Statement of Structural Tests and Special Inspections

National Park Service (NPS) - Denver Service Center (DSC) | 6-29-21

Park: Golden Gate National Recreation Area

Project Management Information System (PMIS) Number: 614-181643

Project Name: Stinson Beach Lifeguard Tower

Structural Engineering Firm: Silman Structural Solutions

This Statement of Structural Tests and Special Inspections is being submitted as required by Chapter 17 of the **2021 International Building Code** (IBC-21). It includes the following:

1. Seismic requirements
2. Wind requirements
3. Qualification Requirements for Inspectors and Testing Technicians
4. Listing of Required Structural Tests and Special Inspections

The Construction Contractor's Quality Control Supervisor will provide copies of all special inspection reports and associated documentation to the Contracting Officer (CO). The Construction Contractor will be required to correct all deficiencies discovered in the Special Inspection and Structural Testing program.

Prepared By: Kirk I. Mettam
(Type or print name)

Signature: Signed Below Date: 09-05-2025

Stamped by Professional Engineer (PE) or Structural Engineer (SE)

Seismic and Wind Requirements

Seismic Requirements, IBC-21 Section 1704.3

Description of seismic-force-resisting system and designated seismic systems subject to special inspections:

Periodic special inspection shall be required for nailing, bolting, anchoring and other fastening of elements of the seismic force-resisting system, including wood shear walls, wood diaphragms, drag struts, braces, shear panels and hold-downs.

Special inspections are not required for wood shear walls, shear panels and diaphragms, including nailing, bolting, anchoring and other fastening to other elements of the seismic force-resisting system, where the lateral resistance is provided by structural sheathing, and the specified fastener spacing at the panel edges is more than 4 inches.

Wind Requirements, IBC-21 Section 1704.3

Description of wind-force-resisting system and designated wind systems subject to special inspections:

Special inspection for wind resistance not required in accordance with IBC 1705.12.

Instructions:

1. Under Listing of Required Structural Tests and Special Inspections:
    a. **Required?** - Place an **X** for all Special Inspections and Tests required for this project.
    b. **Required Qualifications** - Provide qualifications for the special inspector, using the Qualification Requirements for Inspector and Testing Technicians list below, for all required Structural Tests and Special Inspections.
    c. **Continuous** - If marked with an **X**, continuous special inspection shall be as defined in Chapter 2, IBC-21.
    d. **Periodic** - If marked with an **X**, provide the minimum number of tests, i.e. 20% of all field welds, or the amount of work to be inspected (e.g. 10% of all wall surfaces).
2. Attach completed Statement of Structural Tests and Special Inspections to the end of NPS DSC Division 1 Specifications **Section 01 40 00 Quality Requirements**.

Qualification Requirements for Inspectors and Testing Technicians

PE/SE	Structural Engineer – licensed PE or SE specializing in the design of buildings and structures
PE/GE	Geotechnical Engineer – licensed PE specializing in soil mechanics and foundations
EIT	Engineer-In-Training – graduate engineer who has passed the Fundamentals of engineering examination

American Concrete Institute (ACI) Certification

ACI-CCSI	Concrete Construction Special Inspector
ACI-LTT	Concrete Laboratory Testing Technician Level 1 or 2
ACI-STT	Concrete Strength Testing Technician
ACI-FTT	Concrete Field Testing Technician – Grade I

American Society of Non-Destructive Testing (ASNT) Certification

Non-Destructive Testing Technician – Level II or III

American Welding Society (AWS) Certification

AWS-CWI	Certified Welding Inspector

Exterior Design Institute (EDI) Certification

EDI-EIFS	Certified EIFS inspector

International Code Council (ICC) Certification

ICC-PCSI	Prestressed Concrete Special Inspector
ICC-RCSI	Reinforced Concrete Special Inspector
ICC-SSI	Soils Special Inspector
ICC-SFSI	Spray-applied Fireproofing Special Inspector
ICC-SMSI	Structural Masonry Special Inspector
ICC-SSBSI	Structural Steel and Bolting Special Inspector
ICC-SWSI	Structural Welding Special Inspector

National Institute for Certification in Engineering Technologies (NICET) Certification

