



B.4.3 Statement of Special Inspections

CITY OF ORANGE BEACH
 Building Department
 4101 Orange Beach Boulevard
 Orange Beach, AL 36561
 (251) 981-2610

STATEMENT OF SPECIAL INSPECTIONS

This Statement of Special Inspections (SSI) is submitted as a condition for permit issuance and includes the Schedule of Special Inspections applicable to this project.

In accordance with Section 1704 of the *International Building Code* (IBC), the owner, or the Registered Design Professional in Responsible Charge (RDPiRC) acting as the owner’s agent, is required to employ an independent testing/inspection agency, or agencies, to perform the required special inspections and tests.

The RDPiRC shall complete this required SSI, special inspection schedule, and other relevant forms. In accordance with IBC Section 107.1, this SSI shall be submitted, along with construction documents and other data, to the building official with the permit application.

The special inspector(s) assigned to the project shall be identified by the design professional, shall be qualified for the type(s) of inspection(s) performed, and the inspector’s qualifications shall be provided in writing to the building official for approval prior to the start of construction of the item(s) requiring inspection (Section 1704.3.1).

The Special Inspector (SI) shall keep records of specified inspections and testing. The SI shall furnish specified inspection and test reports to the building official, and to the registered design professionals of record, as appropriate. All discrepancies shall be brought to the attention of the contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the code official and to the registered design professionals of record, as appropriate. Interim reports shall be submitted as required. A Final Report of Special Inspections documenting completion of all required special inspections and correction of documented discrepancies shall be submitted prior to the issuance of an occupancy permit.

PROJECT INFORMATION		
Project Title/Description:	Permit #:	
Project Address:		
OWNER INFORMATION		
Name:	Phone:	Email:
Contact Person:	Phone:	Email:
Address:		
REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE		
Name:	Phone:	Email:
Company/Firm:	Phone:	Email:
Address:		

B.4.3 Statement of Special Inspections

CATEGORIES REQUIRING SPECIAL INSPECTION PER INTERNATIONAL BUILDING CODE (IBC) CHAPTER 17 ¹	
<input type="checkbox"/> Structural items to be fabricated off-site (1704.2.5) ²	Special Inspection for Wind Resistance (1705.12)³
Structural Steel (1705.2)	<input type="checkbox"/> In Wind Exp. Cat. B, wind speed ≥ 150 mph, or In Wind Exp. Cat. C or D, wind speed ≥ 140 mph.
<input type="checkbox"/> Structural Stainless Steel (1705.2.2)	
<input type="checkbox"/> Cold-formed Steel Deck (1705.2.3)	<input type="checkbox"/> Structural Wood (1705.12.1)
<input type="checkbox"/> Open-web Steel Joists & Girders (1705.2.4)	<input type="checkbox"/> Cold-formed Steel Light-weight Const. (1705.12.2)
<input type="checkbox"/> Cold-formed Steel Trusses > 60 ft (1705.2.5)	<input type="checkbox"/> Wind-resisting Components (1705.12.3)
<input type="checkbox"/> Metal Building Systems (1705.2.6)	Special Inspection for Seismic Resistance (1705.13)³
Concrete and Reinforcement (Table 1705.3)	<input type="checkbox"/> Structural Steel (1705.13.1)
<input type="checkbox"/> Reinforcement & Prestressing Tendons (Item 1)	<input type="checkbox"/> Seismic force-resisting systems (1705.13.1.1)
<input type="checkbox"/> Reinforcing bar welding (Item 2)	<input type="checkbox"/> Structural Steel Elements (1705.13.1.2)
<input type="checkbox"/> Anchors Cast in Concrete (Item 3)	<input type="checkbox"/> Structural Wood (1705.13.2)
<input type="checkbox"/> Post-installed Anchors in Concrete (Item 4)	<input type="checkbox"/> Cold-formed Steel Light-weight Const. (1705.13.3)
<input type="checkbox"/> Concrete verification (Items 5 – 8)	<input type="checkbox"/> Designated Seismic Systems (1705.13.4)
<input type="checkbox"/> Shotcrete verification (Items 5 – 8))	<input type="checkbox"/> Architectural Components (1705.13.5)
<input type="checkbox"/> Prestressed Concrete (Item 9)	<input type="checkbox"/> Access Floors (1705.13.5.1)
<input type="checkbox"/> Precast Concrete (Items 10 – 12)	<input type="checkbox"/> Plumbing, Mechanical and Electrical (1705.13.6)
<input type="checkbox"/> Post-tension In-situ strength (Item 13)	<input type="checkbox"/> Storage Racks (1705.13.7)
<input type="checkbox"/> Concrete Formwork (Item 14)	<input type="checkbox"/> Seismic Isolation Systems (1705.13.8)
Masonry Construction (1705.4)	<input type="checkbox"/> Cold-formed Steel Special Bolted Moment Frames. (1705.13.9)
<input type="checkbox"/> Masonry construction (1705.4)	
<input type="checkbox"/> Glass Unit Masonry – Risk Category IV (1705.4.1)	Testing for Seismic Resistance (1705.14)
<input type="checkbox"/> Vertical Masonry Foundation (1705.4.2)	<input type="checkbox"/> Structural Steel (1705.14.1)
Wood Construction (1705.5/1705.20)	<input type="checkbox"/> Seismic force-resisting systems (1705.14.1.1)
<input type="checkbox"/> High-load Diaphragms (1705.5.1)	<input type="checkbox"/> Structural Steel Elements (1705.14.1.2)
<input type="checkbox"/> Metal-plate-conn. Wood Trusses > 60 ft (1705.5.2)	<input type="checkbox"/> Nonstructural Elements (1705.14.2.0)
<input type="checkbox"/> Mass Timber Construction (1705.5.3/T. 1705.5.3 ¹)	<input type="checkbox"/> Designated Seismic Systems (1705.14.3)
<input type="checkbox"/> Sealing of Mass Timber (1705.20/703.7)	<input type="checkbox"/> Seismic Isolation Systems (1705.14.4)
Soils (1705.6)	Other Materials and Systems
<input type="checkbox"/> Soil condition, Fill and Load-bearing (1705.6/T.1705.6 ¹)	<input type="checkbox"/> Sprayed Fire-resistive Materials - SFRM (1705.15)
<input type="checkbox"/> Driven Deep Foundations (1705.7/T.1705.7 ¹)	<input type="checkbox"/> Intumescent Fire-resistive Materials (1705.16)
<input type="checkbox"/> Cast-in-place Deep Foundations (1705.8/T.1705.8 ¹)	<input type="checkbox"/> Exterior Insulation and Finish System-EIFS (1705.17)
<input type="checkbox"/> Helical Pile Foundations (1705.9)	<input type="checkbox"/> Fire-resistant Penetrations and Joints (1705.18)
<input type="checkbox"/> Struct. Integrity of Deep Foundation Elements (1705.10)	<input type="checkbox"/> Testing for Smoke Control (1705.19)
<input type="checkbox"/> Other special inspections as required by the Building Official (1705.1.1):	

