative to code requirements for fabricator's scope of work.

**F. Approved Fabricator Responsibilities**

- 1. Fabrication exempt inspections.** Special inspections are not required where work is done on the premise of a fabricator registered and approved to perform such work without special inspection.

2. **Approval of fabricator.** 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.
3. **Completion of fabrication.** Upon completion of fabrication, the approved fabricator shall submit certificate of compliance to the building official stating that the work was performed in accordance with the approved construction documents.

**G. Building Department Responsibilities**

1. **Approve special-inspection program.** The building department shall approve all special inspectors and special-inspection requirements.
2. **Enforce special inspection.** Work requiring special inspection and the building inspector shall monitor the performance of special inspectors. His\Her approval, in addition to that of the special inspector, must be obtained prior to placement of concrete, covering of structural steel, or other similar materials.
3. **Review inspection reports.** The building official should review special-inspection progress and final reports.
4. **Perform final inspection.** The building official should perform the final inspection and approval for a project [IBC Sec. 109.3.1] after the final special-inspection report has been reviewed and approved.

**Project Address:** \_\_\_\_\_ **Permit Number:** \_\_\_\_\_

**ACKNOWLEDGMENTS**

I have read and agree to comply with the conditions of this agreement.

Special Inspection Agency:	Signature:	Printed Name:	Date:
_____	_____	_____	_____
Owner:	Signature:	Printed Name:	Date:
_____	_____	_____	_____
Engineer/ Architect:	Signature:	Printed Name:	Date:
_____	_____	_____	_____
Contractor:	Signature:	Printed Name:	Date:
_____	_____	_____	_____
Approved Fabricator:	Signature:	Printed Name:	Date:
_____	_____	_____	_____
Inspected Fabricator:	Signature:	Printed Name:	Date:
_____	_____	_____	_____
(circle one) CITY OF ASPEN PITKIN COUNTY:	Signature:	Printed Name:	Date:
_____	_____	_____	_____

## SPECIAL INSPECTION – AN OVERVIEW

The *International Building Code* (IBC) has set forth a number of stipulations in which the employment of special inspectors is mandatory. In the first edition of the IBC, the *owner* or the *registered design professional in responsible charge acting as the owner's agent* is required to provide specially qualified inspectors for *continuous* or *periodic* inspections during construction (IBC Sec. 1704.1). These inspections are in addition to the inspections specified in IBC section 109. Exceptions to special inspection are noted also.

A special inspector is a person who has been approved by the building official to perform certain types of inspection as detailed in IBC section 1704. These generally include:

1. **Inspection of fabricators:** Where fabrication of structural load-bearing members and assemblies are being performed on the premises of the fabricator. Note exception for approved fabricators. See Section 1704.2
2. **Steel construction:** See Table 1704.3 for detailed information regarding inspections. Major areas under steel construction (see Section 1704.3) are:
  - a. material verification of high-strength bolts, nuts, and washers;
  - b. inspection of high-strength bolting,
  - c. material verification of structural steel,
  - d. material verification of weld filler materials,
  - e. inspection of welding for both structural steel and reinforcing steel, and,
  - f. inspection of steel frame joint details for compliance with approved construction documents.
3. **Concrete construction:** See Table 1704.4 for detailed information regarding inspection. Major areas under steel construction (see Section 1704.4) are:
  - a. inspection of reinforcing steel, including prestressing tendons, and placement,
  - b. inspection of bolts to be installed in concrete prior to and during placement of concrete,
  - c. verification of use required design mix,
  - d. sampling of fresh concrete and performing slump, air content and fresh concrete temperature at time of making specimens for strength tests,
  - e. inspection of concrete and shotcrete placement for proper application techniques,
  - f. inspection for maintenance of specified curing temperature and techniques,
  - g. inspection of prestressed concrete including application of prestressing forces and grouting of bonded prestressing tendons,
  - h. erection of precast concrete members,
  - i. verification of in-situ concrete strength prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.
4. **Masonry construction:** See IBC Tables 1604.5 and 1617.6 for classification of building or structure requiring special inspection. Tables 1704.5 and 1704.5.3 show detailed information regarding level 1 and level 2 special inspections for masonry construction. Major areas under masonry construction are (see Section 1704.5):
  - a. verification of site-prepared mortar, construction of mortar joints, and locations of reinforcement and connectors,
  - b. verification of size and location of structural elements; type, size, and location of anchors; including details of anchorage of masonry to structural members, frames, or other construction,
  - c. verification of specified size, grade, and type of reinforcement,
  - d. verification of welding of reinforcing bars,
  - e. verification of protection of masonry during hot and cold weather,
  - f. verification prior to grouting that the grout space is clean and correct proportions of site-prepared grout are present,
  - g. preparation of any grout specimens, mortar specimens, and/or prisms,

