

Special Inspections Instructions

Based on Chapter 17 of the 2021 International Building Code

PURPOSE

The purpose of this document is to familiarize the Owner, Engineer, Architect, Special Inspector, Testing Laboratory, and-or Contractor with the City of Venus's requirements related to Special Inspections and Tests required by Chapter 17 of the 2021 International Building Code (IBC), as adopted by the City of Venus.

Chapter 17 of the 2021 IBC has specific requirements for special inspections, testing and structural observations. These special inspections are in addition to the inspections required by the City of Venus and does not waive the requirement for the "normal" inspections conducted by the Building Inspections Department as listed on the building permit. The contractor is responsible for scheduling all "normal" inspections with the Building Inspections Department in the proper sequence and prior to concealment or proceeding with the work as required.

Special inspections are to be made by Special Inspections Agencies approved by the building official and can include but are not limited to special inspectors, testing labs, fabrication shops and even registered design professionals in responsible charge provided they qualify as a special inspector. The approved agencies must be employed by the owner or the registered design professional in responsible charge acting as the owner's agent. *(see attached "Special Inspections Agency / Special Inspectors Validation Form")* These validations are a condition of permit issuance.

These instructions outline the mandatory requirements and responsibilities of all parties involved with special inspections during a project. However, recognizing that there are many ways to evaluate material and construction quality, this handout is NOT intended to be a step-by-step procedural specification sufficient for all projects. Adjustments may be needed to satisfy a project's particular conditions.

It is hoped that by becoming more familiar with the special inspections requirements all parties to the construction process can better prepare to foster quality control in the constructed project.

BUILDING PRE-CONSTRUCTION MEETING

After obtaining a permit, a pre-construction meeting shall be held to discuss the project including any special inspections. The General Contractor in charge of the project shall contact the City of Venus Building Inspection Department to schedule the meeting time and location. The following are required to attend this meeting:

1. Building Inspection staff
2. Owner or designated agent
3. Mechanical Contractor
4. Electrical Contractor
5. Plumbing Contractor
6. Building Contractor
7. Fire Alarm Contractor
8. Fire Sprinkler Contractor
9. Concrete Contractor

DUTIES AND RESPONSIBILITIES

A. Project Owner

1. Employ and Fund Special Inspections Services:

The project owner is responsible for employing and funding the necessary Special Inspections Agencies. These agencies shall not be in the employ of the contractor, a subcontractor or material supplier. In the case of an Owner who is also acting as the contractor, agencies shall be employed as specified and approved by the City of Venus Building Inspection Department.

B. Registered Design Professional in Responsible Charge (RDPiRC)

1. Identify the Need for Special Inspections:

The project plans and-or specifications which are submitted to the building official shall clearly indicate the design parameters and material selections. The RDPiRC analyzes the critical elements of the design and determines if special inspections or structural observations are required based on Chapter 17 of the 2021 IBC. If required, the RDPiRC shall prepare a Statement of Special Inspections for submittal by the permit applicant. (see attached “Statement of Special Inspections Form”) The completion of this form by the RDPiRC is a condition of permit issuance and shall include the following:

- a. The materials, systems, components, and work required to have special inspections or testing
- b. The type and extent of each special inspection
- c. The type and extent of each test
- d. Identification as to whether it will be a continuous or periodic special inspection

2. Respond to Field Discrepancies:

Material and design discrepancies which are not resolved in a timely manner or are about to be incorporated into the work must be brought to the attention of the RDPiRC and the Building Inspection Department. Uncorrected field deficiencies observed by the special inspections agency must also be brought to the attention of the RDPiRC and the Building Inspection Department. The RDPiRC is instrumental in effecting the remedial process of deficiency correction. The RDPiRC is responsible for any design changes and for submission of such changes to the City of Venus Building Inspection Department for approval.

3. Submit Final Report of Special Inspections:

The RDPiRC shall submit a final report at the time of application for Certificate of Occupancy that is sealed, signed and dated to the Building Inspection Department stating that all items requiring special inspections were inspected and approved in accordance with the approved plans, specifications and applicable workmanship provisions. (***See attached “Final Report of Special Inspections Form”***) The completion of this form by the RDPiRC is a condition of CO issuance.

C. Special Inspections Agency

Again, Special Inspections Agencies can include but are not limited to special inspectors, testing labs, fabrication shops and even registered design professionals in responsible charge provided they qualify as special inspectors. The individuals within these agencies have highly developed, specialized skills with which they inspect, observe or test the critical building or structural elements which they are qualified to inspect.