1. See the included Schedule of Special Inspections for additional information on specific inspection and testing requirements.
2. Off-site special inspection is not required when approved by the building official. See "Approved Fabricators Checklist".

STRUCTURAL OBSERVATION REQUIRED PER INTERNATIONAL BUILDING CODE, SECTION 1704.6		
<input type="checkbox"/> Risk Category III or IV	<input type="checkbox"/> High-Rise Building	<input type="checkbox"/> Seismic Design Category E and > 2 stories above grade
<input type="checkbox"/> Required by the Registered Design Professional in Responsible Charge as noted in Special Inspection Schedule.		
<input type="checkbox"/> Required by the Building Official as noted in Special Inspection Schedule.		

Note: Specific elements requiring Structural Observation need to be identified above and described in the Structural Observation portion of the Schedule of Special Inspections.

B.4.3 Statement of Special Inspections

CONTRACTOR’S STATEMENT OF RESPONSIBILITY (B.8) IS REQUIRED FOR THE FOLLOWING ITEMS, SECTION 1704.4¹	
System	List of Specific Elements
Main-wind-force-resisting system (MWFRS)	
Seismic-force-resisting system (SFRS) (if elements in addition to MWFRS)	
Designated seismic systems	
MWFRS or SFRS additional components	

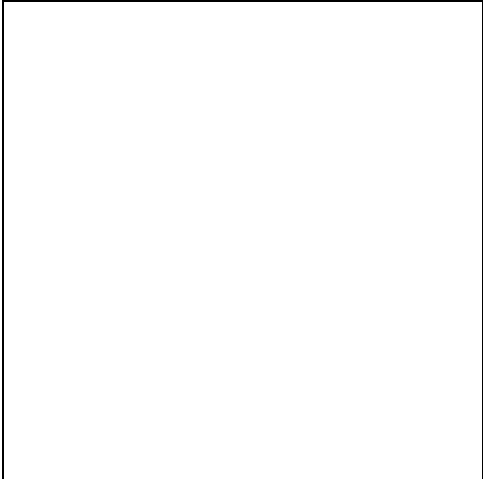
1. The contractor is required to submit a written statement of responsibility (Form B.8) to the building official and the owner, or owner’s authorized agent, acknowledging the awareness of the special requirements for special inspection relating to wind or seismic force-resisting systems (1704.4) prior to the start of work.

ACKNOWLEDGMENT

By signing this SSI, you also affirm that you understand and will comply with the City of Orange Beach requirements for Special inspections as outlined in the “SSI” and the current edition of the International Building Code, including any and all applicable local amendments.

REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE

Name:
Date:



RDP Stamp/Seal

SCHEDULE OF SPECIAL INSPECTIONS

Complete all sections of this Schedule. Indicate N/A if not applicable.

	EXTENT OF SERVICE (Continuous or periodic)	AGENT
SPECIAL CASES Reference: IBC Section 1705.1.1 Testing procedures used and evaluation of test results, by registered design professional, shall be submitted to the City of Orange Beach for review and approval prior to the commencement of the work.		
INSPECTION OF FABRICATED ITEMS Reference: IBC Section 1705.11. Special Inspections of fabricated items shall be performed in accordance with IBC Section 1704.2.5. (The requirements of IBC Section 1704.2.5.1 may apply subject to City of Orange Beach approval).		
STRUCTURAL STEEL Reference: IBC Section 1705.2.1. Inspections and non-destructive testing of structural steel elements shall be in accordance with the quality assurance requirements of AISC 360-16, Chapter N.		
<p style="text-align: center;">Fabricator and Erector Quality Control Program Reference AISC 360, Chapter N, Section N2.</p>		
<p>The fabricator’s Quality Control Inspector shall inspect the following as a minimum, as applicable:</p> <ol style="list-style-type: none"> 1. Shop welding, high-strength bolting, and details in accordance with AISC 360 Section N5. 2. Shop cut and finished surfaces in accordance with AISC 360, Section M2. 3. Shop heating for cambering, curving and straightening in accordance with AISC 360, Section M2.1. 4. Tolerances for shop fabrication in accordance with Code of Standard Practice, Section 6.4. <p>The erector’s Quality Control Inspector shall inspect the following as a minimum, as applicable:</p> <ol style="list-style-type: none"> 1. Field welding, high-strength bolting, and details in accordance with AISC 360, Section N5. 2. Steel deck in accordance with SDI Standard for Quality Control and Quality Assurance for Installation of Steel Deck. 3. Headed steel stud anchor placement and attachment in accordance with AISC 360, Section 5.4. 4. Field cut surfaces in accordance with AISC 360, Section M2.2. 5. Field heating for straightening in accordance with AISC 360, Section M2.1. 6. Tolerances for field erection in accordance with Code of Standard Practice, Section 7.13. 		
<p style="text-align: center;">Fabricator and Erector Documents Reference AISC 360, Chapter N, Section N3.</p>		
Submittals for Steel Construction and Available Documents for Steel Construction shall conform to AISC 360, Section N3.		