NICET-CT	Concrete Technician – Levels I, II, III and IV
NICET-GET	Geotechnical Engineering Technician - Levels I, II, III and IV
NICET-ST	Soils Technician - Levels I, II, III and IV

Other

Listing of Required Structural Tests and Special Inspections

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
	Steel Construction (IBC-21 Section 1705.2; American Institute of Steel Construction: AISC 360-16 Chapter N, AISC 341-16 Chapter J)				
	Prior to Welding (AISC 360-16 Table N5.4-1)				
X	1. Welder qualification records and continuity records	ICC-SWSI	X		
X	2. Welding procedure specifications (WPS) available	ICC-SWSI	X		
X	3. Manufacturer certifications for welding consumables available	ICC-SWSI	X		
X	4. Material identification (type/grade)	ICC-SWSI		X	Per code and inspector requirements
X	5. Welder identification system	ICC-SWSI		X	Per code and inspector requirements
	6. Fit-up of groove welds (including joint geometry)				
	a. Joint preparation			X	
	b. Dimensions (alignment, root opening, root face, bevel)			X	
	c. Cleanliness (condition of steel surfaces)			X	
	d. Tacking (tack weld quality and location)			X	
	e. Backing type and fit (if applicable)			X	
X	7. Fit-up of CJP (complete joist penetration) groove welds of HSS (hollow structural sections) T-, Y- and K-joints without backing (including joint geometry)	ICC-SWSI			
X	a. Joint preparation	ICC-SWSI	X		
X	b. Dimensions (alignment, root opening, root face, bevel)	ICC-SWSI	X		

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
X	c. Cleanliness (condition of steel surfaces)	ICC-SWSI	X		
X	d. Tacking (tack weld quality and location)	ICC-SWSI	X		
X	8. Configuration and finish of access holes	ICC-SWSI		X	Per code and inspector requirements
X	9. Fit-up of fillet welds	ICC-SWSI			
X	a. Dimensions (alignment, gaps at root)	ICC-SWSI		X	Per code and inspector requirements
X	b. Cleanliness (condition of steel surfaces)	ICC-SWSI		X	Per code and inspector requirements
X	c. Tacking (tack weld quality and location)	ICC-SWSI		X	Per code and inspector requirements
X	10. Check welding equipment	ICC-SWSI		X	Per code and inspector requirements
	During Welding (AISC 360-16 Table N5.4-2)				
X	1. Control and handling of welding consumables	ICC-SWSI			
X	a. Packaging	ICC-SWSI		X	Per code and inspector requirements
X	b. Exposure control	ICC-SWSI		X	Per code and inspector requirements
X	2. No welding over cracked tack welds	ICC-SWSI		X	Per code and inspector requirements
X	3. Environmental conditions	ICC-SWSI			
X	a. Wind speed within limits	ICC-SWSI		X	Per code and inspector requirements

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
X	b. Precipitation and temperature	ICC-SWSI		X	Per code and inspector requirements
X	4. WPS followed	ICC-SWSI			
X	a. Settings on welding equipment	ICC-SWSI		X	Per code and inspector requirements
X	b. Travel speed	ICC-SWSI		X	Per code and inspector requirements
X	c. Selected welding materials	ICC-SWSI		X	Per code and inspector requirements
X	d. Shielding gas type/flow rate	ICC-SWSI		X	Per code and inspector requirements
X	e. Preheat applied	ICC-SWSI		X	Per code and inspector requirements
X	f. Interpass temperature maintained (minimum/maximum)	ICC-SWSI		X	Per code and inspector requirements
X	g. Proper position (F, V, H, OH)	ICC-SWSI		X	Per code and inspector requirements
X	h. Intermix of filler metals avoided unless approved (reference: AISC 341-10 Table J6.2)	ICC-SWSI		X	Per code and inspector requirements
X	5. Use of qualified welders	ICC-SWSI	X		
X	6. Welding techniques	ICC-SWSI			
X	a. Interpass and final cleaning	ICC-SWSI		X	Per code and inspector requirements

