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USACE / NAVFAC / AFCEC / NASA **UFGS-01 45 35 (November 2020)**

Preparing Activity: NAVFAC **Superseding**
UFGS-01 45 35 (February 2020)
UFGS-01 45 35.05 20 (March 2020)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated January 2021
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SECTION 01 45 35

SPECIAL INSPECTIONS
11/20

****
NOTE: This guide specification covers the requirements for special inspections when required by UFC 3-301-01.

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable item(s) or insert appropriate information.

Remove information and requirements not required in respective project, whether or not brackets are present.

Comments, suggestions and recommended changes for this guide specification are welcome and should be submitted as a Criteria Change Request (CCR).
****

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NOTE: This guide specification includes tailoring for DESIGN-BID-BUILD, DESIGN-BUILD, ARMY, NAVY and NASA projects. Where an Editor's Note states a paragraph is tailored for a Service or project type, the content of the paragraph, or a portion of the paragraph, is suited specifically to be included only for that Service or project type.
****

PART 1 GENERAL

****
NOTE: This guide specification is applicable to both new structures and existing structural rehabilitations designed according to UFC 3-301-01 STRUCTURAL ENGINEERING.

In addition to Special Inspection requirements, a registered design professional must perform "structural observations" during construction when required by UFC 3-301-01. All observed deficiencies will be immediately reported to the Contracting Officer. The registered design professional performing these observations must be a representative of the Structural Engineer of Record (SER) for the structure being constructed.

Structural observations are required for the following project conditions according to the UFC's and ICC IBC Chapter 17:

1) The structure is classified as Risk Category IV or V.

2) The structure is a high-rise building, which is defined as any building 22860 mm 75 feet or greater in height measured from the lowest point of fire department vehicle access.

3) The Seismic Design Category is D, E, or F and one of the following conditions exist:
- **a. The structure is classified as Risk Category III, IV or V.**
- **b. The structure is classified as Risk Category II and is greater than two stories above grade.**

4) The structure's ultimate design wind speed is 58 m/sec 130 mph or greater and is classified as Risk Category III, IV or V.

5) Where specifically required by the Engineer of Record responsible for the structural design. This is recommended for large magnitude or critical projects where additional quality control is warranted.

For Design-Build projects, the Structural Engineer on the Prime Contractor's Design Team will serve as the Structural Engineer of Record (SER) and provide Structural Observations. Coordinate with the Contracting Officer how Structural Observations will be covered for Design-Bid-Build projects as this service will not be covered by the Contractor.

Special Inspections are minimum Quality Assurance requirements that are in addition to Structural Observations and Contractor Quality Control requirements defined in Sections 01 45 00.00 10 QUALITY CONTROL, 01 45 00.00 20 QUALITY CONTROL and 01 45 00.00 40 QUALITY CONTROL. UFGS 01 45 00.05 20 DESIGN AND CONSTRUCTION QUALITY CONTROL applies to Navy Design-Build projects.

The requirements for Special Inspections, the special inspector, and related testing will be used

where required by UFC 3-301-01 and UFC 4-023-03.
****

1.1 REFERENCES

****
NOTE: This paragraph is used to list the publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a Reference Identifier (RID) outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature to update the issue dates.

References not used in the text will automatically be deleted from this section of the project specification when you choose to reconcile references in the publish print process.
****

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

ASCE 7-16	(2017; Errata 2018; Supp 1 2018) Minimum Design Loads and Associated Criteria for Buildings and Other Structures

INTERNATIONAL CODE COUNCIL (ICC)

ICC IBC	(2018) International Building Code

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 3-301-01	(2019) Structural Engineering

1.2 GENERAL REQUIREMENTS

Perform Special Inspections in accordance with the Statement of Special Inspections, Schedule of Special Inspections and Chapter 17 of ICC IBC. The Statement of Special Inspections and Schedule of Special Inspections are included as an attachment to this specification. Special Inspections are to be performed by an independent third party and are intended to ensure that the work of the Prime Contractor is in accordance with the Contract Documents and applicable building codes. Special inspections do not take the place of the three phases of control inspections performed by the Contractor's QC Manager or any testing and inspections required by other sections of the specifications.