B.4.3 Statement of Special Inspections

STRUCTURAL STEEL (Continued)				
Inspection and Nondestructive Testing Personnel Reference AISC 360, Chapter N, Section N4				
Quality Control Inspector (fabricator or erector) Qualifications, Quality Assurance Inspector (special inspector) Qualifications and Nondestructive Testing Personnel (inspection agency personnel) Qualifications shall conform to AISC 360, Section N4.				
Minimum Requirements for Inspection of Structural Steel Buildings Reference AISC 360, Chapter N, Section N5.				
Quality Control Inspections by the fabricator’s or erector’s Quality Control Inspector (QCI) and Quality Assurance Inspections by the Special Inspector (SI), shall conform to AISC 360, Section N5 and tables N5.4-1, N5.4-2, N5.4-3, N5.6-1, N5.6-2 and N5.6-3. In these tables inspection tasks are as follows: O- Observe these items on a random basis. Operations need not be delayed pending these inspections. P- Perform these tasks for each welded joint or member.				
Nondestructive Testing of Welded joints Nondestructive testing of welded joints shall conform to AISC 360, Section N5 and shall be performed by the Special Inspector (quality assurance inspector) in accordance with AWS D1.1.				
Inspection Tasks Prior to Welding Reference AISC 360, Chapter N				
Inspection Tasks Prior to Welding	QC	AGENT	QA/SI	AGENT
Welder qualification records and continuity records.	P		O	
WPS available.	P		P	
Manufacturer certifications for welding consumables available.	P		P	
Material identification (type/grade).	O		O	
Welder identification system*.	O		O	
Fit-up of groove welds (including joint geometry). <ul style="list-style-type: none"> ▪ Joint preparations. ▪ Dimensions (alignment, root opening, root face, bevel). ▪ Cleanliness (condition of steel surfaces). ▪ Tacking (tack weld quality and location). ▪ Backing type and fit (if applicable). 	O		O	
Fit-up of CJP groove welds of HSS T-, Y- and K-joints without backing (including joint geometry). <ul style="list-style-type: none"> ▪ Joint preparations. ▪ Dimensions (alignment, root opening, root face, bevel). ▪ Cleanliness (condition of steel surfaces). ▪ Tacking (tack weld quality and location). 	P		O	

B.4.3 Statement of Special Inspections

STRUCTURAL STEEL (Continued)				
Fit-up of fillet welds <ul style="list-style-type: none"> ▪ Dimensions (alignment, gaps at root). ▪ Cleanliness (condition of steel surfaces). ▪ Tacking (tack weld quality and location). 	O		O	
Check welding equipment	O		-	-
* The fabricator or erector, as applicable, shall maintain a system by which a welder who has welded a joint or member can be identified. Stamps, if used, shall be the low-stress type.				
Where: O - Observe these items on a random basis. Operations need not be delayed pending these inspections. P - Perform these tasks for each welded joint or member. QC - Quality Control Inspector (fabricator or erector). QA/SI - Special Inspector (quality assurance inspector).				
Inspection Tasks During Welding Reference AISC 360, Chapter N				
Inspection Tasks During Welding...	QC	AGENT	QA/SI	AGENT
Control and handling of welding consumables <ul style="list-style-type: none"> ▪ Packaging. ▪ Exposure control. 	O		O	
Inspection Tasks During Welding...	QC	AGENT	QA/SI	AGENT
No welding over cracked tack welds.	O		O	
Environmental conditions. <ul style="list-style-type: none"> ▪ Wind speed within limits. ▪ Precipitation and temperature. 	O		O	
WPS followed. <ul style="list-style-type: none"> ▪ Settings on welding equipment. ▪ Travel speed. ▪ Selected welding materials. ▪ Shielding gas type/flow rate. ▪ Preheat applied. ▪ Interpass temperature maintained (min./max.). ▪ Proper position (F, V, H, OH). 	O		O	
Welding techniques. <ul style="list-style-type: none"> ▪ Interpass and final cleaning. ▪ Each pass within profile limitations. ▪ Each pass meets quality requirements. 	O		O	
Placement and installation of steel headed stud anchors	P		P	
Where: O - Observe these items on a random basis. Operations need not be delayed pending these inspections. P - Perform these tasks for each welded joint or member. QC - Quality Control Inspector (fabricator or erector). QA/SI - Special Inspector (quality assurance inspector).				

B.4.3 Statement of Special Inspections

STRUCTURAL STEEL (Continued)				
Inspection Tasks After Welding Reference AISC 360, Chapter N				
Inspection Tasks After Welding...	QC	AGENT	QA/SI	AGENT
Welds cleaned.	O		O	
Size, length and location of welds.	P		P	
Welds meet visual acceptance criteria. <ul style="list-style-type: none"> ▪ Crack prohibition. ▪ Weld/base-metal fusion. ▪ Crater cross section. ▪ Weld profiles. ▪ Weld size. ▪ Undercut. ▪ Porosity. 	P		P	
Arc strikes.	P		P	
k-area*.	P		P	
Weld access holes in rolled heavy shapes and built-up heavy shaped**.	P		P	
Backing removed and weld tabs removed (if required).	P		P	
Inspection Tasks After Welding...	QC	AGENT	QA/SI	AGENT
Repair activities	P		P	
Document acceptance or rejection of welded joint of member.	P		P	
No prohibited welds have been added without the approval of the Structural engineer of Record.	O		O	
*When welding of doubler plates, continuity plates or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks within 3 in. of the weld.				
**After rolled heavy shapes (see AISC Specification Section A3.1c) and built-up heavy shapes (see AISC Specification Section A3.1d) are welded, visually inspect the weld access hole for cracks.				
Where: O - Observe these items on a random basis. Operations need not be delayed pending these inspections. P - Perform these tasks for each welded joint or member. QC - Quality Control Inspector (fabricator or erector). QA/SI - Special Inspector (quality assurance inspector).				