1. Observe and Inspect all Work for which They are Responsible:

Special Inspections Agencies shall inspect, observe or test all work for which they are responsible according to the Statement of Special Inspections prepared by the RDPiRC, the approved construction documents, listed standards and nationally recognized testing methods. A special inspector shall be on site at appropriate times to observe construction operations that require continuous or periodic inspections per tables 1705.2.2, 1705.3, 1705.6, 1705.7 and 1705.8 of the 2021 IBC.

2. Provide Timely Reports:

Special Inspections Agencies should complete written reports for each inspection, observation or test and provide the report in a timely manner. The agency shall furnish these reports directly to the RDPiRC and the general contractor. Agencies shall bring all non-conforming 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 RDPiRC and the Building Official shall be notified immediately.

D. 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.

1. 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 code requirements for the fabricator's scope of work.

2. Fabricator Approval:

Special inspections 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. *(see attached "Fabricator's Certificate of Compliance Form")*

E. Contractor

1. Notify the Special Inspections Agencies:

The contractor or the holder of the building permit is responsible for notifying the Special Inspections Agencies regarding special inspections required according to the Statement of Special Inspections prepared by the RDPiRC and the approved construction documents. Adequate notice shall be provided so that the agency has time to become familiar with the project. The contractor or the holder of the building permit is responsible for requesting all required special inspections as well as all "normal" inspections conducted by the Building Inspections Department as listed on the building permit.

2. Provide Access to Approved Construction Documents and the Work being Inspected:

The contractor is responsible for providing the Special Inspections Agencies with access to approved plans, specifications and approved shop drawings. 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 inspections.

3. Retain Special Inspections Reports at the Job Site:

The contractor is responsible for retaining at the job site all special inspections reports submitted by Special Inspections Agencies and providing these reports for review by the City of Venus Building Inspection Department upon request. *(See attached "Report of Special Inspections Form")* The contractor may use this form to record special inspection activity throughout the course of the project to aid the RDPiRC in preparing the Final Report of Special Inspections.

F. City of Venus Building Inspection Department

1. Review for Special Inspections and Validation of Agencies:

The City of Venus Building Inspection Department is responsible for reviewing all submitted construction plans, specifications, or forms related to special inspections and will verify the qualifications of each Special Inspections Agency per the information provided on the Special Inspections Agency Validation Form prior to permit issuance.

2. Monitor Special Inspections and Testing Activities:

The City of Venus Building Inspection Department will monitor work requiring special inspections and testing at the jobsite to assure that the designated approved Special Inspections Agencies are performing their duties when work requiring special inspection is in progress.

3. Review Special Inspection Reports:

The City of Venus Building Inspection Department will review the special inspection reports and perform field inspections to verify conformance to the approved plans and specifications prior to the concealment of any work related to the special inspections.

4. Perform Final Inspection and Issue Certificate of Occupancy:

The City of Venus Building Inspection Department will not issue a Certificate of Occupancy until the Final Report of Special Inspections has been reviewed and approved.

Special Inspections Agency / Special Inspectors Validation Form		Permit No.	
For Special Inspectors, Testing Labs, Fabrication Shops and Qualified Registered Design Professionals in Responsible Charge or other qualified entities			
Project Name:			
Project Address:			

A Special Inspections Agency shall provide all information as necessary for the building official to determine that the agency meets the applicable requirements. The City of Venus Building Inspection Department shall approve all designated Special Inspections Agencies prior to any work being performed.

•
An approved agency shall be objective, competent, and independent from the contractor responsible for the work being inspected.

•
An approved agency shall have adequate equipment to perform required tests. The equipment shall be periodically calibrated.

•
An approved agency shall employ experienced personnel educated in conducting, supervising and evaluating tests and/or inspections.

Agency / Special Inspectors Name:	
Agency / Special Inspectors Address:	
Type of Inspection:	
Relevant Experience or Training for the Special Inspections your Agency will perform: (See “ Special Inspectors Qualification Chart ”)	
Certifications:	
Possible Conflicts of Interest:	

(please attach supporting documentation if needed to the back of this form)

Statement of Special Inspections Form		Permit No.	
Project Name:			
Project Address:			

Check whether the Special Inspections below are
Applicable (A) or Non-Applicable (NA) for this project and if they are Continuous (C) or Periodic (P)

2021 IBC	Type of Special Inspection and Extent	A	NA	C	P
1705.1.1	Special Cases:				
1705.2	Steel:				
1705.3	Concrete:				
1705.4	Masonry:				
1705.5	Wood:				
1705.6	Soils:				
1705.7	Foundation – Driven:				
1705.8	Foundation – CIP:				
1705.9	Foundation – Helical Pile:				
1705.13	Fire Res. – Sprayed:				
1705.14	Fire Res. – Coatings:				
1705.15	EIFS:				
1705.16	Fire Res. – Penetrations/Joints:				
1705.17	Smoke Control:				

Notes:

At the completion of construction a final report by the Registered Design Professional in Responsible Charge (RDPiRC) that verifies all of the special inspections required will be submitted to the Building Official via the Owner. It is our understanding that a Certificate of Occupancy **will not** be issued by the City of Venus until the Final Report of Special Inspections Form is received, indicating that there are no remaining deficiencies.