****
NOTE: The following paragraph includes tailoring

for DESIGN-BID-BUILD and DESIGN-BUILD projects. For Design-Bid-Build projects, identify the Government as providing Structural Observations with notifications provided to the Contracting Officer. For Design-Build projects, identify the Structural Engineer of Record (SER) as providing Structural Observations with notifications directly to both the SER and the Contracting Officer.

****

[Structural observations will be performed separately by the Governmentby the Structural Engineer of Record on the Contractor's Design-Build team. The Contractor must provide notification to the Contracting Officer Structural Engineer of Record and Contracting Officer 14 days prior to the following points of construction to allow for structural observation:

****

NOTE: Define the points in construction that structural observations need to occur.

****

a. [_____]

b. [_____]

c. [_____]

]1.3 DEFINITIONS

1.3.1 Continuous Special Inspections

Continuous Special Inspections is the constant monitoring of specific tasks by a special inspector. These inspections must be carried out continuously over the duration of the particular tasks.

1.3.2 Perform

Perform these Special Inspections tasks for each welded joint or member.

1.3.3 Observe

Observe these Special Inspections items on a periodic daily basis. Operations need not be delayed pending these inspections.

1.3.4 Special Inspector (SI)

A qualified person retained by the Contractor and approved by the Contracting Officer as having the competence necessary to inspect a particular type of construction requiring Special Inspections. The SI must be an independent third party hired directly by the Prime Contractor.

1.3.5 Associate Special Inspector (ASI)

A qualified person who assists the SI in performing Special Inspections but must perform inspection under the direct supervision of the SI and cannot perform inspections without the SI on site.

1.3.6 Third Party

A Special inspector must not be an employee of the Contractor or of any Sub-Contractor performing the work to be inspected.

[1.3.7 Special Inspector of Record (SIOR)

****

NOTE: The Special Inspector of Record is required for the following project conditions in accordance with UFC 3-301-01:

1) The structure is classified as a Risk Category IV or V.

2) The structure is a high-rise building, which is defined as any building with an occupied floor that is 22860 mm 75 ft or greater in height above the lowest point of fire department vehicle access.

3) The Seismic Design Category is D, E, or F and one of the following conditions exist:
a. The structure is classified as Risk Category III, IV or V.
b. The structure is classified as Risk Category II and is greater than two stories above grade.

4) The structure's ultimate design wind speed is 58 m/sec 130 mph; and the structure is assigned to Risk Cat III or IV. See the Statement of Special Inspections (attached to this spec) for project design wind speed and Risk Category.

5) Where specifically required by the Engineer of Record responsible for the structural design. This is recommended for large magnitude or critical projects where additional quality control is warranted.

****

A licensed engineer in responsible charge of supervision of all special inspectors for the project and approved by the Contracting Officer. The SIOR must be an independent third party entity hired directly by the Prime Contractor.

]1.3.8 Contracting Officer

The Government official having overall authority for administrative contracting actions. Certain contracting actions may be delegated to the Contracting Officer's Representative (COR).

1.3.9 Contractor's Quality Control (QC) Manager

****

NOTE: The following paragraph includes tailoring for DESIGN-BID-BUILD, ARMY, NAVY and NASA projects. For Design-Bid-Build projects, include Section 01 45 00.00 10 QUALITY CONTROL for Army projects,

01 45 00.00 20 QUALITY CONTROL for Navy projects, and 01 45 00.00 40 QUALITY CONTROL for NASA projects. For Navy Design-Build projects, delete Section 01 45 00.00 20 QUALITY CONTROL, and replace with UFGS 01 45 00.05 20 DESIGN AND CONSTRUCTION QUALITY CONTROL.
****

An individual retained by the Prime Contractor and qualified in accordance with the Section 01 45 00.00 10 QUALITY CONTROL 01 45 00.00 20 QUALITY CONTROL 01 45 00.00 40 QUALITY CONTROL having the overall responsibility for the Contractor's QC organization.