B.4.3 Statement of Special Inspections

STRUCTURAL STEEL (Continued)				
Inspection Tasks Prior to Bolting Reference AISC 360, Chapter N				
Inspection Tasks Prior to Bolting...	QC	AGENT	QA/SI	AGENT
Manufacturer’s certifications available for fastener materials.	O		P	
Fasteners marked in accordance with ASTM requirements.	O		O	
Correct fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane).	O		O	
Correct bolting procedure selected for joint detail	O		O	
Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements.	O		O	
Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and method used.	P		O	
Protected storage provided for bolts, nuts, washers and other fastener components.	O		O	
<p>Where:</p> <p>O - Observe these items on a random basis. Operations need not be delayed pending these inspections.</p> <p>P - Perform these tasks for each welded joint or member.</p> <p>QC - Quality Control Inspector (fabricator or erector).</p> <p>QA/SI - Special Inspector (quality assurance inspector).</p>				

B.4.3 Statement of Special Inspections

Inspection Tasks During Bolting Reference AISC 360, Chapter N				
Inspection Tasks During Bolting...	QC	AGENT	QA/SI	AGENT
Fastener assemblies placed in all holes and washers and nuts are positioned as required.	O		O	
Joint brought to the snug-tight condition prior to the pre-tensioning operation.	O		O	
Fastener component not turned by the wrench prevented from rotating.	O		O	
Fasteners are pre-tensioned in accordance with RCSC Specification, progressing systematically from the most rigid point toward the free edges.	O		O	
<p>Where:</p> <p>O - Observe these items on a random basis. Operations need not be delayed pending these inspections.</p> <p>P - Perform these tasks for each welded joint or member.</p> <p>QC - Quality Control Inspector (fabricator or erector).</p> <p>QA/SI - Special Inspector (quality assurance inspector).</p>				
Inspection Tasks After Bolting Reference AISC 360, Chapter N				
Inspection Tasks After Bolting...	QC	AGENT	QA/SI	AGENT
Document acceptance or rejection of bolted connections.	P		P	
<p>Where:</p> <p>O - Observe these items on a random basis. Operations need not be delayed pending these inspections.</p> <p>P - Perform these tasks for each welded joint or member.</p> <p>QC - Quality Control Inspector (fabricator or erector).</p> <p>QA/SI - Special Inspector (quality assurance inspector).</p>				

Inspection of Fabricators and Fabrication Procedures Reference IBC Section 1704.2.5
Inspection of fabricators and fabrication procedures shall be performed by the Quality Assurance Inspector (special inspector) and shall conform to IBC Sections 1704.2.5. (The requirements of IBC Section 1704.2.5.1 may apply subject to City of Orange Beach approval).

Nonconforming Materials and Workmanship
Reference AISC 360, Chapter N, Section N7

Identification and rejection of materials or workmanship that is not in conformance with the construction documents shall be permitted at any time during the progress of the work.

Nonconforming material and workmanship shall be brought to the immediate attention of the General Contractor and the fabricator or erector, as applicable.

Nonconforming material or workmanship shall be brought into conformance or made suitable for its intended purpose as determined by the Structural Engineer of Record.

Structural repairs shall be reviewed and approved by the City of Orange Beach.

B.4.3 Statement of Special Inspections

<p>COLD-FORMED STEEL DECK Reference: IBC Section 1705.2.3. Inspections and qualification of welding special inspectors for cold-formed steel floor and roof deck shall be in accordance with the quality assurance inspection requirements of SDI QA/QC-2017 Standard for Quality Control and Quality Assurance for Installation of Steel Deck.</p>
<p style="text-align: center;">Required Submittals Reference: SDI QA/QC-2017, Section 2.</p>
<p>Documents to be submitted to the SER and the Owner/General Contractor for approval prior to the installation of the steel deck shall conform to SDI QA/QC-2017, Section 2.</p>
<p style="text-align: center;">Inspection and Testing Personnel Reference SDI QA/QC-2017, Section 3.</p>
<p>The Quality Control Inspector (installer) Qualifications and the Quality Assurance Inspector (special inspector) Qualifications shall conform to SDI QA/QC-2017, Section 3.</p>
<p style="text-align: center;">Requirements for Inspection of Steel Deck Installation Reference SDI QA/QC-2017, Section 4.</p>
<p>The requirements for inspection for steel deck installation shall conform to SDI QA/QC-2017, Section 4.</p>
<p style="text-align: center;">Installer’s Quality Control Program Reference SDI QA/QC-2017, Section 5.</p>
<p>The installer’s quality control program shall conform to SDI QA/QC-2017, Section 5. All material control and installation procedures shall be monitored by the installer’s Quality Control Inspector (QCI).</p>
<p style="text-align: center;">Quality Assurance Tasks Reference SDI QA/QC-2017, Section 6.</p>
<p>The quality assurance tasks shall conform to SDI QA/QC-2017, Section 6 and shall be performed by the Quality Assurance Inspector (QAI).</p>
<p style="text-align: center;">Nonconforming material and workmanship Reference SDI QA/QC-2017, Section 7.</p>
<p>Identification and rejection of materials and workmanship not in conformance with the construction documents shall be as per SDI QA/QC-2017, Section 7. Nonconforming material or workmanship shall be brought into conformance or made suitable for its intended purpose as determined by the structural engineer of record (SER).</p>

B.4.3 Statement of Special Inspections

COLD-FORMED STEEL DECK (Continued)					
Inspection or Execution Tasks Prior to Deck Placement Reference SDI QA/QC-2017, Appendix 1.					
	Task	QCI	AGENT	QAI/SI	AGENT
A	Verify compliance of materials (deck and all deck accessories) with construction documents, including profiles, material properties, and base metal thickness.	P		P	
B	Document acceptance or rejection of deck and deck accessories.	P		P	
<p>Where:</p> <p>O - Inspect these items on an intermittent basis. Operations need not be delayed pending these Inspection.</p> <p>P - Perform these tasks prior to final acceptance for each item or element.</p> <p>QCI - Quality Control Inspector (Installer).</p> <p>QAI/SI - Quality Assurance Inspector (Special Inspector).</p>					
Inspection or Execution Tasks After Deck Placement Reference SDI QA/QC-2017, Appendix 1.					
	Task	QCI	AGENT	QAI/SI	AGENT
A	Verify compliance of deck and all deck accessories installation with construction documents	P		P	
B	Verify deck materials are represented by the mill certifications that comply with the construction documents	N/A		P	
C	Document acceptance or rejection of installation of deck and deck accessories.	P		P	
Inspection or Execution Tasks Prior to Welding Reference SDI QA/QC-2017, Appendix 1.					
	Task	QCI	AGENT	QAI/SI	AGENT
A	Welding procedure specifications (WPS) available.	O		O	
B	Manufacturer certifications for welding consumables available.	O		O	
C	Material identification (type/grade).	O		O	
D	Check welding equipment.	O		O	
<p>Where:</p> <p>O - Inspect these items on an intermittent basis. Operations need not be delayed pending these Inspection.</p> <p>P - Perform these tasks prior to final acceptance for each item or element.</p> <p>QCI - Quality Control Inspector (Installer).</p> <p>QAI/SI - Quality Assurance Inspector (Special Inspector).</p>					