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
X	b. Each pass within profile limitations	ICC-SWSI		X	Per code and inspector requirements
X	c. Each pass meets quality requirements	ICC-SWSI		X	Per code and inspector requirements
X	7. Placement and installation of headed stud anchors	ICC-SWSI	X		
X	**After Welding** (AISC 360-16 Table N5.4-3)	ICC-SWSI			
X	1. Welds cleaned	ICC-SWSI		X	Per code and inspector requirements
X	2. Size, length and location of welds	ICC-SWSI	X		
X	3. Welds meet visual acceptance criteria	ICC-SWSI			
X	a. Crack prohibition	ICC-SWSI	X		
X	b. Weld/base-metal fusion	ICC-SWSI	X		
X	c. Crater cross section	ICC-SWSI	X		
X	d. Weld profiles	ICC-SWSI	X		
X	e. Weld size	ICC-SWSI	X		
X	f. Undercut	ICC-SWSI	X		
X	g. Porosity	ICC-SWSI	X		
X	4. Arc strikes	ICC-SWSI	X		
X	5. k-area	ICC-SWSI	X		
X	6. Weld access holes in rolled heavy shapes and built-up heavy shapes	ICC-SWSI	X		
X	7. Backing removed and weld tabs removed (if required)	ICC-SWSI	X		
X	8. Repair activities	ICC-SWSI	X		

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
X	9. Document acceptance or rejection of welded joint or member	ICC-SWSI	X		
X	10. No prohibited welds have been added without the approval of the EOR (Engineer of Record)	ICC-SWSI	X		
X	11. Placement of reinforcing or contouring fillet welds (if required) (reference: AISC 341-16)	ICC-SWSI	X		
X	**Nondestructive Testing** (AISC 360-16 Section N5 and AISC 341-16 Section J6)	ICC-SWSI			
X	1. Risk Category II Structures - Perform Ultrasonic Testing on 10% of CJP groove welds in butt, T- and corner joints subject to transversely applied tension loading, in materials 5/16 inch thick or greater.	ICC-SWSI		X	Per code and inspector requirements
	2. Risk Category III or IV Structures - Perform Ultrasonic Testing on all CJP groove welds subject to transversely applied tension loading in butt, T- and corner joints, in materials 5/16 inch thick or greater.		X		
	3. Access Holes – Perform Magnetic Particle Testing or Liquid Penetrant Testing when the flange thickness exceeds 2 inches for rolled shapes, or when the web thickness exceeds 2 inches for built-up shapes.		X		
	4. Welded Joints Subject to Fatigue		X		
	Nondestructive Testing (AISC 341-16 Section J6)				
	Column Splice and Column to Base Plate PJP Groove Weld (AISC 341-16 Section J6 2b)				
	1. Perform Ultrasonic Testing on 100% of PJP (partial-joint-penetration) groove welds in column splices and column to base plate welds		X		
	2. CJP Groove weld		X		
	3. Lamellar tearing		X		
	4. Beam cope and access hole		X		
	5. Reduced beam section repair		X		
	6. Weld tab removal		X		

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
X	**Prior to Bolting** (AISC 360-16 Table N5.6-1)	ICC-SSBSI			
X	These inspections are not required for snug-tight joints.	ICC-SSBSI			
X	1. Manufacturer's certifications available for fastener materials	ICC-SSBSI	X		
X	2. Fasteners marked in accordance with ASTM requirements	ICC-SSBSI		X	Per code and inspector requirements
X	3. Correct fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	ICC-SSBSI		X	Per code and inspector requirements
X	4. Correct bolting procedure selected for joint detail	ICC-SSBSI		X	Per code and inspector requirements
X	5. Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	ICC-SSBSI		X	Per code and inspector requirements
X	6. Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used	ICC-SSBSI		X	Per code and inspector requirements
X	7. Protected storage provided for bolts, nuts, washers and other fastener components	ICC-SSBSI		X	Per code and inspector requirements
	During Bolting (AISC 360-16 Table N5.6-2)				
	These inspections are not required for snug-tight joints.				
	These inspections are not required for pretensioned joints and slip-critical joints, when the installer is using the turn-of-nut method with matchmarking techniques, the direct-tension-indicator method, or the twist-off-type tension control bolt method.				
	1. Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are positioned as required			X	Per code and inspector requirements