- h.** verification of compliance with required inspection provisions of the construction documents and the approved submittals.
- 5. Wood construction:** Inspection of the fabrication of wood structural elements and assemblies. (Section 1704.2) See Section 1704.6.
- 6. Soils:** Inspection of site preparation prior to placement of prepared fill, verification of fill materials and maximum lift thickness, and verification that in-place densities meet soils report. See Section 1704.7.
- 7. Pile foundations:** Inspection of installation and testing of pile foundations, and recording of installation, load test, and cutoff and tip elevation of each pile. See Section 1704.8.
- 8. Pier foundations:** Inspection of pier foundations in accordance with Section 1616.3 for buildings located in Seismic Design Categories C, D, E, or F. See Section 1704.9.
- 9. Wall panels and veneers:** Inspection of exterior and interior architectural wall panels and the anchoring of veneers for building assigned to Seismic Design Categories E and F. Inspections of veneers shall meet requirements of Section 1704.5. See Section 1704.10
- 10. Sprayed fire-resistant materials:** Inspection of fire-resistant material applied to structural elements and decks in accordance with Section 1704.11 through 1704.11.5.
- 11. Exterior insulation and finish systems (EIFS):** See Section 1704.12 for exceptions to required inspections.
- 12. Special cases:** Inspections that, in the opinion of the building official, are needed because of the use of alternate materials, unusual design, or use of materials not having building code approval that are necessary to meet special manufacturer requirements. See Section 1704.13
- 13. Smoke control:** See Section 1704.14

## GENERAL PROGRAM GUIDELINES

### A. Purpose of Special Inspection

Special Inspection is the monitoring of the materials and workmanship that are critical to the integrity of the building structure. It is a review of the work that the contractors and their employees to assure that the approved plans and specifications are being followed and that relevant codes and ordinances are being observed. The special inspection process is in *addition* to those inspections conducted by the municipal building inspector and by the engineer or architect of record as part of periodic structural observation. The special inspectors furnish *continuous* or *periodic* inspection as prescribed in IBC Table 1704.3 for that construction which requires their presence. [IBC Section 109.3.9 and 1704]

Good communication between the special inspector and the designers, contractor, and building department is essential to project quality assurance.

### B. Duties and Responsibilities of the Special Inspector

Though not required by code, special inspectors and/or inspection agencies can document acceptance of their responsibilities and scope of work for a project by signing an agreement that includes a detailed schedule of services, commonly known as the Special-Inspection and Testing Agreement and the Special-Inspection and Testing Schedule. Duties of special inspectors and/or inspection agencies include the following