B.4.3 Statement of Special Inspections

COLD-FORMED STEEL DECK (Continued)					
Inspection or Execution Tasks During Welding					
Reference SDI QA/QC-2017, Appendix 1.					
	Task	QCI	AGENT	QAI/SI	AGENT
A	Use of qualified welders.	O		O	
B	Control and handling of welding consumables.	O		O	
C	Environmental conditions (wind speed, moisture, temperature).	O		O	
D	WPS followed.	O		O	
<p>Where:</p> <p>O - Inspect these items on an intermittent basis. Operations need not be delayed pending these Inspection.</p> <p>P - Perform these tasks prior to final acceptance for each item or element.</p> <p>QCI - Quality Control Inspector (Installer).</p> <p>QAI/SI - Quality Assurance Inspector (Special Inspector).</p>					
Inspection or Execution Tasks After Welding					
Reference SDI QA/QC-2017, Appendix 1.					
	Task	QCI	AGENT	QAI/SI	AGENT
A	Verify size and location of welds, including support, side lap, and perimeter welds.	P		P	
B	Welds meet visual acceptance criteria.	P		P	
C	Verify repair activities.	P		P	
D	Document acceptance or rejection of welds.	P		P	
<p>Where:</p> <p>O - Inspect these items on an intermittent basis. Operations need not be delayed pending these inspections</p> <p>P - Perform these tasks prior to final acceptance for each item or element.</p> <p>QCI - Quality Control Inspector (Installer).</p> <p>QAI/SI - Quality Assurance Inspector (Special Inspector).</p>					

B.4.3 Statement of Special Inspections

COLD-FORMED STEEL DECK (Continued)					
Inspection or Execution Tasks Prior to Mechanical Fastening					
Reference SDI QA/QC-2017, Appendix 1.					
	Task	QCI	AGENT	QAI/SI	AGENT
A	Manufacturer installation instructions available for mechanical fasteners	O		O	
B	Proper tools available for fastener installation	O		O	
C	Proper storage for mechanical fasteners	O		O	
Inspection or Execution Tasks During Mechanical Fastening					
Reference SDI QA/QC-2017, Appendix 1.					
	Task	QCI	AGENT	QAI/SI	AGENT
A	Fasteners are positioned as required	O		O	
B	Fasteners are installed in accordance with manufacturer's instructions	O		O	
Inspection or Execution Tasks After Mechanical Fastening					
Reference SDI QA/QC-2017, Appendix 1.					
	Task	QCI	AGENT	QAI/SI	AGENT
A	Check spacing, type, and installation of support fasteners	P		P	
B	Check spacing, type, and installation of side lap fasteners	P		P	
C	Check spacing, type, and installation of perimeter fasteners	P		P	
D	Verify repair activities	P		P	
E	Document acceptance or rejection of mechanical fasteners	P		P	
<p>Where:</p> <p>O - Inspect these items on an intermittent basis. Operations need not be delayed pending these Inspection.</p> <p>P - Perform these tasks prior to final acceptance for each item or element.</p> <p>QCI - Quality Control Inspector (Installer).</p> <p>QAI/SI - Quality Assurance Inspector (Special Inspector).</p>					

B.4.3 Statement of Special Inspections

OPEN - WEB STEEL JOISTS AND JOIST GIRDERS Reference: IBC Section 1705.2.4, IBC Table 1705.2.4.		
Required Special Inspections of Open Web Steel Joists and Joist Girders Reference: IBC Table 1705.2.4	EXTENT OF SERVICE (Continuous or periodic)	AGENT
1. Installation of open-web steel joists and joist girders.		
a. End connections – welding or bolted.		
b. Bridging – horizontal or diagonal <ul style="list-style-type: none"> 1. Standard bridging. 2. Bridging that differs from the Steel Joist Institute SJI specifications listed in IBC Section 2207.1 		
COLD-FORMED STEEL TRUSSES SPANNING 60 FEET OR GREATER Reference: IBC Section 1705.2.5		
1. Temporary installation restraint/bracing		
2. Permanent individual truss member restraint/bracing		

B.4.3 Statement of Special Inspections

CONCRETE CONSTRUCTION		
Reference: IBC Section 1705.3 Special inspections and tests of concrete construction shall be performed in accordance with IBC Section 1705.3, IBC Table 1705.3.		
CONCRETE Reference: IBC Table 1705.3	EXTENT OF SERVICE (Continuous or periodic)	AGENT
1. Inspect reinforcement, including pre-stressing tendons, and verify placement.		
2. Reinforcing bar welding: a. Verify weldability of reinforcing bars other than ASTM A706; b. Inspect single-pass fillet welds, maximum 5/16; and c. Inspect all other welds.		
3. Inspect anchors cast in concrete.		
4. Inspect anchors post-installed in hardened concrete members. See note below. a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads. Installation shall be performed by an ACI or CRSI certified adhesive anchor installer. b. Mechanical anchors and adhesive anchors not defined in 4.a.		
5. Verify use of required design mix.		
6. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.		
7. Inspect concrete and shotcrete placement for proper application techniques.		
8. Verify maintenance of specified curing temperature and techniques.		
9. Inspect pre-stressed concrete for: a. Application of pre-stressing forces; and b. Grouting of bonded pre-stressing tendons.		
10. Inspect erection of precast concrete members.		
11. Verify 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. The strength evaluation shall be demonstrated by field-cured cylinders only.		
12. Inspect formwork for shape, location and dimensions of the concrete member being formed.		