1.3.10 Structural Engineer of Record (SER)

****
NOTE: The following paragraph includes tailoring for DESIGN-BID-BUILD and DESIGN-BUILD projects. For Design-Bid-Build projects, select either "employed by the Government" or "contracted by the Government as an A/E" based on how these services are being contracted for the project. For Design-Build projects, select "retained by the Prime Contractor".
****

A registered design professional [employed by the Government] [contracted by the Government as an A/E]retained by the Prime Contractor responsible for the overall design and review of submittal documents prepared by others. The SER is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws in the state in which the design professional works. The SER is also referred to as the Engineer of Record (EOR) in design code documents.

1.3.11 Statement of Special Inspections (SSI)

****
NOTE: The Statement of Special Inspections will be developed by the SER and must cover the following items:
1) List of the Architectural Designated Seismic Systems.
a. These components are in or attached to a Risk Category IV or V structure and are needed for continued operation of the facility or their failure could impair the continued operation of the facility.

2) List of the Mechanical Designated Seismic Systems.
a. For Seismic Design Category C or Risk Category V list the following:
i. Heating, ventilation and air-conditioning (HVAC) ductwork containing hazardous materials and anchorage of such ductwork.
ii. Piping systems and mechanical units containing flammable, combustible or highly toxic materials.
b. For Seismic Design Category D, E or F or Risk

Category V list mechanical system that meet one of the following:
i. Life safety component required to function after an earthquake
ii. Component that contains hazardous content
iii. All components in an essential facility needed for continued operation after an earthquake

3) List of the Electrical Designated Seismic Systems.
a. For Seismic Design Category C or Risk Category V list the following:
i. Anchorage of electrical equipment used for emergency or standby power systems.
b. For Seismic Design Category D, E or F list electrical system that meet one of the following:
i. Life safety component required to function after an earthquake
ii. Component that contains hazardous content
iii. All components in an essential facility needed for continued operation after an earthquake

4) Define the periodic walk-down inspections required by UFC 3-301-01.

The Statement of Special Inspections and the Schedule of Special Inspections must be included as an attachment to this specification.

****

****

NOTE: A template for the Statement of Special Inspections can be found on the Whole Building Design Guide website at www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/ufgs-01-45-35

****

A document developed by the SER identifying the material, systems, components and work required to have Special Inspections. This statement is included at the end of this specification.

1.3.12 Schedule of Special Inspections (SSI)

****

NOTE: A template for the Schedule of Special Inspections can be found on the Whole Building Design Guide website at www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/ufgs-01-45-35

****

A schedule which lists each of the required Special Inspections, the extent to which each Special Inspection is to be performed, and the required frequency for each in accordance with ICC IBC Chapter 17. This schedule is included at the end of this specification.

[1.3.13 Designated Seismic Systems (DSS)

****
NOTE: Include this paragraph when Designated Seismic Systems are required in accordance with UFC's 3-301-01 and 3-301-02 (where applicable) and the Statement of Special Inspections.
****

Those nonstructural components that require design in accordance with ASCE 7-16 Chapter 13 and for which the component importance factor, Ip, is greater than 1.0. This designation applies to systems that are required to be operational following the Design Earthquake for RC I - IV structures and following the MCER for RC V structures. All systems in RC V facilities designated as MC-1 in accordance with UFC 3-301-02 are considered part of the Designated Seismic Systems.[Designated Seismic Systems will have an Importance Factor Ip = 1.5].

]1.3.14 Definable Feature of Work (DFOW)

An inspection group that is separate and distinct from other inspection groups, having inspection requirements or inspectors that are unique.

