

Schedule of Special Inspection Services

The following sheets comprise the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows.

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| <input type="checkbox"/> Structural Steel | <input type="checkbox"/> Sprayed Fire Resistant Material |
| <input type="checkbox"/> Cold-Formed Steel Framing | <input type="checkbox"/> Intumescent Fire-Resistant Coatings |
| <input type="checkbox"/> Concrete Construction | <input type="checkbox"/> Exterior Insulation & Finish System |
| <input type="checkbox"/> Masonry – Level 1 ^a | <input type="checkbox"/> Smoke Control |
| <input type="checkbox"/> Wood Construction | <input type="checkbox"/> Retaining Walls Exceeding 5 Feet |
| <input type="checkbox"/> Soils | <input type="checkbox"/> Wind-Resisting Components (1705.4) ^b |
| <input type="checkbox"/> Driven Deep Foundations | <input type="checkbox"/> Wind Requirements (1706) ^c |
| <input type="checkbox"/> Cast-in-Place Deep Foundations | <input type="checkbox"/> Seismic Resistance ^d |
| <input type="checkbox"/> Helical Pile Foundations | |

a. Occupancy Category IV structures, as defined by 1604.5 of the North Carolina Building Code, may require Level 2 inspection of masonry construction. The SER shall review Code sections 1704.5.1 and 1704.5.3 and adjust the Schedule of Special Inspection Services as needed.

b. Special inspections for Wind Resistance are applicable to those areas defined by 1705.4 of the North Carolina Building Code. Wind Resistance Special Inspections are only effective if the 1704.1.2 base triggers apply.

c. Special Inspections for Wind Requirements are applicable to those areas defined by 1706.1 of the North Carolina Building Code. Wind Requirements are effective even if the 1704.1.2 base triggers do not apply.

d. Special Inspections for Seismic Resistance are applicable to those structures defined by 1707.1 of the North Carolina Building Code. Seismic Requirements are only effective if the 1704.1.2 base triggers apply.

Inspection Agents	Qualifications	Address
1. Special Inspector	SI	
2. Structural Engineer of Record	SER	
3. Testing Laboratory	ITL	
4. Other		

Note: The inspection and testing agent shall be engaged by the Owner’s Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the State Construction Office, prior to commencing work.

Seismic Design Category: A B C D

Basic Wind Speed: 90-109mph 110-119mph ≥120mph

Wind Exposure Category: B C D

Schedule of Special Inspection Services

Structural Steel

Item	Qualifications	Scope
1. Fabricator Certification/Quality Control Procedures	SI SER / SI	<ul style="list-style-type: none"> • Ensure fabricator meets the requirements of NCSBC 1704.2.2 • Collect certificate of compliance from fabricator at completion of fabrication
2. Welding	SI	<ul style="list-style-type: none"> • Continuous inspection of complete and partial joint penetration welds, multipass fillet welds, plug and slot welds, and single-pass fillet welds > 5/16" in accordance with NCSBC Table 1704.3 • Periodic inspection of single-pass fillet welds ≤ 5/16" • Collect certificate of compliance for weld filler material • Identify use of approved filler material and in accordance with AWS D1.1
3. Metal Deck	SI SER / SI	<ul style="list-style-type: none"> • Collect material data sheets for decking and connectors or fasteners • Periodic inspection of welds and / or mechanical fasteners
4. Structural Details	SER / SI	<ul style="list-style-type: none"> • Periodic inspection of steel framing and joint details
5. Bolting	SI SI SER / SI	<ul style="list-style-type: none"> • Collect material data sheets for bolts, nuts, and washers • Collect certificate of compliance from bolt supplier • Periodic inspection of snug-tight, pretensioned, and slip critical joints in accordance with NCSBC Table 1704.3 • Continuous inspection of pretensioned and slip-critical joints using turn-of-nut without matchmarking or calibrated wrench methods of installation
6. Material Certification	SI	<ul style="list-style-type: none"> • Collect certified mill test reports

Schedule of Special Inspection Services
Cold-Formed Steel Framing

Item	Qualifications	Scope
1. Plant Certification/ Quality Control Procedures for Pre- Engineered Wall Panels Assembled Off-Job Site	SI SER / SI	<ul style="list-style-type: none"> • Ensure wall panel fabricator meets the requirements of NCSBC 1704.2.2 • Collect certificate of compliance from wall panel fabricator at completion of fabrication
2. Mechanical Connections	SER / SI	<ul style="list-style-type: none"> • Periodic inspection of all field connections including anchorage to the structural frame
3. Welding	SER / SI	<ul style="list-style-type: none"> • Periodic inspection of all field connections including anchorage to the structural frame
4. Framing Details	SER / SI	<ul style="list-style-type: none"> • Periodic inspection framing and details
5. Cold-formed Steel Trusses	SER / SI	<ul style="list-style-type: none"> • For trusses clear spanning 60 feet or more, verify that both temporary and permanent restraints and braces are installed in accordance with the approved truss submittal package.