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
	2. Joint brought to the snug-tight condition prior to the pretensioning operation			X	Per code and inspector requirements
	3. Fastener component not turned by the wrench prevented from rotating			X	Per code and inspector requirements
	4. Fasteners are pretensioned in accordance with the RCSC (Resource Council on Structural Connections) Specification, progressing systematically from the most rigid point toward the free edges			X	Per code and inspector requirements
	After Bolting (AISC 360-16 Table N5.6-2)				
	Document acceptance or rejection of bolted connections.		X		
	Other Inspection Tasks (AISC 360-16 Section N5.7)				
X	1. Verify compliance of fabricated steel with the details shown on the approved shop drawings.	ICC-SSBSI		X	Per code and inspector requirements
X	2. Verify compliance of the erected steel frame with the details shown on the approved erection drawings, including braces, stiffeners, member locations and joint details.	ICC-SSBSI		X	Per code and inspector requirements
X	3. Anchor rods and other embedments support structural steel	ICC-SSBSI			
X	a. Verify the diameter, grade, type and length of the anchor rod or embedded item.	ICC-SSBSI		X	Per code and inspector requirements
X	b. Verify the extent or depth of embedment into the concrete.	ICC-SSBSI		X	Per code and inspector requirements
	4. RBS (reduce beam section) requirements, if applicable (AISC 341-16)				
	a. Contour and finish			X	
	b. Dimensional tolerances			X	

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
	5. Protected zone - no holes and unapproved attachments made by fabricator or erector, as applicable. (AISC 341-16)			X	
	6. H-piles - Protected zone - no holes and unapproved attachments made by the responsible contractor, as applicable. (AISC 341-16)			X	
	Cold-formed Steel Deck (IBC-21 1705.2.2)				
	1. Special inspections in accordance with QA/QC-2017 Standard for Quality control (QC) and Quality assurance (QA) for Installation of Steel Deck				
	Open-Web steel Joists and Joist Girders (IBC-21 Table 1705.2.3)				
	1. Installation of open-web steel joists and joist girders.				
	a. End connections - welding or bolted			X	
	b. Bridging - horizontal or diagonal				
	1. Standard bridging			X	
	2. Bridging that differs from the SJI (Steel Joist Institute) specifications listed in Section 2207.1.			X	
	Inspection of Composite Structures Prior to Concrete Placement (AISC 341-16 Table J9.1)				
	1. Material identification of reinforcing steel (Type/Grade)			X	
	2. Determination of carbon equivalent for reinforcing steel other than ASTM A706			X	
	3. Proper reinforcing steel size, spacing and orientation			X	
	4. Reinforcing steel has not been rebent in the field			X	
	5. Reinforcing steel has been tied and supported as required			X	
	6. Required reinforcing steel clearances have been provided			X	

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
	7. Composite member has required size			X	
	Inspection of Composite Structures During Concrete Placement (AISC 341-16 Table J9.2)				
	1. Concrete: Material identification (mix design, compressive strength, maximum large aggregate size, maximum slump)			X	
	2. Limits on water added at the truck or pump			X	
	3. Proper placement techniques to limit segregation			X	
	Inspection of Composite Structures During Concrete Placement (AISC 341-16 Table J9.2)				
	1. Achievement of minimum specified concrete compressive			X	
	Cold-formed Steel Trusses Spanning 60-feet or Greater (IBC-21 Section 1705.2.4)				
	1. Verify temporary installation restraint/bracing installed in accordance with the approved shop drawings.			X	
	2. Verify permanent individual truss member restraint/bracing installed in accordance with the approved shop drawings.			X	
	Concrete Construction (IBC-21 Section 1705.3)				
X	1. Inspect reinforcing steel, including prestressing tendons, and placement.	ICC-RCSI		X	Per code and inspector requirements
X	2. Inspection of reinforcing steel welding	ICC-RCSI			
X	a. Verify weldability of reinforcing bars other than ASTM A706.	ICC-RCSI	X		
X	b. Inspect single pass fillet welds, maximum 5/16 inch.	ICC-RCSI		X	Per code and inspector requirements
X	c. Inspect all other welds.	ICC-RCSI		X	Per code and inspector requirements