1.4 SUBMITTALS

****
NOTE: Review Submittal Description (SD) definitions in Section 01 33 00 SUBMITTAL PROCEDURES and edit the following list, and corresponding submittal items in the text, to reflect only the submittals required for the project. The Guide Specification technical editors have classified those items that require Government approval, due to their complexity or criticality, with a "G." Generally, other submittal items can be reviewed by the Contractor's Quality Control System. Only add a "G" to an item if the submittal is sufficiently important or complex in context of the project.

For Army projects, fill in the empty brackets following the "G" classification, with a code of up to three characters to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force, and NASA projects.

The "S" classification indicates submittals required as proof of compliance for sustainability Guiding Principles Validation or Third Party Certification and as described in Section 01 33 00 SUBMITTAL PROCEDURES.

Choose the first bracketed item for Navy, Air Force, and NASA projects, or choose the second bracketed

item for Army projects.
****

****
NOTE: For Navy Design-Build projects, delete 01 33 00 SUBMITTAL PROCEDURES, and replace with UFGS 01 33 00.05 20 CONSTRUCTION SUBMITTAL PROCEDURES and UFGS 01 33 10.05 20 DESIGN SUBMITTAL PROCEDURES.
****

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are [for Contractor Quality Control approval.][for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

SIOR Letter of Acceptance; G[, [_____]]

Special Inspections Project Manual; G[, [_____]]

Special Inspections Agency's Written NDT Practices with method and evidence of regular equipment calibration where applicable

SD-06 Test Reports

Special Inspections Daily Reports

Special Inspections Biweekly Reports

SD-07 Certificates

AISC Certified Steel Fabricator

Steel Truss Plant Quality Assurance Program

Wood Truss Plant Quality Assurance Program

AC472 Accreditation

Steel Joist Institute Membership

Precast Concrete Institute (PCI) Certified Plant

Certificate of Compliance

Special Inspector of Record Qualifications; G[, [_____]]

Special Inspector Qualifications; G[, [_____]]

Qualification Records for NDT technicians

SD-11 Closeout Submittals

****
NOTE: Include this submittal for large complex projects.

****

Interim Report of Special Inspections for Each DFOW; G[, [_____]]

Comprehensive Final Report of Special Inspections; G[, [_____]]

1.5 SPECIAL INSPECTOR QUALIFICATIONS

****

NOTE: The following paragraphs and subparagraphs include special inspector requirements for a variety of building or site components. Not all components are included on every project. Delete building or site component paragraphs and corresponding submittal requirements when no special inspection requirement exists for the project.

****

Submit qualifications for each special inspector[and the special inspector of record].

1.5.1 Steel Construction and High Strength Bolting

1.5.1.1 Special Inspector

a. ICC Structural Steel and Bolting Special Inspector certificate with one year of related experience, or

b. Registered Professional Engineer with three years of related experience

1.5.1.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.2 Welding Structural Steel

1.5.2.1 Special Inspector

****

NOTE: For highly complex steel projects use only AWS Certified Welding Inspectors.

****

a. ICC Structural Welding Special Inspector certificate with one year of related experience, or

b. AWS Certified Welding Inspector

1.5.2.2 Associate Special Inspector

AWS Certified Associate Welding Inspector

1.5.3 Nondestructive Testing of Welds

1.5.3.1 Special Inspector

NDT Level III Certificate

1.5.3.2 Associate Special Inspector

NDT Level II Certificate plus one year of related experience

1.5.4 Cold Formed Steel Framing

1.5.4.1 Special Inspector

****
NOTE: For projects with Seismic Design Category D, E or F or nominal design wind speed in excess of 49 m/s 110 mph, consider eliminating "c".
****

a. ICC Structural Steel and Bolting Special Inspector certificate with one year of related experience, or

b. ICC Commercial Building Inspector with one year of experience, or

c. ICC Residential Building Inspector with one year of experience, or

d. Registered Professional Engineer with three years related experience

1.5.4.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.5 Concrete Construction