Schedule of Special Inspection Services

Concrete Construction

Item	Qualifications	Scope
1. Mix Design/Material Certifications	SER / SI	<ul style="list-style-type: none"> Collect mix designs and verify appropriate mix use during specific installation
2. Reinforcement Installation	SER / SI SI SI	<ul style="list-style-type: none"> Periodic inspection of reinforcing steel, including prestressing tendons and welded wire fabric Collection of certified mill test reports Continuous inspection of reinforcing steel welding in accordance with Table 1704.3, Item 5b
3. Concrete Placement/Monitoring Fresh Concrete, Sampling & prep of test samples	SI SI / ITL SER / SI SI / ITL SI SI	<ul style="list-style-type: none"> Continuous inspection of cast-in-place concrete placement Continuous monitoring of sampling of fresh concrete, slump test, air content test, temperature of concrete and creation of strength test specimens Periodic inspection of formwork Periodic verification of concrete strength prior to removal of shores and forms from beams and structural slabs Continuous inspection of bolts to be installed in concrete prior to and during placement Periodic inspection of anchors installed in hardened concrete
4. Curing & Protection	SI	<ul style="list-style-type: none"> Periodic inspections of curing techniques
5. Structural Precast Concrete Members	SER / SI	<ul style="list-style-type: none"> Periodic inspection of attachment of precast members
6. Post-Tensioned Concrete Members	SI / ITL SI SI	<ul style="list-style-type: none"> Periodic verification of posttensioned concrete strength (f'_{ci}) prior to force transfer Continuous inspection of force application to prestressing tendons Continuous inspection of grouting procedures at bonded prestressing tendons included in the lateral force resisting system

Schedule of Special Inspection Services

Masonry

Item	Qualifications	Scope
1. Material Certification	SI SI SI	<ul style="list-style-type: none"> Collect mix design for mortar Collect mix design for grout Certificates of Compliance for masonry constituents
2. Mixing of Mortar & Grout	SI SI	<ul style="list-style-type: none"> Periodic inspection of site prepared mortar, site-prepared grout, and grout for bonded tendons Continuous verification of slump flow and VSI as self-consolidating grout is delivered to the site
3. Installation of Masonry	SI SER / SI	<ul style="list-style-type: none"> Periodic inspection of construction of mortar joints, prior to beginning masonry construction and during construction Periodically verify the type, size, and location of anchors and their attachment to the structure Periodically verify size and location of structural elements
4. Reinforcement Installation	SER / SI SI SER / SI SER / SI SI	<ul style="list-style-type: none"> Verify location of reinforcement and connections to structure as construction begins Continuous inspection of reinforcing steel welding in accordance with Table 1704.3, Item 5b Prior to grouting periodically verify size, grade, and placement of reinforcement and connection of masonry to structural frame Periodically verify prestressing technique During construction, continuously monitor the application and measurement of prestressing force
5. Grouting Operations	SI SI SI	<ul style="list-style-type: none"> Prior to grouting, periodically verify conforming cleanliness of grout space and placement of the reinforcement and connectors Continuous observation of the placement of all grout Continuously observe the grouting of prestressing bonded tendons
6. Weather Protection	SI	<ul style="list-style-type: none"> Periodically verify protection techniques for construction of masonry below 40°F and above 90°F
7. Observation of the Evaluation of Masonry Strength	SI / ITL	<ul style="list-style-type: none"> Periodic observation of the preparation of grout specimens, mortar specimens and or prisms.

Schedule of Special Inspection Services
Wood

Item	Qualifications	Scope
1. Inspection of Fabricators	SI	<ul style="list-style-type: none"> • Ensure fabricator meets the requirements of NCSBC 1704.2 verifying adequate quality control procedures for prefabricated wood structural elements and assemblies are in place
2. High-load diaphragms	SER / SI	<ul style="list-style-type: none"> • Periodic inspection of Table 2306.2.1(2) high-load diaphragm sheathing panels, fasteners, and framing members at adjoining panel edges.
3. Wood Trusses	SER / SI	<ul style="list-style-type: none"> • For trusses clear spanning 60 feet or more, verify that both temporary and permanent restraints and braces are installed in accordance with the approved truss submittal package.