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
X	3. Inspection of anchors cast in concrete.	ICC-RCSI		X	Per code and inspector requirements
	4. Inspection of anchors post-installed in hardened concrete members.				
	a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension load		X		
	b. Mechanical anchors and adhesive anchors not defined in 4 a			X	
X	5. Verify use of approved design mix.	ICC-RCSI		X	Per code and inspector requirements
X	6. Prior to placement fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	ICC-RCSI	X		
X	7. Inspect concrete and shotcrete placement for proper application techniques.	ICC-RCSI	X		
X	8. Inspect for maintenance of specified curing temperature and techniques.	ICC-RCSI		X	Per code and inspector requirements
	9. Inspection of prestressed concrete:				
	a. Application of prestressing forces		X		
	b. Grouting of bonded prestressing tendons in the seismic-force-resisting system.		X		
X	10. Erection of precast structural members	ICC-RCSI		X	Per code and inspector requirements
	11. For precast concrete diaphragm connections or reinforcement at joints classified as moderate or high deformability elements (MDE or HDE) in structures assigned to Seismic Design Category C, D, E, or F, inspect such connections and reinforcement in the field for:				
	a. Installation of the embedded parts		X		

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
	b. Completion of the continuity of reinforcement across joints		X		
	c. Completion of connections in the field		X		
	12. Inspect installation tolerances of precast concrete diaphragm connections for compliance with ACI 550.5 (American Concrete Institute).			X	
	13. 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.			X	
X	14. Inspection formwork for shape, location and dimensions of the concrete member being formed.	ICC-RCSI		X	Per code and inspector requirements
	Masonry Construction (IBC-21 Section 1705.4)				
	1. Inspect masonry construction in accordance with IBC-21 Section 1705.4 and TMS 602-13 (The Masonry Society)/ACI 530.1-13 Article 1.6.				
	Level A Quality Assurance				
	Tests: None.				
	Inspection: Verify compliance with the approved submittal and project specifications.			X	
	Level B Quality Assurance				
	Tests:				
	1. Verify slump flow and Visual Stability Index (VSI) as delivered to the project site in accordance with TMS 602-13/ACI 530.1-13 Specification Article 1.5B.1.b.3 for self-consolidating grout.				
	2. Verify f'm and f'aac in accordance with TMS 602-13/ACI 530.1-13 Specification Article 1.4B prior to construction, except where specifically exempted.				
	Inspection:				

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
	1. Verify compliance with the approved submittals and project specifications.			X	
	2. At the start of masonry construction, verify:				
	a. Proportions of site-prepared mortar.			X	
	b. Construction of mortar joints.			X	
	c. Grade and size of prestressing tendons and anchorages.				
	d. Location of reinforcement, connectors, prestressing tendons and anchorages.			X	
	e. Prestressing technique.			X	
	f. Properties of thin-bed mortar for AAC (autoclaved aerated concrete) masonry. (Continuous inspection is required for the first 5000 square feet of AAC masonry. Periodic inspection is required after the first 5000 square feet of AAC masonry.)		X	X	
	3. Prior to grouting, verify:				
	a. Grout space is clean.			X	
	b. Grade, type and size of reinforcement and anchor bolts, and prestressing tendons and anchorages.			X	
	c. Placement of reinforcing and connectors, and prestressing tendons and anchorages.			X	
	d. Proportions of site-prepared grout and prestressing grout for bonded tendons.			X	
	e. Construction of mortar joints.			X	
	4. During masonry construction, verify:				
	a. Size and location of structural members.			X	
	b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction.			X	
	c. Welding of reinforcement.		X		