Note: Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with 17.8.2 in ACI 318, or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the City of Orange Beach prior to the commencement of the work.

B.4.3 Statement of Special Inspections

<p>MASONRY CONSTRUCTION Reference: IBC Section 1705.4 Special inspections and tests of masonry construction shall be performed in accordance with the Quality Assurance Program requirements of TMS 402 and TMS 602.</p>				
<p>QUALITY ASSURANCE PROGRAM The Quality Assurance Program shall comply with the Level defined in Table 3.1 of TMS 402, depending on how the masonry was designed and the Risk Category, as defined in IBC Table 1604.5. The Quality Assurance Program shall itemize the requirements for verifying conformance of material composition, quality, storage, handling, preparation, and placement with the requirements of TMS 602, and shall comply with the minimum requirements of TMS 602, Tables 3 and 4 for the required Level. The Structural Engineer of Record may increase the amount of Verification and Special Inspections required.</p>				
<p>MINIMUM QUALITY ASSURANCE LEVEL Reference TMS 402, Table 3.1</p>				
Designed in accordance with:	Risk Category I, II or III	Risk Category IV		
Part 3 or Appendix B or Appendix C of TMS 402	Level 2	Level 3		
Part 4 of TMS 402	Level 1	Level 2		
Appendix A of TMS 402	Level 1	Not permitted		
<p>MINIMUM VERIFICATION REQUIREMENTS Reference TMS 602, Table 3</p>				
Minimum Verification...	Required for Quality Assurance			AGENT
	Level 1	Level 2	Level 3	
Prior to construction, verification of compliance of submittals.	R	R	R	
Prior to construction, verification of f'm and f'aac, except where specifically exempted by the Code	NR	R	R	
During construction, verification of Slump flow and Visual Stability Index (VSI) when self-consolidating grout is delivered to the project site.	NR	R	R	
During construction, verification of f'm and f'aac for every 5000 sq. ft.	NR	NR	R	
During construction, verification of proportions of materials as delivered to the project site for premixed or pre-blended mortar, pre-stressing grout, and grout other than self-consolidating grout.	NR	NR	R	
<p>Where: R=Required, NR=Not Required.</p>				

MASONRY CONSTRUCTION (continued)				
MINIMUM SPECIAL INSPECTION REQUIREMENTS				
Reference TMS 602, Table 4				
INSPECTION TASK...	Frequency*			AGENT
	Level 1	Level 2	Level 3	
1. As masonry construction begins, verify that the following are in compliance:				
a. Proportions of site-prepared mortar	NR	P	P	
b. Grade and size of pre-stressing tendons and anchorages	NR	P	P	
c. Grade, type and size of reinforcement, connectors, anchor bolts, and pre-stressing tendons and anchorages	NR	P	P	
d. Pre-stressing technique	NR	P	P	
e. Properties of thin-bed mortar for AAC masonry	NR	C**/P****	C	
f. Sample panel construction	NR	P	C	
2. Prior to grouting, verify that the following are in compliance:				
a. Grout space	NR	P	C	
b. Placement of pre-stressing tendons and anchorages	NR	P	P	
c. Placement of reinforcement, connectors, and anchor bolts	NR	P	C	
d. Proportions of site-prepared grout and pre-stressing grout for bonded tendons	NR	P	P	
3. Verify compliance of the following during construction:				
a. Materials and procedures with the approved submittals	NR	P	P	
b. Placement of masonry units and mortar joint construction	NR	P	P	
c. Size and location of structural members	NR	P	P	
d. Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction	NR	P	C	
e. Welding of reinforcement	NR	C	C	
f. Preparation, construction, and protection of masonry during cold weather (temperature below 40 degrees F) or hot weather (temperature above 90 degrees F)	NR	P	P	
g. Application and measurement of pre-stressing force	NR	C	C	

(Continued)

B.4.3 Statement of Special Inspections

MINIMUM SPECIAL INSPECTION REQUIREMENTS Reference TMS 602, Table 4 (Continued)				
INSPECTION TASK (Continued)	Frequency*			AGENT
	Level 1	Level 2	Level 3	
h. Placement of grout and pre-stressing grout for bonded tendons is in compliance	NR	C	C	
i. Placement of AAC masonry units and construction of thin-bed mortar joints	NR	C**/p***	C	
4. Observe preparation of grout specimens, mortar specimens, and/or prisms	NR	P	C	
5. Inspect location and conformance of wall penetrations, embedded items and wall flashing	NR	P	P	

***Frequency** refers to frequency of inspections, which may be **Continuous** during the listed task or **Periodic** during the listed task, as defined in Table 4 above.

Where: NR= Not Required, P= Periodic, C= Continuous

** Required for the first 5000 square feet of AAC masonry.

*** Required after the first 5000 square feet of AAC masonry.

B.4.3 Statement of Special Inspections

WOOD CONSTRUCTION Reference: IBC Section 1705.5	EXTENT OF SERVICE (Continuous or periodic)	AGENT
Special Inspections of prefabricated wood structural elements and assemblies shall be in accordance with Section 1704.2.5 (The requirements of Section 1704.2.5.1 may apply subject to City of Orange Beach approval).		
Special Inspection of site-built assemblies shall be in accordance with Section 1705.5		
Inspect high-load diaphragms as per Section 1705.5.1		
Inspect metal-plate-connected trusses as per Section 1705.5.2		
Inspect Load Bearing Walls as follows, as applicable: <ol style="list-style-type: none"> 1. Wall stud species and spacing per project specifications. 2. Placement of blocking inside of floor system. 3. Stud drillings and penetrations (not to exceed one third of stud dimension unless otherwise is specified by the structural engineer of record). 4. Sill plate species as per project specifications. 		
Inspect Wood Columns as follows, as applicable: <ol style="list-style-type: none"> 1. Types and placement of wood columns as per construction documents. 2. Column connection details at beams and trusses. 3. Column within the floor system for load path continuity. 4. Column base assemblies. 		
Inspect Shear Wall Systems as follows, as applicable: <ol style="list-style-type: none"> 1. Wall stud, size and spacing. 2. Anchor bolt size, location on sill plates and strappings through floor system. 3. Placement of diagonal bracing and component shear trusses. 4. Placement of hold-down anchors and tension rods as per contract documents. 5. Shear wall sheathing type, fastener types and fastener spacing. 6. Wall blocking. 		