Schedule of Special Inspection Services
Soils

Item	Qualifications	Scope
1. Site Preparation	SI	<ul style="list-style-type: none"> • Determine that the subgrade has been prepared in accordance with the approved soils report and the construction document
2. Fill Placement	SI	<ul style="list-style-type: none"> • Periodic classification and testing of compacted fill materials • Continuous observation of materials used, densities, and lift thickness ensuring compliance with the approved soils report and the construction documents
3. Evaluation	SI / ITL	<ul style="list-style-type: none"> • Determine that the materials below shallow foundations are adequate to achieve the design bearing capacity

Schedule of Special Inspection Services
Driven Deep Foundations^{a b}

Item	Qualifications	Scope
1. Material Verification	SI	<ul style="list-style-type: none"> Continuously verify pile materials, sizes, and lengths comply with the construction documents
2. Pile Testing	SI	<ul style="list-style-type: none"> Continuously observe pile load tests and determine capacities of test elements ensuring compliance with the construction documents
3. Installation	SI SI SI	<ul style="list-style-type: none"> Continuous observation of the driving operations Continuously observe pile placement, location, plumbness, blow count, penetration, tip and butt elevations, and anomalies Maintain complete and accurate records

a. For steel elements, perform additional inspections in accordance with Section 1704.3 of the North Carolina Building Code and the companion Schedules included herein

b. For concrete elements and concrete-filled elements, perform additional inspections in accordance with Section 1704.4 of the North Carolina Building Code and the companion Schedules included herein

Schedule of Special Inspection Services
Cast-in-Place Deep Foundations^a

Item	Qualifications	Scope
1. Material Verification	SI	<ul style="list-style-type: none"> • Continuously verify pile materials comply with the construction documents
2. Pile Testing	SI	<ul style="list-style-type: none"> • Continuously observe pile load tests and determine capacities of test elements ensuring compliance with the construction documents
3. Installation	SI SI SI	<ul style="list-style-type: none"> • Continuous observation of the drilling operations • Continuously verify pile placement, location, plumbness, diameters, lengths, rock embedment, end-bearing strata capacity, concrete or grout volumes, and anomalies • Maintain complete and accurate records

a. For concrete elements and concrete-filled elements, perform additional inspections in accordance with Section 1704.4 of the North Carolina Building Code and the companion Schedules included herein

Schedule of Special Inspection Services
Helical Pile Foundations

Item	Qualifications	Scope
1. Quality Control Procedures	SI	<ul style="list-style-type: none">• Collect Certificate of Compliance from fabricator
2. Installation of Helical Piles	SI	<ul style="list-style-type: none">• Continuously observe the installation equipment used, pile placement, location, tip elevations, final depth, and final installation torque

Schedule of Special Inspection Services
Sprayed On Fire Resistant Materials

Item	Qualification	Scope
1. Preparation	SI / ITL	<ul style="list-style-type: none"> • Periodically inspect preparation of substrate prior to installation in accordance with approved fire resistance design and approved manufacturer's written instructions
2. Application	SI / ITL	<ul style="list-style-type: none"> • Periodically inspect that substrate has minimum ambient temperature before and after application as specified by the fire resistance design and approved manufacturer's written instructions • Test thickness of sprayed on material per the instruction of Section 1704.12.4, the fire resistance design, and the approved manufacturer's written instructions • Periodically test Density of sprayed on material per fire resistance design and approved manufacturer's written instructions • Periodically test bond Strength to ensure a value greater than 150 pounds per square foot.

Schedule of Special Inspection Services
Mastic and Intumescent Fire-Resistant Coatings

Item	Qualification	Scope
1. Preparation	SI / ITL	<ul style="list-style-type: none">Periodically inspect preparation of substrate prior to installation in accordance with approved fire resistance design, approved manufacturer's written instructions, and the requirements of AWCI 12-B
1. Application	SI / ITL	<ul style="list-style-type: none">Periodically observe application of fire-resistant coatings ensuring compliance with approved fire resistance design, approved manufacturer's written instructions, and the requirements of AWCI 12-B