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
	d. Preparation, construction and protection of masonry during cold weather (temperature below 40 degrees Fahrenheit) or hot weather (temperature above 90 degrees Fahrenheit).			X	
	e. Application and measurement of prestressing force.		X		
	f. Placement of grout and prestressing grout for bonded tendons is in compliance.		X		
	g. Placement of AAC masonry units and construction of thin-bed mortar joints. (Continuous inspection is required for the first 5000 square feet of AAC masonry. Periodic inspection is required after the first 5000 square feet of AAC masonry.)		X	X	
	5. Observe preparation of grout specimens, mortar specimens and/or prisms.			X	
	Level C Quality Assurance				
	Tests:				
	1. Verify f'm and f'aac in accordance with TMS 602-13/ACI 530.1-13/ASCE 6-13 Specification Article 1.4B prior to construction, and for every 5000 square feet during construction.				
	2. Verify proportions of materials in premixed or pre-blended mortar, prestressing grout, and grout other than self-consolidating grout as delivered to the project site.				
	3. Verify slump flow and Visual Stability Index (VSI) as delivered to the project site in accordance with TMS 602-13/ACI 530.1-13/ASCE 6-13 Specification Article 1.5B.1.b.3 for self-consolidating grout.				
	Inspection:				
	1. Verify compliance with the approved submittals and project specifications.			X	
	2. Verify:				
	a. Proportions of site-prepared mortar, grout and prestressing grout for bonded tendons.			X	

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
	b. Grade, type and size of reinforcement and anchor bolts, and prestressing tendons and anchorages.			X	
	c. Placement of masonry units and construction of mortar joints.			X	
	d. Placement of reinforcement, connectors and prestressing tendons and anchorages.		X		
	e. Grout space prior to grouting.		X		
	f. Placement of grout and prestressing grout for bonded tendons.		X		
	g. Size and location of structural elements.			X	
	h. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.		X		
	i. Welding of reinforcement.		X		
	j. Preparation, construction and protection of masonry during cold weather (temperature below 40 degrees Fahrenheit) or hot weather (temperature above 90 degrees Fahrenheit).			X	
	k. Application and measurement of prestressing force.		X		
	l. Placement of AAC masonry units and construction of thin-bed mortar joints.		X		
	m. Properties of thin-bed mortar for AAC masonry.		X		
	3. Observe preparation of grout specimens, mortar specimens and/or prisms.		X		
	Wood Construction (IBC-21 Section 1705.5)				
	1. Inspect prefabricated wood structural elements in accordance with Section 1704.2.5.			X	
	2. High load diaphragms:				
	a. Verify sheathing grade and thickness.			X	

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
	b. Verify nominal size of framing members at adjoining panel edges.			X	
	c. Verify nail or staple diameter and length.			X	
	d. Verify number of fastener lines.			X	
	e. Verify spacing between fasteners in each line and at panel edges.			X	
	3. Shearwalls:				
X	a. Verify sheathing grade and thickness.	ICC Commercial Building Inspector		X	Per code and inspector requirements
X	b. Verify nominal size of framing members at adjoining panel edges.	ICC Commercial Building Inspector		X	Per code and inspector requirements
X	c. Verify nail or staple diameter and length.	ICC Commercial Building Inspector		X	Per code and inspector requirements
X	d. Verify number of fastener lines.	ICC Commercial Building Inspector		X	Per code and inspector requirements
X	e. Verify spacing between fasteners in each line and at panel edges.	ICC Commercial Building Inspector		X	Per code and inspector requirements
X	f. Location and size of holdowns.	ICC Commercial Building Inspector		X	Per code and inspector requirements
X	4. Verify nailing, bolting, anchoring and fastening of:	ICC Commercial Building Inspector			
X	a. Drag struts and collectors.	ICC Commercial Building Inspector		X	Per code and inspector requirements
X	b. Braces.	ICC Commercial Building Inspector		X	Per code and inspector requirements

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
X	c. Hold-downs.	ICC Commercial Building Inspector		X	Per code and inspector requirements
	5. Metal-plate-connected wood trusses spanning 60 feet or greater:				
	a. Verify temporary installation restraint/bracing installed in accordance with the approved shop drawings.			X	
	b. Verify permanent individual truss member restraint/bracing installed in accordance with the approved shop drawings.			X	
	Soils (IBC-21 Section 1705.6)				
X	1. Verify materials below shallow foundations are adequate to achieve the required bearing capacity.	ICC-SSI		X	Per code and inspector requirements
X	2. Verify excavations are extended to proper depth and have reached proper material.	ICC-SSI		X	Per code and inspector requirements
X	3. Perform classification and testing of compacted fill materials.	ICC-SSI		X	Per code and inspector requirements
X	4. During fill placement, verify use of proper materials and procedure in accordance with the provisions of the approved geotechnical report. Verify densities and lift thicknesses during placement and compaction of compacted fill.	ICC-SSI	X		
X	5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.	ICC-SSI		X	Per code and inspector requirements
	Driven Deep Foundation Elements (IBC-21 Section 1705.7)				
X	1. Verify element materials, sizes and lengths.	ICC-SSI	X		
X	2. Determine capacities of test elements and conduct additional load tests when required. Refer to project specifications.	ICC-SSI	X		