1.5.5.1 Special Inspector

a. ICC Reinforced Concrete Special Inspector Certificate with one year of related experience, or

b. ACI Concrete Construction Special Inspector, or

c. Registered Professional Engineer with three years of related experience

1.5.5.2 Associate Special Inspector

a. ACI Concrete Construction Special Inspector in Training, or

b. Engineer-In-Training with one year of related experience

1.5.6 Prestressed Concrete Construction

1.5.6.1 Special Inspector

a. ICC Pre-stressed Special Inspector Certificate with one year of related experience, or

b. PCI Quality Control Technician/ Inspector Level II Certificate with one year of related experience, or

c. Registered Professional Engineer with three years of related experience

1.5.6.2 Associate Special Inspector

a. PCI Quality Control Technician/ Inspector Level I Certificate with one

year of related experience, or

b. Engineer-In-Training with one year of related experience

1.5.7 Post-tensioned Concrete Construction

1.5.7.1 Special Inspector

a. PTI Level 2 Unbonded PT Inspector Certificate, or

b. Registered Professional Engineer with three years of related experience

1.5.7.2 Associate Special Inspector

a. PTI Level 1 Unbonded PT Inspector Certificate with one year of related experience, or

b. Engineer-In-Training with one year of related experience

1.5.8 Masonry Construction

1.5.8.1 Special Inspector

a. ICC Structural Masonry Special Inspector Certificate with one year of related experience, or

b. Registered Professional Engineer with three years of related experience

1.5.8.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.9 Wood

1.5.9.1 Special Inspector

a. ICC Commercial Building Inspector Certificate with one year of related experience, or

b. ICC Residential Building Inspector with on year of experience, or

c. Registered Professional Engineer with three years of related experience

1.5.9.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.10 Verification of Site Soil Condition, Fill Placement and Load-Bearing Requirements

1.5.10.1 Special Inspector

a. ICC Soils Special Inspector Certificate with one year of related experience, or

b. NICET Soils Technician Level II Certificate in Construction Material Testing, or

c. Geologist-In-Training with three years of related experience, or

d. Registered Professional Engineer with three years of related experience

1.5.10.2 Associate Special Inspector

a. NICET Soils Technician Level I Certificate in Construction Material Testing with one year of related experience, or

b. Engineer-In-Training with one year of related experience

1.5.11 Deep Foundations

1.5.11.1 Special Inspector

a. NICET Soils Technician Level II Certificate in Construction Material Testing, or

b. Geologist-In-Training with three years of related experience, or

c. Registered Professional Engineer with three years of related experience

1.5.11.2 Associate Special Inspector

a. NICET Soils Technician Level I Certificate in Construction Material Testing with one year of related experience, or

b. NICET Geotechnical Engineering Technician Level I Construction or Generalist Certificate with one year of related experience, or

c. Engineer-In-Training with one year of related experience

1.5.12 Sprayed Fire Resistant Material

1.5.12.1 Special Inspector

a. ICC Spray-applied Fireproofing Special Inspector Certificate, or

b. ICC Fire Inspector I Certificate with one year of related experience, or

c. Registered Professional Engineer or Architect with related experience

1.5.12.2 Associate Special Inspector

Engineer-In-Training with one year of related experience

1.5.13 Mastic and Intumescent Fire Resistant Coatings

1.5.13.1 Special Inspector

a. ICC Spray-applied Fireproofing Special Inspector Certificate, or

b. ICC Fire Inspector I Certificate with one year of related experience, or

c. Registered Professional Engineer or Architect with related experience

1.5.13.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.14 Exterior Insulation and Finish System (EIFS)

1.5.14.1 Special Inspector

a. AWCI EIFS Inspector Certificate, or

b. Exterior Design Institute Certificate, or

c. Registered Professional Engineer or Architect with related experience

1.5.14.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.15 Fire-Resistant Penetrations and Joints

1.5.15.1 Special Inspector

a. Passed the UL Firestop Exam with one year of related experience, or

b. Passed the FM Firestop Exam with one year of related experience, or

c. Registered Professional Engineer with related experience

1.5.15.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.16 Smoke Control

1.5.16.1 Special Inspector

a. AABC Technician Certification with one year of related experience, or

b. Registered Professional Engineer with related experience

1.5.16.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

[1.5.17 Special Inspector of Record (SIOR)

Registered Professional Engineer with five years of related experience.