B.4.3 Statement of Special Inspections

WOOD CONSTRUCTION (Continued) Reference IBC Section 1705.5	EXTENT OF SERVICE (Continuous or Periodic)	AGENT
Inspect Roof Framing as follows, as applicable: <ol style="list-style-type: none"> 1. Placement of hurricane ties. 2. Placement of parapet hold-down anchors. 3. Placement of permanent roof bracing. 4. Placement of gable truss bracing. 		
Inspect Steel Framing as follows, as applicable: <ol style="list-style-type: none"> 1. Wood to steel connections (number, size and spacing of bolts and hunger types). 2. Bracing of steel beams and columns (placement of sill plates, anchor bolt, and diagonal bracing to top of beams and blocking placement at steel beam webs). 		
Inspect Floor trusses as follows, as applicable: <ol style="list-style-type: none"> 1. Placement of horizontal 2x support members at end of trusses. 2. Truss bearing width in butting and diagonal situations. 		
Other Wood Inspections as determined by SER:		

SOILS Reference: IBC Section 1705.6, IBC Table 1705.6		
Required Special Inspections and Tests of Soils... Reference: IBC Table 1705.6	EXTENT OF SERVICE (Continuous or periodic)	AGENT
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.		
2. Verify excavations are extended to proper depth and have reached proper material.		
3. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.		
4. Perform classification and testing of compacted fill materials.		
5. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.		

DRIVEN DEEP FOUNDATION ELEMENTS... Reference: IBC Section 1705.7, IBC Table 1705.7		
Required Special Inspections and Tests of Driven Deep Foundation Elements... Reference: IBC Table 1705.7	EXTENT OF SERVICE (Continuous or periodic)	AGENT
1. Verify element materials, sizes and lengths comply with the requirements.		
2. Determine capacities of test elements and conduct additional load tests, as required.		
3. Inspect driving operations and maintain complete and accurate records for each element.		
4. Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element.		
5. For steel elements, perform additional special inspections in accordance with IBC Section 1705.2		
6. For concrete elements and concrete-filled elements, perform tests and additional inspections in accordance with IBC Section 1705.3		
7. For specialty elements, perform additional inspections as determined by the registered design professional in responsible charge.		
CAST-IN-PLACE DEEP FOUNDATIONS... Reference: IBC Section 1705.8, IBC Table 1705.8		

B.4.3 Statement of Special Inspections

Required Special Inspections and Tests of Cast-in-Place Deep Foundation Elements Reference: IBC Table 1705.8	EXTENT OF SERVICE (Continuous or periodic)	AGENT
1. Inspect drilling operations and maintain complete and accurate records for each element.		
2. Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable) and adequate end-bearing strata capacity. Record concrete or grout volumes.		
3. For concrete elements, perform tests and additional Special inspections in accordance with IBC Section 1705.3		
HELICAL PILE FOUNDATION Reference: IBC Section 1705.9		
1. Record installation equipment used, pile dimensions, tip elevations, final depth, and final installation torque.		
2. Use approved geotechnical report and construction documents to verify compliance with design.		

SPECIAL INSPECTIONS FOR WIND RESISTANCE Reference: IBC Section 1705.12	EXTENT OF SERVICE (Continuous or periodic)	AGENT
A. Structural wood Reference: IBC Section 1705.12.1		
B. Cold-Formed Steel Light-Frame Construction Reference: IBC Section 1705.12.2		
C. Wind-resisting components Reference: IBC Section 1705.12.3		

SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE Reference: IBC Section 1705.13 and Table below		
A. Structural Steel... Reference: IBC Section 1705.13.1 and the Quality Assurance Requirements of AISC 341-16	EXTENT OF SERVICE (Continuous or periodic)	AGENT
1. Seismic Force-Resisting Systems Reference: IBC Section 1705.13.1.1		
2. Structural Steel Elements... Reference: IBC Section 1705.13.1.2		
B. Structural Wood... Reference: IBC Section 1705.13.2		
C. Cold-Formed Steel Light-Frame Construction Reference: IBC Section 1705.13.3		

B.4.3 Statement of Special Inspections

<p>D. Designated Seismic Systems Reference: IBC Section 1705.13.4 and Section 13.2.2 of ASCE 7-16</p>		
<p>E. Architectural Components Reference: IBC Section 1705.13.5</p> <ol style="list-style-type: none"> 1. Exterior cladding, interior and exterior nonbearing walls and interior and exterior veneer 30 ft or less in height above grade or walking surface. 2. Exterior cladding and interior and exterior veneer weighting 5 psf or less 3. Interior nonbearing walls weighing 15 psf or less 		
<p>F. Access floors Reference: IBC Section 1705.13.5.1 Anchorage of access floors in structures assigned to SDC D, E or F</p>		
<p>G. Plumbing, Mechanical and Electrical Components Reference: IBC Section 1705.13.6</p>		
<p>H. Storage racks Reference: IBC Section 1705.13.7/Table 1705.13.7</p>		
<p>I. Seismic Isolation Systems Reference: IBC Section 1705.13.8</p>		
<p>J. Cold-formed steel special bolted moment frames Reference: IBC Section 1705.13.9</p>		