Schedule of Special Inspection Services
Retaining Walls Exceeding 5 Feet

Item	Qualification	Scope
1. Retaining Systems	SI / ITL / SER	<ul style="list-style-type: none">• All retaining walls exceeding 5 feet in height require special inspections. Refer to the applicable material schedules for explicit requirements
1. Application	SI / ITL	<ul style="list-style-type: none">• Periodic examination of backfill materials for compliance with the approved specifications• Confirm that all subsoil drainage piping is undamaged, drains freely to the designated outlet or structure, and has been installed per the approved engineered design

Schedule of Special Inspection Services
Exterior Insulation and Finish Systems (EIFS)

Item	Qualifications	Scope
1. Application	SI	<ul style="list-style-type: none">• Verify that EIFS is installed in conformance with project specifications• For EIFS incorporating drainage over a water-resistive barrier, periodically confirm that the water-barrier and drainage strip are installed in conformance with project specifications

Schedule of Special Inspection Services
Smoke Control

Item	Qualifications	Scope
1. Smoke Evacuation System	SI / Independent Inspector	<ul style="list-style-type: none">• During erection of ductwork and prior to concealment leak test and record locations of devices• Upon completion of smoke control system perform pressure difference testing, flow measurements and detection and control verification

Schedule of Special Inspection Services
Wind-Resisting Components

Item	Qualifications	Scope
1. Contractor Statement of Responsibility	SI	<ul style="list-style-type: none"> • Prior to any work taking place, each contractor responsible for the construction of a wind-resisting material, system, or component shall submit a written statement of responsibility to the Special Inspector for distribution to the Building Official and Owner
2. Wind-resisting components	SER / SI	<ul style="list-style-type: none"> • Inspect the wind-resisting materials, systems, components, and connections listed below ensuring all items are installed in conformance with the project documents

Main Wind-Force Resisting System(s):

Wind-Resisting Components Subject to Continuous Special Inspections:

Wind-Resisting Components Subject to Periodic Special Inspections:

Schedule of Special Inspection Services
Special Inspections for Wind Requirements

Item	Qualifications	Scope
1. Structural Wood	SER / SI SER / SI	<ul style="list-style-type: none"> • Continuously observe field gluing operations pertinent to the main wind force-resisting system • Periodically inspect all nailing, anchoring, and fastening of components within the main windforce-resisting system
2. Cold-Formed Steel Light-Frame Construction	SER / SI SER / SI	<ul style="list-style-type: none"> • Periodically inspect welding operations at elements of the main windforce-resisting system • Periodically inspect all screw attachment, bolting, anchoring, and fastening of components within the main windforce-resisting system
3. Wind-resisting components	SER / SI	<ul style="list-style-type: none"> • Periodically inspect the roof cladding and wall cladding components and connections listed below ensuring all items are installed in conformance with the project documents

Structural Wood and Cold-Formed Steel Light-Frame Construction Main Wind-Force Resisting System(s) Subject to Special Inspections:

Roof Cladding Components Subject to Periodic Special Inspections:

Wall Cladding Components Subject to Periodic Special Inspections:

Schedule of Special Inspection Services
Special Inspections for Seismic Resistance^a

Item	Qualifications	Scope
1. Contractor Statement of Responsibility	SI	<ul style="list-style-type: none"> • Prior to any work taking place, each contractor responsible for the construction of a seismic-resisting material, system, or component shall submit a written statement of responsibility to the Special Inspector for distribution to the Building Official and Owner
3. Mechanical and electrical components	SI	<ul style="list-style-type: none"> • Collect manufacturer certificates and verify compliance with ASCE7 requirements for nonstructural components • Periodic inspection during the anchorage of electrical equipment used for emergency power systems • Periodic inspection of piping systems intended to carry flammable, combustible, or highly toxic contents and their associated mechanical units. • Periodic inspection during the installation of vibration isolation systems accommodating nominal clearances of ¼ inch or less • Periodic inspection of HVAC ductwork that will contain hazardous materials
4. Seismic isolation system	SI	<ul style="list-style-type: none"> • Periodic inspection of isolator units and energy dissipation devices during fabrication and installation • Oversee testing program per ASCE7 requirements
5. Structural Steel	SI / ITL	<ul style="list-style-type: none"> • Testing and inspection program per AISC 341 - Seismic Provisions for Structural Steel Buildings

a. The Special Inspections listed reflect North Carolina code requirements for Seismic Design Category C. The SER shall review Code sections 1705 and 1707 and adjust the Schedule of Special Inspection Services for structures of greater seismic hazard.

Main Wind-Force Resisting System(s):

Seismic-Resisting Components Subject to Continuous Special Inspections:

Seismic-Resisting Components Subject to Periodic Special Inspections:

