

**STATE OF NORTH CAROLINA**  
**DEPARTMENT OF ADMINISTRATION**  
**STATE CONSTRUCTION OFFICE**



**SPECIAL INSPECTIONS GUIDELINES**

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## TABLE OF CONTENTS

	<u>Pages</u>
Chapter 1 - Introduction . . . . .	1-1
Chapter 2 – Classification of Structures . . . . .	2-1 to 2-2
Chapter 3 – Procurement Methods . . . . .	3-1 to 3-6
Chapter 4 – Contract Document Requirements . . . . .	4-1 to 4-2
Chapter 5 – Qualifications of Special Inspectors . . . . .	5-1 to 5-4
Chapter 6 – Preconstruction Meeting . . . . .	6-1
Chapter 7 – Roles and Responsibilities . . . . .	7-1 to 7-5
Chapter 8 – Inspection and Report Submittal Process . . . . .	8-1 to 8-6
Chapter 9 – Deviations from NCSBC Chapter 17 . . . . .	9-1 to 9-2
Appendix A - Definitions and Abbreviations . . . . .	A-1 – A-4
Appendix B – Special Inspection Forms	(See SCO Website)
• Special Inspection Checklist	
• Statement of Special Inspections	
• Contractor’s Statement of Responsibility	
• Special Inspection Daily Report	
• Discrepancy Notice	
• Discrepancy Notice and Resolution Log	
Appendix C – Resources . . . . .	C-1 – C-2
Appendix D – Chapter 17 of the NCSBC – Structural Tests and Special Inspections (See NC Code)	



# **CHAPTER 1 INTRODUCTION**

These guidelines are offered to assist the design community and owning agencies in understanding and implementing special inspections.

The 2002 NC Building Code (2000 International Building Code with North Carolina Amendments) became effective in January 2002. After a twelve-month transition period, the 2002 NC Code's use became mandatory in January 2003.

In January 2003, the State Construction Office began to require Special Inspections, per NC Code Chapter 17, for all State Capital Improvement projects.

Special inspections are detailed inspections of important elements of a specific project. These inspections largely deal with the building structure, but also may address fire protection, electrical systems, and mechanical systems. The Prime Designer and his/her identified consultants remain fully responsible for conducting regular construction observation visits per the requirements of the Design Contract. For the purposes of this Special Inspections Guideline, special inspections shall be considered the construction observation and inspection that exceeds the traditional requirements of the Design Contract.

Through preparation of the Statement of Special Inspections, the Structural Engineer of Record creates a project-specific schedule of inspections. These inspections are conducted under the supervision and responsibility of the Special Inspector.

## CHAPTER 2 CLASSIFICATION OF STRUCTURES

The requirements for special inspections as specified in **Section 1704** of the North Carolina State Building Code and outlined in this guideline shall apply as follows:

**Included** All Capital Improvement Projects reviewed by the SCO, except as explicitly noted below, fall under the requirements of Section 1704.

**Included** Community College projects valued at more than \$300,000. While these projects are reviewed and inspected by local building officials, SCO is the statutory “Building Official” for these projects and requires Special Inspections for them.

**Exempt** Community College projects valued at less than \$300,000.

### **Projects Under Other Jurisdiction**

These are projects that, by statute, are explicitly *not* under jurisdiction of the State Construction Office. The Building Official having jurisdiction may require section 1704 special inspections.

- University System Projects valued at \$2M and less.  
*General Statute 116-31.11 charges The University of North Carolina with developing procedures to perform the duties of the Department of Administration and State Construction Office under G.S. 133-1.1(d) and G.S. 143-341(3) for projects valued at two million dollars and less. The University of North Carolina will require Section 1704 special inspections and will follow State Construction Office criteria in determining projects where special inspections will be waived, delegating special inspections discretion to the individual campuses in accordance with criteria established by the Board of Governors for management of capital projects costing two million dollars and less.*
- UNC-Hospital projects.
- ECU Medical Faculty Practice Plan Projects.  
(G.S. 116-40.6)

**Exempt** During Design Development Review phase, SCO attempts to identify projects on which SCO will waive Special Inspections. If a waiver is granted, this is verified in writing via a review comment. Such projects are generally of limited structural complexity. Projects likely to be exempt from Special Inspections include:

- Site pre-grading projects.

- General site infrastructure projects involving paving, repaving, storm drainage, and site utilities. Significant retaining wall structures may need Special Inspections.
- Renovation projects that are largely concerned with mechanical, electrical, and life-safety upgrades. Limited structural work (including roof-top cooling tower framing) will not require special inspections. Conversely, exterior elevator shaft additions (often part of major renovation projects) will require special inspections.
- Minor wood-framed single-story structures such as picnic shelters, bathhouses, and other traditional Parks & Recreation structures. However, significant visitors' centers are likely to need special inspections.
- Single-story un-reinforced masonry bearing wall buildings in areas of low seismicity and low wind load (Projects *not* subject to the Seismic & Wind Quality Assurance provisions of Code Sections 1705 & 1706).
- Low- and moderate-span metal-clad pre-engineered metal buildings (Projects *not* subject to the Wind Quality Assurance provisions of Code Section 1706). Masonry facades and mezzanine floor systems will likely trigger the requirement for special inspections, particularly in areas of high seismicity.