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
X	3. Inspect driving operations and maintain complete and accurate records for each element.	ICC-SSI	X		
X	4. Verify element locations and plumbness.	ICC-SSI	X		
X	a. Verify type and size of hammer.	ICC-SSI	X		
X	b. Record number of blows per foot of penetration.	ICC-SSI	X		
X	c. Determine required penetration to achieve specified capacity.	ICC-SSI	X		
X	d. Record pile tip and butt elevations.	ICC-SSI	X		
X	e. Document any damage to any foundation element.	ICC-SSI	X		
	5. For steel piling, perform additional inspection in accordance with Section 1705.2 and AISC 341-16, Table J10.1.	ICC-SSI			
X	6. For concrete elements and concrete-filled elements, perform additional inspections in accordance with Section 1705.3.	ICC-SSI			
	7. For specialty elements, perform additional inspections as required in the project specifications.				
	Cast-in-Place Deep Foundation (IBC-21 Section 1705.8)				
	1. Inspect drilling operations and maintain complete and accurate records for each element.		X		
	2. Verify element locations and plumbness.		X		
	a. Verify element diameter.		X		
	b. Verify bell diameter (if applicable).		X		
	c. Verify element lengths.		X		
	d. Verify embedment depth into bedrock (if applicable).		X		
	e. Verify adequate end-bearing strata capacity.		X		

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
	f. Record concrete or grout volumes.		X		
	3. For concrete elements, perform additional inspections in accordance with Section 1705.3.				
	Helical Piles (IBC-21 Section 1705.10)				
	1. Verify pile locations.		X		
	a. Verify installation equipment used.		X		
	b. Verify pile dimensions.		X		
	c. Verify tip elevations.		X		
	d. Verify final depth.		X		
	e. Verify final installation torque.		X		
	f. Other data as required by the project specifications.		X		
	Fabricated Items (IBC-21 Section 1705.11)				
X	1. Inspect fabricated items in accordance with Section 1704.2.5.	PE/SE	X		
	Wind Resistance (IBC-21 Section 1705.12)				
	1. Provide inspections when required by Section 1705.12.				
	Seismic Resistance (IBC-21 Section 1705.13)				
X	1. Provide inspections when required by Section 1705.13.				
	Testing and Qualification for Seismic Resistance (IBC-21 Section 1705.14)				
	1. Test and qualify seismic resistance in accordance with IBC-21 Section 1705.14 and the project specifications.				

Required?	Structural Test or Special Inspection	Required Qualifications	Continuous	Periodic	Frequency of Periodic Test or Inspection
	Sprayed Fire-Resistant Materials (IBC-21 Section 1705.15)				
	1. Inspect sprayed fire-resistant materials in accordance with IBC-21 Section 1705.15 and the project specifications.				
	Mastic and Intumescent Fire-Resistant Coatings (IBC-21 Section 1705.16)				
X	1. Perform inspections in accordance with AWCI 12-B (Association of the Wall and Ceiling Industry) and IBC-21 Section 1705.16.	EDI-EIFS		X	Per code and inspector requirements
	Exterior Insulation and Finish Systems (EIFS) (IBC-21 Section 1705.17)				
	1. Perform inspections in accordance with project specifications and IBC-21 Section 1705.17.			X	
	Fire-Resistant Penetrations and Joints (IBC-21 Section 1705.18)				
	1. Perform inspections in accordance with project specifications and IBC-21 Section 1705.18.			X	
	Smoke Control (IBC-21 Section 1705.19)				
	1. Perform testing in accordance with project specifications and IBC-21 Section 1705.19.				
	Sealing of Mass Timber (IBC-21 Section 1705.20)				
	1. Perform testing in accordance with project specifications and IBC-21 Section 1705.20.				