B.4.3 Statement of Special Inspections

TESTING FOR SEISMIC RESISTANCE... Reference IBC Section 1705.14		
A. Structural Steel... Reference: IBC Section 1705.14.1 and the Quality Assurance Requirements of AISC 341-16	EXTENT OF SERVICE (Continuous or periodic)	AGENT
1. Seismic Force-Resisting Systems... Reference: IBC Section 1705.14.1.1		
2. Structural Steel Elements... Reference: IBC Section 1705.14.1.2		
B. Nonstructural Components... Reference: IBC Section 1705.14.2 and Section 13.2.1 of ASCE 7-16.		
C. Designated Seismic Systems... Reference: IBC Section 1705.14.3 and Section 13.2.2 of ASCE 7-16.		
D. Seismic Isolation Systems... Reference: IBC Section 1705.14.4 and Section 17.8 of ASCE 7-16.		
Other Seismic Resistance Inspections/Testing as determined by SER:		

B.4.3 Statement of Special Inspections

SPRAYED FIRE-RESISTANT MATERIALS... Reference: IBC Section 1705.15	EXTENT OF SERVICE (Continuous or periodic)	AGENT
1. Special Inspections and Tests Required: <ol style="list-style-type: none"> a. Condition of substrates. b. Thickness of application. c. Density in pounds per cubic foot. d. Bond strength adhesion/cohesion. e. Condition of finished application. 		
INTUMESCENT FIRE-RESISTANT COATINGS Reference: IBC Section 1705.16 <ol style="list-style-type: none"> 1. Substrate Condition. Verify: <ol style="list-style-type: none"> a. Surface condition-coatings are compatible with applied shop primer. b. Element temperature 2. Site Condition. Verify <ol style="list-style-type: none"> a. Ambient temperature b. Ambient humidity c. Ventilation d. Weather protection 3. Tests. The special inspection shall include the following tests and observations to demonstrate compliance with the listing and the fire-resistance rating: <ol style="list-style-type: none"> a. Condition of substrates b. Thickness of application c. Condition of finished application d. Quality of patching work 		

EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)	
Reference: IBC Sections 1705.17 and 1705.17.1 (The method of application shall be reviewed and approved by the City of Orange Beach prior to commencement of the work). The criteria for special inspection are based upon the items contained in the manufacturer’s installation instructions. As a minimum, the following must be included in the list of inspections:	
Inspection Type	Requirement
Prior to installation of EIFS, verify:	
Condition of substrate	<ul style="list-style-type: none"> • Flatness • Cleanliness • Condition of sheathing or substrate surface (including gypsum sheathing and proper attachment to building framing)
Adhesive (for adhesively applied systems only)	<ul style="list-style-type: none"> • Specified brand and type • Cleanliness • Proper storage of adhesive • Correct ingredient mix
Foam boards	<ul style="list-style-type: none"> • Foam plastic material labeled in accordance with AC 219 and the manufacturer’s requirements

B.4.3 Statement of Special Inspections

Mesh	<ul style="list-style-type: none"> • Material meets manufacturer’s specifications
Sealant	<ul style="list-style-type: none"> • Specified brand and type of sealants and primers • Shelf life not exceeded
During installation of EIFS, verify:	
Application of adhesive(for adhesively applied systems only)	<ul style="list-style-type: none"> • Ambient and surface temperature • Thickness of application • Cure/dry temperature and time • Attachment of foam plastic board is within time limit after adhesive application • Attachment of foam plastic board has full contact with substrate • Correct configuration of adhesive application
Application of foam boards	<ul style="list-style-type: none"> • Substantial contact of the board to substrate • Boards tightly abutted or have proper gap for joint design
Application of coating	<ul style="list-style-type: none"> • Foam plastic board surface rasped prior to application of base coat • Mix proportions correct • Ambient and surface temperatures • Cure/dry temperature and time • Thickness of coating layers
Application of mesh	<ul style="list-style-type: none"> • Fully embedded in base coat • Fully covered in accordance with manufacturer’s instructions
Penetration details	Installation in accordance with the details tested for wind-driven rain infiltration and drawn in the evaluation report
Application of sealants	<ul style="list-style-type: none"> • Applied in accordance with the specified configuration • Proper application of sealants and primers • Joint configurations in accordance with construction documents • Cure temperature and time

FIRE-RESISTANT PENETRATIONS AND JOINTS...			
Reference: IBC Section 1705.18			
Inspection Tasks			Periodic Inspection
Before Installation			
Verify firestop materials are listed and labeled for intended use and match construction documents			X
Verify firestop materials are tested in accordance with ASTM E814 or UL 1479			X
During or After Installation			
Verify type, quantity and location of firestop			X
Verify installation done according to: 1. Manufacturer’s installation documents 2. Construction documents approved by the Code Compliance Agency			X
Determine Whether to Inspect During or After Installation			
Inspection During Installation	Minimum of 10% of each type of firestop installed	<ul style="list-style-type: none"> • Observe the installation process • Record measurements of substrates • Record measurements of materials being installed • Failed specimens require repair or replacement and reinspection plus one full additional inspection of that type of firestop 	X
Inspection After Installation	Minimum of 2% of each type of firestop shall be inspected per floor when floor area ≤ 10,000 ft ² (929m ²) If a floor area > 10,000 ft ² (929 m ²), inspect a minimum of 2% of each area of < 10,000 ft ² (929 m ²)	<ul style="list-style-type: none"> • Perform destructive examination of completed installations: repair of examined installations • Failed specimens require repair or replacement and reinspection plus one full additional inspection of that type of firestop 	X
Document: 1. All observed deficiencies 2. Locations where a required firestop does not comply with the construction documents 3. Locations where installed firestop does not comply with the construction documents 4. Whether repairs follow manufacturer’s recommended procedures and methods 5. Whether repairs meet requirements of the construction documents			-

B.4.3 Statement of Special Inspections

	EXTENT OF SERVICE (Continuous or periodic)	AGENT
TESTING FOR SMOKE CONTROL... Reference: IBC Section 1705.19		
Smoke control systems shall be tested by a specialty inspector registered in the City of Orange Beach. Qualifications of Approved Agencies for smoke control testing shall meet the requirements of IBC Section 1705.18.2. The tests shall be witnessed and accepted by the Mechanical Inspector for the project.		
STRUCTURAL OBSERVATION Reference: IBC 1704.6		
SHEETING AND SHORING Reference: 3304.1.1, 3307		
UNDERPINNING Reference: 1804.2, 3304.1.2, 3307		