]PART 2 PRODUCTS

2.1 FABRICATOR SPECIAL INSPECTIONS

Special Inspections of fabricator's work performed in the fabricator's shop is required to be inspected in accordance with the Statement of Special Inspections and the Schedule of Special Inspections unless the fabricator is certified by the approved agency to perform such work without Special Inspections. Submit the following certification [certifications] to the Contracting Officer for information to allow work performed in the fabricator's shop to not be subjected to Special

Inspections.

****
NOTE: The following certifications meet the requirements for fabricator approval in accordance with paragraph 1704.2.5.2 of IBC.
****

[AISC Certified Steel Fabricator.

][Truss Plate Institute (TPI) steel truss plant quality assurance program certification.

][Truss Plate Institute (TPI) wood truss plant quality assurance program certification.

]

****
NOTE: AC472 Accreditation is the accreditation criteria for inspection programs for manufacturers of metal building systems.
****

[International Accreditation Service, AC472 Accreditation

][Steel Joist Institute Membership

][Precast Concrete Institute (PCI) Certified Plant, Group C

] At the completion of fabrication, submit a certificate of compliance, to be included with the comprehensive final report of Special Inspections, stating that the materials supplied and work performed by the fabricator are in accordance with the construction documents.

PART 3 EXECUTION

3.1 RESPONSIBILITIES

[3.1.1 Special Inspector of Record

****
NOTE: Include this paragraph when the SIOR is required.
****

a. Supervise all Special Inspectors required by the Contract Documents and the IBC.

b. Submit a SIOR Letter of Acceptance to the Contracting Officer attesting to acceptance of the duties of SIOR, signed and sealed by the SIOR.

c. Verify the qualifications of all of the Special Inspectors.

d. Verify the qualifications of fabricators.

****
NOTE: Include the following bracketed requirements when the structural design is required to follow AISC 341 for seismic design of steel structures.

****

[e. Submit Special Inspections agency's written NDT practices for the monitoring and control of the agency's operations to include the following:

(1) The agency's procedures for the selection and administration of inspection personnel, describing the training, experience and examination requirements for qualifications and certification of inspection personnel.

(2) The agency's inspection procedures, including general inspection, material controls, and visual welding inspection.

f. Submit qualification records for nondestructive testing (NDT) technicians designated for the project.

g. Submit NDT procedures and equipment calibration records for NDT to be performed and equipment to be used for the project.

] h. Prepare a Special Inspections Project Manual, which must cover the following:

(1) Roles and responsibilities of the following individuals during Special Inspections: SIOR, SI, ASI, General Contractor's QC Manager and SER.

(2) Organizational chart or communication plan, indicating lines of communication.

(3) Contractor's internal plan for scheduling inspections. Address items such as timeliness of inspection requests, who to contact for inspection requests, and availability of alternate inspectors.

(4) Indicate the Government reporting requirements.

(5) Propose forms or templates to be used by SI and SIOR to document inspections.

(6) Indicate procedures for tracking nonconforming work and verification that corrective work is complete.

(7) Indicate how the SIOR and SI will participate in weekly QC meetings.

(8) Indicate how Special Inspections of shop fabricated items will be handled when the fabricator's shop is not certified in accordance with paragraph FABRICATOR SPECIAL INSPECTIONS.

(9) Include a section in the manual that covers each specific item requiring Special Inspections that is indicated on the Schedule of Special Inspections. Provide names and qualifications of each special inspector who will be performing the Special Inspections for each specific item. Provide detail on how the Special Inspections are to be carried out for each item so that the expectations are clear for the General Contractor and the Subcontractor performing the work.