1. **Signify presence at job site.** Special inspectors should notify contractor personnel of their presence and responsibilities at the job site. If required by the building official, they shall sign in on the appropriate form posted with the building permit.
2. **Observe assigned work.** [IBC Section 1704] Special inspectors shall inspect all work for which they are responsible for conformance with the building department approved (stamped) plans and specifications and applicable provisions of the IBC.
3. **Report nonconforming items.** Special inspectors shall bring all nonconforming items to the immediate attention of the contractor. If any such item is not resolved in a timely manner or is about to be incorporated into the work, the engineer or architect of record and the building official should be notified immediately and then the item noted in the inspector's written report. [IBC Section 1704.1] The special inspector shall write a separate report to be posted at the job site regarding noted discrepancies that should contain, as a minimum, the following information about each nonconforming item:
  - a. Description and exact location
  - b. Reference to applicable detail of approved plans/specifications
  - c. Name and title of each individual notified and method of notification
  - d. Resolution or corrective action taken
4. **Provide timely reports.** The special inspector should complete written inspection reports for each inspection visit and provide the reports on a timely basis determined by the building official. The special inspector or inspection agency shall furnish these reports directly to the building official, engineer, or architect of record, and others as designated. [IBC Section 1704.1.2] These reports should be organized on a daily and weekly format and may be submitted weekly at the option of the building official. In these reports, special inspectors should include:
  - a. Describe inspections and tests made, with applicable locations
  - b. Indicate how nonconforming items were resolved
  - c. List unresolved items, parties notified, time and method of notification
  - d. Itemize changes authorized by the engineer or architect of record if not included in the nonconforming items.
5. **Submit final report.** Special inspectors or inspection agencies shall submit a final signed report to the building department stating that all items requiring special inspection and testing were fulfilled and reported, and to the best of their knowledge, in conformance with the approved plans, specifications, and the applicable provisions of the IBC. [IBC Section 1704.1.2] Items not in conformance, unresolved items, or any discrepancies in inspection coverage (i.e. missed inspections, periodic inspection when continuous inspection was required, etc) should be specifically itemized in this report.

### C. Duties and Responsibilities of the Project Owner

The project owner, the engineer, architect of record, or an agent of the owner is responsible for funding special inspections services. The special inspector\agency shall *not* be in the employ of the contractor, subcontractor, or material supplier. [IBC Section 106.3.5] In the case of an owner\contractor, the special inspector\agency shall be employed as specified by the building official.

#### **D. Duties and Responsibilities of the Design Professional in Responsible Charge**

The design professional in responsible charge should be a consenting party by written acknowledgement of special inspection and testing agreements. The design professional in responsible charge has many duties and responsibilities related to special inspection, including the following:

1. **Prepare special inspection program.** The design professional in responsible charge shall list the items for which special inspection is required; and shall indicate any items for which the IBC or the building official approves periodic inspection and the frequency of such inspection. [IBC Section 106.3.4]  
The design professional in responsible charge should coordinate with the project owner in the selection of special inspectors [IBC Section 1704.1] and is required to list special inspectors and their duties on the special inspection program [IBC Section 106.3.4.1]. The standard of the industry for employing a qualified inspection agency is its compliance with the requirements of ASTM E-329. The choice of special inspector should include the following considerations:
  - a. Project size and complexity: experience with similar projects
  - b. Inspection staffing: sufficient qualified inspectors
  - c. Site location: proximity of inspection and testing facilities
  - d. Off-site inspection: capabilities for inspecting at remote locations
2. **Respond to field discrepancies.** The engineer or architect of record shall respond to special inspector reports of uncorrected noncomplying items and shall approve remedial measures.
3. **Review shop drawings and submit revisions to approved plans.** The design professional in responsible charge shall acknowledge and review for conformance with the construction documents those shop drawings that may detail structural information, shall submit to the building official and to the special inspection agency written documentation of any verbally approved deviations from the approved construction documents, and shall submit revised documents for the building official approval as needed. [IBC Section 106.3.4.2]

#### **E. Duties and Responsibilities of the Contractor**

The contractor's duties include the following:

1. **Notify the special inspector.** The holder of the building permit or their duly authorized agent is responsible for notifying the special inspector or agency regarding individual inspections as required by the building department. [IBC Section 109.5] Adequate notice shall be provided so that the special inspector has time to become familiar with the project.
2. **Provide access to approved plans.** The contractor is responsible for providing the special inspector access to approved plans. [IBC Section 106.3.1]
3. **Retain special inspection records.** When required by the building official, the contractor is responsible for retaining, at the job site, all special inspection records submitted by the special inspector, and providing them for review to the building department's inspector upon request.

#### **F. Duties and responsibilities of the Building Official**

Of all the team members involved in the construction process, the building official is the only one with the legal authority to enforce the special inspection provisions of the code. [IBC Section 104.4] The employment of a special inspector or agency shall *not* relieve the building department of responsibility for progress or called inspections as required by the code. Building department inspections of items also requiring special inspection should not be signed off without the concurrence of the special inspector.