Respectfully,

Signature of RDPiRC

Name of RDPiRC

Firm Name of RDPiRC

Seal & Date

Final Report of Special Inspections Form		Permit No.	
Project Name:			
Project Address:			

√	2021 IBC	Special Inspection	Agency
	1705.1.1	Special Cases	
	1705.2	Steel	
	1705.3	Concrete	
	1705.4	Masonry	
	1705.5	Wood	
	1705.6	Soils	
	1705.7	Foundation – Driven	
	1705.8	Foundation – CIP	
	1705.9	Foundation – Helical Pile	
	1705.13	Fire Res. – Sprayed	
	1705.14	Fire Res. – Coatings	
	1705.15	EIFS	
	1705.16	Fire Res. – Penetrations/Joints	
	1705.17	Smoke Control	

Notes:

As the registered design professional in responsible charge for all required inspections for this project during construction, to the best of my information, knowledge and belief the listed special inspections and tests indicated above for this project have been performed and all discovered discrepancies have been resolved.

Respectfully,

Signature of RDPiRC

Name of RDPiRC

Firm Name of RDPiRC

Seal & Date

Special Inspectors Qualification Chart

Special Inspection Category	2021 International Building Code	Qualifications		
		Primary Inspector or Inspection Supervisor	Supplemental Inspector (Alternative 1) - Under direct supervision of Inspection Supervisor	Supplemental Inspector (Alternative 2) - Under direct supervision of Inspection Supervisor
Special Cases	1705.1.1	Special Inspector for special cases shall be approved by the Building Official	N/A	N/A
Steel: Welding	1705.2	PE or RA; and * AWS Certified Welding Inspector (AWS-CWI); <u>OR</u> PE or RA; and * ICC Certification as a structural Welding Inspector (ICC-SWI); <u>and</u> * 1 year relevant experience	*AWS Certified Welding Inspector (AWS-CWI) <u>OR</u> *ICC Certification as a Structural Welding Inspector (ICC-SWI) *3 years relevant experience	* AWS Certified Associate Welding Inspector (AWS-CAWI) Note: AWS-CAWI only permitted to inspect when an AWS-CWI or ICC-SWI is on site supervising
Steel: High Strength Bolting	1705.2	*PE - Civil/Structural; <u>and</u> *ICC Certification as a Structural Steel and Bolting Inspector; <u>and</u> *1 year relevant experience	N/A	*Technician with ICC Certification as a Structural Steel and Bolting Inspector; <u>and</u> *3 years relevant experience
Steel: Structural Cold-Formed Steel	1705.2	*PE or RA; <u>and</u> *1 year relevant experience	*Bachelor's degree in engineering or architecture; <u>and</u> *2 years relevant experience	*ICC Certification as a Commercial Building Inspector <u>OR</u> ICC Residential Building Inspector
Concrete Note: Licensed concrete testing lab to perform sampling and testing of cylinders	1705.3	<u>Cast-in-Place & Precast</u> *PE - Civil/Structural or RA <u>and</u> *1 year relevant experience <u>Prestressed Concrete</u> *PE - Civil/Structural <u>and</u> *1 year relevant experience	<u>Cast-in-Place & Precast</u> *ACI Certification as Concrete Construction Special Inspector (ACI-CCSI) <u>OR</u> *ICC Certification as Concrete Special Inspector (ICC-CSI) <u>Prestressed Concrete</u> *Bachelor's degree in engineering or architecture; <u>and</u> *ICC Certification as Prestressed Concrete Special Inspector; <u>and</u> *1 year relevant experience	<u>Cast-in-Place & Precast</u> *ACI Certification as an Associate Concrete Construction Special Inspector (ACI-ACCSI) Note: AWS-CAWI only permitted perform inspection under on-site supervision by PE, RA, ACI-CCSI, or ICC-CSI <u>Prestressed Concrete</u> *ICC Certification as Prestressed Concrete Special Inspector; <u>and</u> *3 years relevant experience
Masonry	1705.4	*PE or RA; <u>and</u> *1 year relevant experience	*Bachelor's degree in engineering or architecture; <u>and</u> *ICC Certification as a Structural Masonry Special Inspector <u>and</u> *1 year relevant experience	*ICC Certification as a Structural Masonry Special Inspector; <u>and</u> *2 years relevant experience
Wood	1705.5	*PE <u>and</u> *1 year relevant experience	N/A	*ICC Certification as a Commercial or Residential Building Inspector; <u>and</u> *2 years relevant experience
Soils	1705.6	*PE - Geotechnical, Civil, or Structural; <u>and</u> *1 year relevant experience	*Bachelor's degree in Geotechnical, Civil, or Structural engineering; <u>and</u> *1 year relevant experience	*Technician with NICET II Geotechnical Certification; <u>OR</u> *Technician with ICC Certification Soils Special Inspector <u>and</u> *1 year relevant experience
Foundation - Driven	1705.7	*PE - Geotechnical, Civil, or Structural; <u>and</u> *1 year relevant experience	*Bachelor's degree in Geotechnical, Civil, or Structural engineering; <u>and</u> 3 years relevant experience	Technician with NICET Level II Geotechnical Certification

Special Inspectors Qualification Chart

Special Inspection Category	2021 International Building Code	Qualifications		
		Primary Inspector or Inspection Supervisor	Supplemental Inspector (Alternative 1) - Under direct supervision of Inspection Supervisor	Supplemental Inspector (Alternative 2) - Under direct supervision of Inspection Supervisor
Foundation Cast-in-place	1705.8	*PE - Geotechnical, Civil, or Structural; and *1 year relevant experience	*Bachelor's degree in Geotechnical, Civil, or Structural engineering; and 3 years relevant experience	Technician with NICET Level II Geotechnical Certification
Foundation - Helical Pile	1705.9	*PE - Geotechnical, Civil, or Structural; and *1 year relevant experience	*Bachelor's degree in Geotechnical, Civil, or Structural engineering; and 3 years relevant experience	Technician with NICET Level II Geotechnical Certification
Sprayed Fire Resistant material	1705.13	*PE or RA; and *ICC Certification as a Spray-Applied Fireproofing Special Inspector	*Bachelor's degree in Architecture or Engineering; and *ICC Certification as a Spray-Applied Fireproofing Special Inspector	Technician with ICC Certification as a Spray-Applied Fireproofing Special Inspector; and 3 years relevant experience
Fire Resistant Coatings	1705.14	*PE or RA; and *ICC Certification as a Spray-Applied Fireproofing Special Inspector	*Bachelor's degree in Architecture or Engineering; and *ICC Certification as a Spray-Applied Fireproofing Special Inspector	Technician with ICC Certification as a Spray-Applied Fireproofing Special Inspector; and 3 years relevant experience
EIFS	1705.15	*PE or RA; and AWCI EIFS Inspector Certification OR ICC Certification as a Commercial Building Inspector OR ICC Certification as a Residential Building Inspector	*Bachelor's degree in Architecture or Engineering; and *AWCI EIFS Inspector Certification OR *ICC Certification as a Commercial Building Inspector OR *ICC Certification as a Residential Building Inspector	*AWCI EIFS Inspector Certification OR *ICC Certification as a Commercial Building Inspector OR *ICC Certification as a Residential Building Inspector
Fire-Resistant Penetrations and Joints	1705.16	*PE or RA; and *Pass a UL Firestop Examination or FM Firestop Examination	*Bachelor's degree in Architecture or Engineering; and *Pass a UL Firestop Examination or FM Firestop Examination	*Pass a UL Firestop Examination or FM Firestop Examination
Smoke Control	1705.17	*PE or RA; and *AABC, NEBB or equivalent Balancing Technician Certification	*Bachelor's degree in Architecture or Engineering; and AABC, NEBB or equivalent Balancing Technician Certification	AABC, NEBB or equivalent Balancing Technician Certification

Abbreviations:

SI = Special Inspector
 ICC = International Code Council
 NICET = National Institute for Certification in Engineering Technologies
 AWCI = Association of the Wall and Ceiling Industry
 UL = Underwriters Laboratories
 AABC = Associated Air Balance Council
 AWS = American Welding Society
 ACI = American Concrete Institute
 FM - Factory Mutual

Note:

Each Agency and Special Inspector shall complete a Validation Form from the "**Special Inspections Instructions**" manual

Fabricator's Certificate of Compliance Form

Each approved fabricator that is exempt from Special Inspection of shop fabrication and implementation procedures per section 1704.2.5.2 of the 2021 International Building Code must submit this Fabricator's Certificate of Compliance Form at the completion of fabrication.

Project: _____

Fabricator's Name: _____

Address: _____

Certification or Approval Agency: _____

Certification Number: _____

Date of Last Audit or Approval: _____

Description of structural members and assemblies that have been fabricated:

I hereby certify that items described above were fabricated in strict accordance with the approved construction documents.

Name and Title (type or print)

Signature

Date

*Attach copies of fabricator's certification or building code evaluation service report
and fabricator's quality control manual*