Make a copy of the Special Inspections Project Manual available on the

job site during construction. Submit a copy of the Special Inspections Project Manual for approval.

i. Attend coordination and mutual understanding meeting where the information in the Special Inspections Project Manual will be reviewed to verify that all parties have a clear understanding of the Special Inspections provisions and the individual duties and responsibilities of each party.

j. Maintain a 3-ring binder for the Special Inspector's daily and biweekly reports and the Special Inspections Project Manual. This file must be located in a conspicuous place in the project trailer/office to allow review by the Contracting Officer and the SER.

k. Submit a copy of the Special Inspector's daily reports to the QC Manager.

l. Discrepancies that are observed during Special Inspections must be reported to the QC Manager for correction. If discrepancies are not corrected before the special inspector leaves the site the observed discrepancies must be documented in the daily report.

m. Submit a biweekly Special Inspections report until all work requiring Special Inspections is complete. A report is required for each biweekly period in which Special Inspections activity occurs, and must include the following:

(1) A brief summary of the work performed during the reporting time frame.

****

NOTE: Include the bracketed portion of the following line when there are designated seismic systems for mechanical and electrical.

****

(2) Changes and discrepancies with the drawings, specifications[and mechanical or electrical component certification,] that were observed during the reporting period.

(3) Discrepancies which were resolved or corrected.

(4) A list of nonconforming items requiring resolution.

(5) All applicable test results including nondestructive testing reports.

****

NOTE: Include the following subparagraph on large complex projects.

****

[n. At the completion of each Definable Feature of Work (DFOW) requiring Special Inspections, submit an interim report that documents the Special Inspections completed for that DFOW including corrections of all discrepancies noted in the daily reports. Interim reports of Special Inspections must be signed and dated by the SIOR.

] o. At the completion of the project submit a comprehensive final report

of Special Inspections that documents the Special Inspections completed for the project including corrections of all discrepancies noted in the daily reports. The comprehensive final report of Special Inspections must be signed, dated and bear the seal of the SIOR.

]3.1.2 Quality Control Manager

****
NOTE: Include the bracketed items when there is no SIOR.
****

[a. Supervise all Special Inspectors required by the Contract Documents and the IBC.

b. Verify the qualifications of all of the Special Inspectors.

c. Verify the qualifications of fabricators.

d. Maintain a 3-ring binder for the Special Inspector's daily and biweekly reports. This file must be located in a conspicuous place in the project trailer/office to allow review by the Contracting Officer and the SER.

] [a.][e.] Maintain a rework items list that includes discrepancies noted on the Special Inspectors daily report.

3.1.3 Special Inspectors

a. Inspect all elements of the project for which the special inspector is qualified to inspect and are identified in the Schedule of Special Inspections.

b. Attend preparatory phase meetings related to the Definable Feature of Work (DFOW) for which the special inspector is qualified to inspect.

****
NOTE: Include subparagraphs "c" through "j" when the SIOR is NOT required.
****

****
NOTE: Include subparagraphs "c" through "e" requirements when the structural design is required to follow AISC 341 for seismic design of steel structures.
****

[c. Submit Special Inspections agency's written NDT practices for the monitoring and control of the agency's operations to include the following:

(1) The agency's procedures for the selection and administration of inspection personnel, describing the training, experience and examination requirements for qualifications and certification of inspection personnel.

(2) The agency's inspection procedures, including general inspection, material controls, and visual welding inspection.

d. Submit qualification records for nondestructive testing (NDT) technicians designated for the project.

e. Submit NDT procedures and equipment calibration records for NDT to be performed and equipment to be used for the project.

] f. Submit a copy of the daily reports to the QC Manager.

g. Report discrepancies that are observed during Special Inspections to the QC Manager for correction. If discrepancies are not corrected before the special inspector leaves the site the observed discrepancies must be documented in the daily report.

h. Submit a biweekly Special Inspection Report until all inspections are complete. A report is required for each biweekly period in which Special Inspections activity occurs, and must include the following:

(1) A brief summary of the work performed during the reporting time frame.

****

NOTE: Include the bracketed portion when there are designated seismic systems for mechanical and electrical.

****

(2) Changes and discrepancies with the drawings, specifications[and mechanical or electrical component certification,] that were observed during the reporting period.

(3) Discrepancies which were resolved or corrected.

(4) A list of nonconforming items requiring resolution.

(5) All applicable test result including nondestructive testing reports.

****

NOTE: Include the following subparagraph for large complex projects.

****

[i. At the completion of each DFOW requiring Special Inspections, submit an interim report of Special Inspections that documents the Special Inspections completed for that DFOW. Identify the inspector responsible for each item inspected and corrections of all discrepancies noted in the daily reports. The interim report of Special Inspections must be signed, dated and indicate the certification of the special inspector qualifying them to conduct the inspection.

] j. At the completion of the project submit a comprehensive final report of Special Inspections that documents the Special Inspections completed for the project and corrections of all discrepancies noted in the daily reports. The comprehensive final report of Special Inspections must be signed, dated and indicate the certification of the special inspector qualifying them to conduct the inspection.

****

NOTE: Include the following requirement when the SIOR is required.
****

[k. Submit daily reports to the SIOR.

][3.1.4 Structural Engineer of Record (SER)

****
NOTE: This paragraph includes taioring for DESIGN-BUILD projects. Include this paragraph on Design-Build projects when the SER is retained by the Prime Contractor.
****

a. Develop the Statement of Special Inspections and the Schedule of Special Inspections as defined in Chapter 17 of ICC IBC. Submit the Statement of Special Inspections and the Schedule of Special Inspections for approval by the Contracting Officer.

The Statement of Special Inspection must include the following information:

(1) List of Architectural Designated Seismic Systems.

(2) List of Mechanical Designated Seismic Systems.

(3) List of the Electrical Designated Seismic Systems.

(4) Define the periodic walk-down inspections required by UFC 3-301-01.

(5) List of elements that are part of the progressive collapse resistance system.

Develop Schedule of Special Inspection using the template located on the Whole Building Design Guide website at: www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/ufgs-01-45-35

****
NOTE: Include the following subparagraphs when the project conditions according to the UFC's and ICC IBC Chapter 17 are met and structural observations are required.

Structural observations are specifically related to the wind/seismic force resisting system within the structure.
****

[b. Prior to the start of structural observations submit a written statement identifying the frequency and delineation wind/seismic force resisting system requiring structural observations.

c. At the conclusion of the structural observations submit a final report of structural observations indicating that the structural observation site visits have been made and identify any reported deficiencies which, to the best of the structural observer's knowledge, have not been resolved.
]

****

NOTE: Include the following subparagraphs when the project includes designated seismic systems for mechanical and electrical components in accordance with UFC 3-301-01.

Include the Nonstructural Component Design Review Panel for Risk Category V structures in accordance with UFC 3-301-01.

****

[d. Perform a final walk-down inspection of the designated seismic systems for mechanical and electrical components[with the Nonstructural Component Design Review Panel] to ensure that the non-structural elements satisfy life safety mounting requirements as defined in the Statement of Special Inspections.

e. Submit a report of the final walk-down inspection that includes the following:

(1) Record/observations of final site visit

(2) Documentation that all required inspections were performed in accordance with the Statement of Special Inspections.

(3) Documentation that the Designated Seismic Systems were installed in accordance with the construction documents and the requirements of ICC IBC Chapter 17, as modified by UFC 3-301-01.

]]3.2 DEFECTIVE WORK

Check work as it progresses, but failure to detect any defective work or materials must in no way prevent later rejection if defective work or materials are discovered, nor obligate the Contracting Officer to accept such work.

-- End of Section --