The specific duties and responsibilities of the building official relating to special inspection include the following:

1. **Review submittal documents for compliance with special inspection requirements.** The building official is charged with the legal authority to review the plans, specifications, special inspection program, and other submittal documents for compliance with code requirements. [IBC Section 104.2, 106.3, 106.5 through 106.5]
2. **Approve special inspection program.** The building official is responsible for approving the special inspection program submitted by the design professional in responsible charge [IBC Section 1704.1] and may require a preconstruction conference to review the program with all appropriate members of the construction team.
3. **Approve special inspectors\inspection agencies.** The building official is responsible for determining the competence of special inspectors for the types of work they will be inspecting. [IBC Section 1704]
4. **Monitor special inspection activities.** The building official should monitor the special inspection activities at the job site to assure that qualified special inspectors are performing their duties when work requiring special inspection is in progress.
5. **Review inspection reports.** The building official receives and reviews special inspection progress reports and final reports for conformance with the approved plans, specifications, and workmanship provisions of the code. [IBC Section 1704.1.2]
6. **Perform special inspection.** The building official should not perform the final inspection and approval of a project [IBC Section 109.3.10] until the final special inspection report has been reviewed and approved.

The use of special inspectors is *not* discretionary. IBC Section 1704 clearly states the conditions under which they must be utilized, but there is a provision for the building official to waive the special inspection for work of a minor nature.

It is the responsibility of the building official to determine the competency of special inspectors. The IBC does not make specific requirements for the determination of an inspector's qualifications, but that in no way lessens the importance of being selective in this crucial process.

A qualified special inspector usually has skills that are significantly more specialized than those of regular municipal inspectors. A municipal inspector is required to have a general knowledge of a great number of code requirements, whereas special inspectors focus on limited areas of structural inspection and materials testing.

#### **G. Duties and Responsibilities of the approved fabricator**

Special inspections required by this code are not required where work is done on the premises of a fabricator registered and approved to perform such work without special inspection. Approved 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.

**APPROVED SPECIAL INSPECTORS**

<b>Name</b>	<b>Category</b>	<b>Phone #</b>
<b>Rebecca Gremillion</b> Carbondale, CO 81623	Reinforced Concrete Structural Steel\Welding High-Strength Bolting	970/963-8452
<b>Stuart M. Hackett</b> Thorton, CO	Reinforced Concrete Structural Steel\Welding High-Strength Bolting Sprayed-applied Fireproofing	303/472-5233
<b>Scott L. Maxwell</b> Grand Junction, CO 81505	Structural Steel\Welding High-Strength Bolting	970/256-9965
<b>David L. Sturgeon</b> Conifer, CO	Structural Steel\Welding High-Strength Bolting	303/674-7560
<b>Bernie Whitman</b> Rifle, CO	Structural Steel\Welding	970/370-8644
<b>CTL Thompson</b> Glenwood Springs, CO 81601	Various	970/945-2809
<b>Hepworth Pawlak</b> Glenwood Springs, CO 81601	Various	970/945-8454
<b>West Slope Testing and Inspection</b> Grand Junction, CO 81505	Structural Steel\Welding High-Strength Bolting	970/434-6988 970/260-2844
<b>Thunder Mountain Testing</b> 2973 F. Road Grand Junction, CO 81504	Various	970/256-9965
<b>Ground Engineering</b> 41 Inverness Drive East Englewood, CO 80112 www.groundeng.com	Various	303/289-1989

**APPROVED FABRICATORS**

<b>Name</b>	<b>Phone #</b>
<b>Myer's and Company Architectural Metals</b> 555 Basalt Ave. Basalt CO 81621 <a href="http://www.meyersandco.com">www.meyersandco.com</a>	970/927-4761
<b>Western Slope Iron &amp; Supply Inc</b> 670 23 Rd. Grand Junction CO 81505	970/243-9770
<b>Zimkor LLC</b> PO Box 1006 7011 Titan Rd. Littleton CO 80160	303/791-1333 (FAX) 303/791-1340