**Sections 1705 “Quality Assurance for Seismic Resistance” and 1706 “Quality Assurance for Wind Requirements”** are applicable, respectively, whenever a project falls within Seismic Design Category C (or worse) and/or within the triggering wind velocity & wind Exposure Category combinations. These Sections are mandatory, as applicable, on all projects, public or private. The Section 1704.1 “discretion”, granted to the Building Official, does not apply to Sections 1705 & 1706.

## **CHAPTER 3 PLANNING & PROCUREMENT**

### **Planning**

For each project, owning agencies shall consider the possibility that special inspections may be needed. See Chapter 2, Classification of Structures, for general guidance. If there is any doubt regarding the applicability of special inspections, then planning should anticipate that special inspections *will be required*.

To this end, special inspections costs should be estimated and added as a line item in the Form OC-25, "Proposed Capital Improvement Project".

At present, the State Construction Office does not possess sufficient historical data to provide precise costs of special inspections services for different types of projects. From early experience, it appears that special inspections costs are falling in the range of ¼% to 1% of Estimated Construction Cost.

In the event that special inspections are budgeted for a project, but ultimately not needed or cost less than the budgeted amount, excess funds will revert to the project contingency fund. Should special inspections costs exceed the budgeted amount, the project contingency fund will provide the necessary additional monies.

### **Procurement**

At the Pre-Design Phase of the project, the Owner must determine its preferred method for procuring special inspections services.

Designer selection procedures are prescribed by the NC Administrative Code, Title 01 – Administration, Subchapter 30D, "State Building Commission Designer & Consultant Selection Policy" (01 NCAC 30D). On June 1, 2005, new special-inspections-specific selection rules went into effect. These rules were structured to provide maximum selection flexibility for owning agencies and were tailored to the unique character of professional special inspections services. A reprint of the new rules appears at the end of this chapter.

There are two basic methods of procurement for special inspections services:

#### **1. Special Inspections Through the Designer's Contract**

Special inspections services may be procured through the Designer's contract with the Owner. These services may be included from the initiation of the Design Contract or may be added to an existing Design Contract via a contract amendment.

- **Special Inspections as Part of Initial Design Contract**

During the proposal and negotiation of the Design Contract, the Designer shall identify the design team member that will be the designated Special Inspector. Once a Design Contract is in place, the Special Inspector may change only through a formal amendment to the Design Contract.

The role of the Special Inspector (SI) may be filled by the Prime Designer (usually the Architect), the Structural Engineer of Record (SER), or by another qualified member of the design team. The SI may utilize a number of qualified Agents to perform specific observations or inspections that require particular expertise.

The State Construction Office recognizes that, at the time of Design Contract negotiation, the project scope is only broadly defined and the building's final structural system is likely unknown. Therefore, the initial Design Contract line item for special inspections is an estimated figure that will require adjustment via one or more Design Contract amendments. The Owner and Designer shall carefully consider the Form OC-25 estimated special inspections figure when formalizing the Design Contract.

Actual payment for special inspections services, performed during the Construction Phase of the project, will be handled per Article 3, "Full-Time Construction Inspection", of the Design Contract: "The Designer shall be compensated for the additional expenses in a manner as mutually agreed upon between the Owner and the Designer and as set forth in a written amendment to this Agreement."

- **Special Inspections Added to the Design Contract Via Contract Amendment**

The addition of special inspections to an existing Design Contract may be necessary where a contract was in place prior to the SCO requirement of Section 1704 Special Inspections or if other circumstances warrant such an addition.

The role of the Special Inspector (SI) may be filled by the Prime Designer (usually the Architect), the Structural Engineer of Record (SER), or by another consultant added to the design team as the Special Inspector. The SI may utilize a number of qualified Agents to perform specific observations or inspections that require particular expertise.



## 2. Special Inspections Through a Qualified Independent Firm

Special Inspections may be performed by an independent firm selected through the Designer Selection and Evaluations Procedures as adopted by the State Building Commission (SBC) under 01 NCAC 30D, effective June 1, 2005.

- **A Firm Selected Through The Full Designer Selection Process**

The independent firm may be selected using the traditional designer selection process.

- **A Firm Selected and Engaged via Open-Ended Service Agreement**

Open ended contracts may be used for Special Inspections professional services. Annual fees are limited to \$300,000 with no single project fee exceeding \$100,000. These annual contracts may be extended for an additional year with the total two-year fee not exceeding \$600,000. Extension of a firm's contract for the additional year precludes that firm's selection for the next year's annual contract.

"Minor Project" procedures may be used when selecting firms for these open-ended agreements.

- **A Firm Selected From Formally-Identified Consultants to the Prime Designer**

The Owner may negotiate a professional services contract with one of the Prime Designer's formally-identified (in Article 13 of the Standard Form of Agreement Between Owner and Designer) consultants. This consultant could be the Structural Engineer of Record or a Special Inspections Consultant. There is no requirement for solicitations of letters-of-interest or formal interviews.

- **A Firm Currently Under Contract for Professional Services Related to the Same Project**

If originally selected using appropriate Qualifications Based Selection (QBS) procedures, a professional firm already engaged for some aspect of a specific project may, if suitably qualified, have its scope of services expanded to provide Special Inspections services. An example would be a Geotechnical Engineering firm or Independent Testing Laboratory already engaged or at work on a project.

Selected Excerpts:

**SUBCHAPTER 30D - STATE BUILDING COMMISSION DESIGNER AND CONSULTANT  
SELECTION POLICY**

**01 NCAC 30D .0103 DEFINITIONS**

For purposes of this Subchapter, the following definitions shall apply:

- (1) "Annual Service Agreement" means an open end agreement for professional services with a designer or consultant, subject to the limitations of the Rule in this Subchapter.
- (2) "Capital Projects Coordinator" means the individual authorized by each funded agency to coordinate all capital improvement projects and related matters with the State Construction Office and to represent that agency on all matters presented to the SBC. The individual so designated for purposes of the Rules in this Subchapter may have other titles within his agency but shall carry out the duties assigned herein to the Capital Projects Coordinator. Whenever the Capital Projects Coordinator is referenced herein, it shall be understood to include a designated assistant or representative.
- (3) "Consultant" means any individual, firm, partnership, corporation, association or other legal entity selected for planning and studies of an architectural and engineering nature associated with a capital improvement project. The consultant must be licensed to practice architecture or engineering in the State of North Carolina.
- (4) "Contact person" means the person named in the public advertisement who shall be the Capital Projects Coordinator or his designee.
- (5) "Designer" means any individual, firm, partnership, corporation, association or other legal entity licensed to practice architecture, engineering, or landscaping architecture in the State of North Carolina.
- (6) "Funded agency" means the department, agency, authority, or office that is named in the legislation appropriating funds for the design and/or or construction project.
- (7) "Major projects" means those capital improvement projects whose authorized funding or estimated cost is greater than five hundred thousand dollars (\$500,000.00) or a planning study activity whose authorized funding is greater than fifty thousand dollars (\$50,000.00).
- (8) "Minor projects" means those capital improvement projects whose authorized funding or estimated cost is five hundred thousand dollars (\$500,000.00) or less or a planning or study activity whose authorized funding is fifty thousand dollars (\$50,000.00) or less. Minor projects may also include a grouping of small non-specified or anticipated projects whose aggregate total falls within the minor project cost limitations.
- (9) "Professional services" means those services within the scope of the practice of architecture, engineering or landscape architecture as defined by the public laws of North Carolina.
- (10) **"Special inspections" means detailed inspections of materials, installation, fabrication, erection or placement of components and connections requiring special expertise to ensure compliance with construction documents and referenced standards as per Section 1704 of the NC State Building Code.**
- (11) "Using agency" means the sub-division of the funded agency for whose use the project is to be provided. If the funded agency is so subdivided for administrative control, the using agency would be a division, geographically self-contained facility, campus, or similar body, as determined by the administrative head of the funded agency.

*History Note: Authority G.S. 143-135.25; 143-135.26;  
Eff. January 1, 1988;  
Amended Eff. June 1, 2005, May 1, 1990; April 1, 1989.*

**01 NCAC 30D .0302 PRE-SELECTION**

(a) A pre-selection committee shall be established for all projects requiring professional service. On minor projects the pre-selection committee shall consist of at least the Capital Projects Coordinator, a representative of the using agency and one representative from the State Construction Office. On major projects the pre-selection committee shall consist of at least the Capital Projects Coordinator, a representative of the using agency and two representatives from the State Construction Office. At least one member of all pre-selection committees shall be a licensed design professional.

(b) General Procedure for All Projects: The Capital Projects Coordinator shall review with the using agency the requirements of the project. This step shall take place prior to public advertisement in the Purchase Directory, because designers and consultants have a significant need to know in advance the program intent of a project in order to demonstrate their qualifications for the project in their letter of interest. The Capital Projects Coordinator shall receive all letters of interest and other qualification information either directly or from the designated contact person. After a pre-selection priority list is prepared, the list shall remain confidential except to the Secretary of the SBC. If fewer than three letters of interest are received on major projects, the project shall be readvertised in the Purchase Directory. If fewer than three letters of interest are received following the re-advertisement, the Capital Projects Coordinator may proceed with the selection process using the data received or may advertise again.

(c) Special Procedures for Minor Projects: The Capital Projects Coordinator shall review with the using agency the requirements of the project and the qualifications of all firms expressing interest in a specific project. The Capital Projects Coordinator and a representative of the using agency shall meet with the representative from the State Construction Office for the evaluation of each firm and development of a list of three firms in priority order to be presented to the SBC. The Capital Projects Coordinator may institute the interview procedures in Paragraph (d) of this Rule if he deems it beneficial in evaluating the firms. The Capital Projects Coordinator shall submit to the Secretary of the SBC the list of three firms in priority order, including pre-selection information and written recommendations, to be presented to the SBC. The Capital Projects Coordinator shall state in the submission to the SBC that the rules for public announcement and pre-selection have been followed.

(d) Special Procedures for Major Projects: The pre-selection committee shall review the requirements of a specific project and the qualification of all firms expressing interest in that project and shall select from that list not more than six nor less than three firms to be interviewed and evaluated. The pre-selection committee shall interview each of the selected firms, evaluate each firm interviewed, and rank in order three firms. The Capital Projects Coordinator shall state in his submission that the rules for public announcement and pre-selection have been followed.

(e) Special Procedures for Emergency Projects: On occasion, emergency design or consultation services may be required for restoration or correction of a facility condition which by its nature poses a hazard to persons or property, or when an emergency exists. Should this situation occur, in all likelihood there will not be sufficient time to follow the normal procedures described in this Rule. The Capital Projects Coordinator on these occasions may declare an emergency, notify the State Construction Office and then obtain the services of a designer or consultant for consultation or design of the corrective action. In all cases, such uses of these emergency powers shall involve a written description of the condition and rationale for employing this special authority signed by the head of the agency and presented to the SBC at its next normal meeting. Timeliness for obligation of funds or other non-hazardous or non-emergency situations do not constitute sufficient grounds for invoking this special authority.

(f) Fixed Term Contract: A Funded Agency or a Using Agency may require the services of designer(s) or consultant(s) for projects under three hundred thousand dollars (\$300,000) on a fixed term basis for one year. In such cases, designer(s) or consultant(s) for fixed term contracts shall be selected in accordance with the procedures for minor projects in Paragraph (c). In addition, no fixed term contract fee under the jurisdiction of the State Building Commission shall exceed one hundred fifty thousand dollars (\$150,000) in total volume per year regardless of the number of projects. No fee shall exceed thirty-six thousand dollars (\$36,000) per project. Fixed term contracts may be extended for a term of one additional year. Total fees shall not exceed one hundred fifty thousand dollars (\$150,000) for the first year or three hundred thousand dollars (\$300,000) for the two-year period regardless of the number of projects.

(g) Special Procedures for Department of Environment and Natural Resources: For Division of Water Quality projects under the Wetlands Restoration Program, the Funded Agency may require the services of multiple designer(s) or consultant(s) for design and construction management of wetland, stream and riparian buffer restoration projects on a routine basis. In such cases, designer(s) or consultant(s) for such open-ended contracts shall be selected in accordance with the procedures described for minor projects. This does not preclude the

Funded Agency's use of the designer selection procedures specified for major or minor projects if it elects to do so. The total volume of business in terms of negotiated design fee shall not exceed seven hundred thousand dollars (\$700,000) for the biannual contract term and no single project fee shall exceed three hundred fifty thousand dollars (\$350,000). In no case shall individual projects exceeding one million five hundred thousand dollars (\$1,500,000) in total costs be assigned for design under an open-end agreement. Open-end agreements under this procedure shall not be extended beyond a two-year term. The funded agency must readvertise on a biannual basis.

**(h) Special Procedures for Special Inspections: Special Inspections professional services may be selected utilizing any one of the following methods:**

- (1) **The special inspections services may be performed as part of the project design services rendered by the project designer selected in accordance with Paragraphs (a) through (d) of this Rule.**
- (2) **The special inspections services may be performed, independent of the project design services contract, by:**
  - (A) **a firm selected in accordance with Paragraphs (a) through (d) of this Rule.**
  - (B) **a firm selected via in accordance with Paragraph (f) of this Rule. Firms for such open-ended contracts shall be selected in accordance with the procedures described for minor projects. This does not preclude the Funded Agency's use of the designer selection procedures specified for major or minor projects if it elects to do so. In addition, no annual contract fee shall exceed three hundred thousand dollars (\$300,000.00) in total volume and no single fee shall exceed one hundred thousand dollars (\$100,000.00). Annual contracts may be extended for one additional year. However, if extended for an additional one-year period, the designer may not be selected for the next annual contract. Total annual fees shall not exceed three hundred thousand dollars (\$300,000.00) for first year or six hundred thousand dollars (\$600,000.00) for two-year period. If and when these fees are used to limit, the agency must readvertise.**
  - (C) **a firm selected from the consultants formally identified in Article 13 of the Standard Form of Agreement Between Owner and Designer.**
  - (D) **a firm initially selected using a qualifications based selection process, currently under contract for that project, and qualified to perform special inspections services.**

*History note: Authority G.S. 143-135.25; 143-135.26; S.L. 2001-442, Sec. 6(c);  
Eff. January 1, 1988;  
Amended Eff. July 1, 1993; May 1, 1990;  
Temporary Amendment Eff. May 15, 2002;  
Amended Eff. June 1, 2005, November 1, 2004; August 1, 2004.*

Subchapter 30D may be viewed in its entirety at

<http://ncrules.state.nc.us/ncadministrativ /title01administ /chapter30statec /default.htm>

Click on "Subchapter D Rules"

## **CHAPTER 4 CONTRACT DOCUMENT REQUIREMENTS**

The following are required to be included in the project construction documents.

### **Statement of Special Inspections**

The Statement of Special Inspections (SSI) is a form that identifies the scope of special inspection requirements specific to a project and identifies the agencies and/or inspectors responsible for providing those services. The SSI shall be developed by the structural engineer of record, shall be incorporated into the construction documents and shall be submitted with the 95% plan review set to the State Construction Office. It may be included in the contract drawings or specifications. A sample format is included in Appendix B and is posted on the SCO website at

[http://interscope2.doa.state.nc.us/Guidelines/Special\\_inspect/TOC\\_Special.htm](http://interscope2.doa.state.nc.us/Guidelines/Special_inspect/TOC_Special.htm).

In addition to information required above, for identified “Special Cases” as outlined in Section 1704.13 of the NCSBC, the structural engineer of record must identify specific qualifications for special inspections.

### **Seismic Quality Assurance Plan**

A Seismic Quality Assurance Plan, if required per NCSBC Section 1705, must be included in the contract documents, drawings and/or specifications. The Structural Engineer of Record shall develop the Quality Assurance Plan and shall submit it to the SCO with the 95% review set. No specific format is required.

### **Wind Quality Assurance Plan**

A Wind Quality Assurance Plan, if required per NCSBC Section 1706, must be included in the contract documents, drawings and/or specifications. The Structural Engineer of Record shall develop the Quality Assurance Plan and shall submit it to the SCO with the 95% review set. No specific format is required.

### **Acknowledgement of Contractor’s Responsibility Form**

If a Quality Assurance Plan is required (either Seismic or Wind), an “Acknowledgement of Contractor’s Responsibility” form shall be included in the specifications, Division 1. A format for the Acknowledgement of Contractor’s Responsibility is included in Appendix B and is posted on the SCO website at

[http://interscope2.doa.state.nc.us/Guidelines/Special\\_inspect/TOC\\_Special.htm](http://interscope2.doa.state.nc.us/Guidelines/Special_inspect/TOC_Special.htm) .

This shall be included in the 95% review set submitted to the SCO.

### **Specification Coordination**

It shall be the design team's responsibility to coordinate the specifications with the contract drawings, Statement of Special Inspections, the Wind and/or Seismic Quality Assurance Plan(s) and the requirements of the SCO Special Inspections Guidelines.

### **Contract Drawing Coordination**

It shall be the design team's responsibility to coordinate the contract drawings with the specifications, Statement of Special Inspections, the Wind and/or Seismic Quality Assurance Plan(s) and the requirements of the SCO Special Inspections Guidelines.

## **CHAPTER 5**

### **QUALIFICATIONS OF SPECIAL INSPECTORS**

Prior to starting work the owner shall be provided with the name and resume for the designated Special Inspector for the project. The designated Special Inspector shall be a North Carolina Professional Engineer or a North Carolina Registered Architect and approved by the project owner.

Individuals providing inspections shall meet the following minimum criteria of certification and/or documented experience. Work experience must be related to the field for which the inspector is being utilized. Work experience may be gained by working for an inspection/testing agency, an engineering firm, or a contractor as a technician, inspector or engineer.

The designated Special Inspector shall be responsible for collecting and approving documentation of qualifications for all inspectors. Copies of documentation of qualifications, including the qualifications of the ITL if they are providing Special Inspection services, shall be maintained by the Special Inspector and be made available for owner review as requested.

#### **Section 1704.2 Inspection of Fabricators**

- Precast: PCI Level 2 or Reinforced Concrete Requirements
- Bar Joists: Current AWS Certified Welding Inspector
- Metal Buildings: Current AWS Certified Welding Inspector
- Structural Steel: Current AWS Certified Welding Inspector
- Wood Construction: EI with one year of related experience

#### **Section 1704.3 Steel Construction**

Welding NCSBC 1704.3, 3.1, 3.2; Table 1704.3 All of Section 5 except 5.a.4 and 5.a.5; Table 1704.4 Item 2; 1707.2

- Current AWS Certified Welding Inspector

High Strength Bolting NCSBC 1704.3.3; Table 1704.3 Items 1 and 2; and Table 1704.3 items 5.a.4 and 5.a.5.

- Current ICC Structural Steel and Welding Certificate and one year of related experience or
- Current AWS Certified Welding Inspector or
- EI with one year of related experience.

Steel Frame Inspection NCSBC Table 1704.3 Items 1, 2, 3, 5.a.4, 5.a.5, and 6

- Current AWS Certified Welding Inspector, or
- EI with one year of related experience, or
- ICC Structural Steel certification

Steel Frame Inspections NCSBC Table 1704.3 Items 4, 5.a.1, 5.a.2, 5.a.3, 5.b

- Current AWS Certified Welding Inspector

### **Section 1704.4 Concrete Construction**

Reinforced Concrete: NCSBC 1704.4, 1805, Table 1704.4 Items 1, 2, 3, 4, 5, 6, 7

- Current ICC Reinforced Concrete Special Inspector and ACI Concrete Field Testing Technician, Grade 1 or
- ACI Certification, Concrete Construction Special Inspector or
- NICET Concrete Level III with two years related experience or
- EI with one year related experience

Prestressed Concrete NCSBC Table 1704.4 Items 8 and 10

- Pretension Tendons: Requirements for Reinforced Concrete plus current ICC Prestressed Concrete Certification, or EI with one year of related experience.
- Post-tension tendons: Current Post-Tensioning Institute Certification or EI with one year related experience.

Prestressed Concrete NCSBC Table 1704.4 Item 9

- Connections: Current AWS Certified Welding Inspector
- Size and location of Members: EI with one year of related experience, or ICC Reinforced Concrete Inspector

Post Tension Slabs-on-Grade NCSBC 1805.8.2

- Current Post-Tensioning Institute Certification or EI with one year related experience.

### **Section 1704.5 Masonry Construction**

Structural Masonry NCSBC 1704.5, Table 1704.5.1 Items 1, 2.a, 2.b, 3, 4, 5,  
Table 1704.5.3 Items 1, 2.a, 2.b, 3

- ACI Concrete Field Testing Technician, Grade 1 or
- Current ICC Structural Masonry certificate or
- EI with one year related experience

Structural Masonry NCSBC 1704.5, Table 1704.5.1 Item 2.c, 6, Table 1704.5.3 Item 2.c, 6

- Current ICC Structural Masonry certificate
- ACI Certification, Concrete Construction Special Inspector or
- EI with one year related experience



Structural Masonry NCSBC 1704.5, Table 1704.5.1 Item 2.d, Table 1704.5.3 Item 2.d

- Current AWS Certified Welding Inspector certification

### **Section 1704.7 Soils**

Excavation and Filling NCSBC 1704.7, 1803.4

- Current NICET certification in geotechnical engineering technology (Construction Materials – Soils), Level II, or
- EI with one year related experience, or
- GIT with one year of related experience

Verification of Soils NCSBC 1804, 1805

- Current NICET certification in geotechnical engineering technology, Level II, or
- EI with one year related experience or
- GIT with one year of related experience

### **Section 1704.8 Pile Foundations and Section 1704.9 Pier Foundations**

Piling and Drilled Piers NCSBC 1704.8, 1704.9, 1804.2.4, 1807-11

- Current NICET certification in geotechnical engineering technology, Level II, or
- EI with one year related experience, or
- GIT with one year of related experience

### **Section 1704.11 Sprayed Fire Resistant Materials**

Sprayed Fire Resistant Materials NCSBC 1704.11

- Current ICC Spray-Applied Fire Proofing certificate, or
- EI with one year related experience

### **Section 1704.12 Exterior Insulation and Finish System**

Exterior Insulation and Finish System NCSBC Section 1704.12

- Professional Engineer or Architect registered in the state of North Carolina or
- EI with one year related experience, or
- AWCI EIFS Inspector

### **Section 1704.13 Special Cases**

Special Cases NCSBC 1704.13

- As identified by the SER, on a case by case, in the Statement of Special Inspections.

### **Section 1704.04 Special Inspection for Smoke Control**

Smoke Control NCSBC 1704.14

- Certified as required in Section 1704.14.

**Sections 1707, 1708, 1709 Special Inspections for Seismic Resistance**

Seismic Resistance NCSBC 1707, 1708, 1709

- Professional Engineer registered in the State of North Carolina
- As recognized above for specific type of component (steel, concrete, masonry, etc.)

**Section 9.4 NC SCO Special Inspection Guidelines, Fire Rated Penetrations**

- EI with one year of building systems experience

## **CHAPTER 6 PRECONSTRUCTION MEETING**

The following topics related to special inspections shall be included in the agenda for the preconstruction meeting. These topics are in addition to those outlined by the State Construction Office in the Preconstruction Conference Meeting Requirements and Agenda Guidelines. These additional topics do not relieve named parties from responsibilities outlined in the Preconstruction Conference Meeting Requirements and Agenda Guidelines.

- The Special Inspector shall review the Statement of Special Inspections to verify that all parties have a clear understanding of the special inspections provisions and the individual duties and responsibilities of each party.
- The Special Inspector shall review the certification requirements to verify that all parties have a clear understanding of the requirements.
- The representatives of the project owner, State Construction Office, Structural Engineer of Record, general contractor, independent testing lab and Special Inspector will sign the log-in sheet documenting their presence at the meeting.
- A matrix for communication shall be developed clearly indicating reporting requirements for Special Inspections and identifying parties responsible for said reporting. Responsibilities for distribution of reports and certifications shall be outlined. See Chapter 8 for documentation requirements and distribution list for each report requirement.
- The construction schedule shall be presented to the Special Inspector.
- The Special Inspector shall review the construction schedule and identify elements of the construction that will require special inspections. Special Inspector shall provide contractor a schedule of special inspections based on construction schedule within 14 days of receiving construction schedule.
- Contractor shall provide Special Inspector a copy of revised construction schedule on a monthly basis in accordance with contracts and per progress of the construction.
- Special Inspector shall revise schedule of special inspections monthly to reflect changes in the progress of construction.
- Special Inspector shall establish timely notification for inspections. The minimum standard for timely notification shall be one business day.

## **CHAPTER 7 ROLES AND RESPONSIBILITIES**

The following are the responsibilities of the various parties involved throughout the design and construction process for Capital Improvement projects as outlined in Chapter 2.

### **Owner**

#### Pre-design Phase

- The Owner shall be aware of the necessity to provide Special Inspections and shall reserve funds within the project budget to cover the Special Inspection requirements.
- The Owner should indicate its preferred method of procuring special inspections when soliciting letters-of-interest for design services.

#### Pre-construction Phase

- The Owner shall solicit proposals, from ITL's, for construction testing services.
- The Owner shall confer with the Designer to ensure that the scope of construction testing services is sufficient to facilitate the Special Inspections of the project.
- If the special inspections are not part of the Designer's contract, the Owner must engage an independent firm to perform special inspections.
- If the special inspections are a part of the Designer's contract, the owner shall review any amendments to the design contract as they relate to special inspection services to address change in scope.
- Participate in Preconstruction meeting.

#### Construction Phase

- Maintain Special Inspection documentation consistent with institutional requirements.

### **Architect**

#### Pre-design Phase

- Inquire regarding the Owner's preference for procurement of special inspections services.
- If special inspections will be performed under the Designer's contract, ensure that the proposal for the Design Contract specifically includes services for the performance of all special inspection activities. These services shall be separately identified in the proposal.
- If special inspections will be performed under the Designer's contract, identify the agency that will serve as the Special Inspector (SI).

#### Design Phase

- Understand Chapter 17 and its impact on overall design and construction administration activities.

- Assure that the Statement of Special Inspections, the Quality Assurance Plans and the Statement of Contractor's Responsibility Form (all provided by the SER) are included in the contract documents.

#### Pre-construction Phase

- If Special Inspections are included under the designer's contract, architect shall review and propose an amendment to Special Inspection contract, if necessary.
- If Special Inspections are not included under the designer's contract, architect shall provide assistance in the selection of the Special Inspector.
- Facilitate Preconstruction Meeting.

#### Construction Phase

- Provide construction administration services as contracted under the design contract and per State Construction Manual.
- Ensure distribution of Special Inspection documentation as agreed upon in preconstruction meeting.

### **Structural Engineer of Record**

#### Pre-design Phase

- Communication with Architect/Prime Designer, during establishment of design fee proposal, to ensure that overall design fee reflects SI tasks of the Structural Engineer of Record (SER).
- If special inspections will be performed under the Designer's contract, and if the SER is to provide the special inspection services, the SER shall provide the Architect/Prime Designer an estimated fee to provide the special inspections services.

#### Design Phase

- Preparation of the Statement of Special Inspections.
- Preparation of the Quality Assurance plans as needed.
- Coordination of specification & drawing requirements with the Statement of Special Inspections.

#### Pre-construction Phase

- Participate in Preconstruction Meeting.
- Provide assistance in the selection of the Special Inspector if requested by Architect/Prime Designer.

#### Construction Phase

- Provide construction administration services as contracted under the design contract and per the State Construction Manual. These include periodic inspections of the structural steel framing and visual inspections of the bolted and single pass fillet welded connections. Field reports shall be completed for all site visits, and submitted to the architect and included in the monthly report submitted by the Special Inspector.

- Review deficiencies brought to his attention by the Special Inspector. The SER is the sole judge of the ultimate acceptability of any apparent deficiency.
- If the SER is the Special Inspector, it is the responsibility of the SER/Special Inspector to avoid duplication of services and/or fees associated with the construction administration and Special Inspections.
- Distribute documentation as agreed upon in preconstruction meeting.

### **MEP Engineer of Record**

#### Design Phase

- Communicate to SER the inclusion of a smoke control system in the project scope, if appropriate.
- For Seismic Design Categories C, D, E or F, various MEP systems need to be included in the Quality Assurance Plans for Seismic Resistance. See Section 1705.
- For Seismic Design Categories C, D, E or F, mechanical and electrical components require specific special inspections as outlined in Section 1707.7.
- Include in specifications the structural testing requirements for mechanical and electrical equipment seismic system components and their mounting systems as outlined in Section 1708.5.

### **Special Inspector**

#### Pre-construction Phase

- Provide Owner or Designer an estimated fee to provide special inspections if requested.
- Participate in preconstruction meeting.

#### Construction Phase

- The Special Inspector shall provide all inspections outlined in the scope as defined in the Statement of Special Inspections, except those performed by the SER. The SI may retain the services of other qualified Agents of the Special Inspector (Agents) to conduct particular inspections and tests. The Special Inspector shall provide and distribute all field reports as agreed upon in the preconstruction meeting. Efforts shall be made to avoid duplication of inspections.
- Administer special inspection process. The SI is responsible for managing and coordinating the efforts of the various agents.
- Adhere to reporting requirements outlined in Chapter 8.
- For simple deficiencies discovered, the Special Inspector shall immediately inform the Contractor of the deficiency. The SI makes a record of the deficiency and a record of the corrective actions taken in the Discrepancy Notice.
- For complex deficiencies, the SI immediately informs the Contractor, the remainder of the Design Team, and the Owner of the complex deficiency in the Discrepancy Notice. The SI must be present during the remedial actions with the frequency assigned to the original inspection requirements. Upon completion of any remedial

- actions, the SI notifies the Designer and the Owner that the work is ready for reevaluation.
- SI shall keep separate his time spent to review corrected deficiencies. Owner's special inspection costs incurred after identification of the initial deficiency will be reimbursed to the Owner by the Contractor at the conclusion of the project via deductive change order.
  - The Special Inspector shall attend monthly meetings during phase of construction special inspections are required.

## **Contractor**

### Pre-construction Phase

- Participate in preconstruction meeting.
- Understand Chapter 17 and its impact on overall construction administration activities.

### Construction Phase

- Timely notification to SI for each portion of work requiring inspection (the current SCO General Conditions directly address this in Article 13.c.).
- If Quality Assurance plans for Seismic or Wind are required, Contractor has responsibilities as outlined in those plans and Sections 1705 and 1706.
- Submit copy of approved shop drawings and submittals to SI.
- Correct deficiencies in the presence of the SI.
- For complex deficiencies identified by the SI, the contractor must either stop work until the Designer has rendered judgment or, if the Contractor proceeds regardless, the Contractor will be responsible for complete removal and replacement (and any related forensic costs) of any apparent deficiency that is ultimately judged unacceptable by the Designer.
- Provide access to and means for safe and proper inspection of work.

## **Independent Testing Lab**

### Pre-construction Phase

- Participate in preconstruction meeting.

### Construction Phase

- The ITL provides tests as outlined in the contract specifications.
- The ITL may provide special inspections services as an Agent of the SI, under contract with the SI.
- The ITL may provide special inspection services under contract directly with the Owner or Designer.
- Distribute documentation as agreed upon in preconstruction meeting.

- The ITL shall submit to the Special Inspector the qualifications for personnel performing the following:
  - concrete slump and air content tests
  - monitoring temperature of concrete
  - creation of concrete test specimens for strength tests
  - preparation of grout and mortar specimens and or prisms

**State Construction Office**

Pre-design Phase

- Assist Owner in contract negotiations when Special Inspections are part of the Design Contract.

Design Phase

- Determine if project is “exempt” from special inspections as outlined in Chapter 2. Document exemption via review comment in Design Development review comments.
- Review Statement of Special Inspections and Quality Assurance Plans at 95% Contract Document review. Review for conformance to NCSBC and SCO guidelines.

Pre-construction Phase

- Participate in preconstruction meeting.
- Assist Owner in contract negotiations when Special Inspections are not part of the Design Contract.

Construction Phase

- Monitor execution of special inspections.
- Maintain special inspection documentation consistent with SCO policy.



## **CHAPTER 8**

### **INSPECTION AND REPORT SUBMITTAL PROCESS**

The following are the general requirements for providing Special Inspections for Capital Improvement Projects as outlined in Chapter 2.

1. The owner shall ensure that copies of the approved Statement of Special Inspections, plans and specifications are provided to the Special Inspector prior to the start of the affected work.
2. It is the Special Inspector's responsibility to review the approved Statement of Special Inspections, plans and specifications, as they relate to Special Inspection requirements, in advance of construction in order to establish that adequate information is available to conduct the required inspections and tests. Any issues identified by the Special Inspector with regard to the completion of Special Inspections services, should be brought to the attention of the owner and designer, in writing, and resolved prior to the start of construction.
3. The Special Inspector should request copies of qualifications for all inspectors expected to provide services on a given project. The Special Inspector shall review the qualifications for conformance with the Statement of Special Inspections and the requirements listed in Chapter 5 of this guideline.
4. The Special Inspector should attend the Pre-Construction meeting, (See Chapter 6). The Special Inspector shall review the construction schedule and identify work elements that require special inspections. The general contractor is responsible for notifying the Special Inspection agency when work is ready for inspection.
5. The contractor shall provide a minimum notice of one business day when inspections are required. The contractor is responsible for providing access to and means for safe and proper inspection of the work.
6. The Special Inspector shall perform inspections of the work in accordance with the approved Statement of Special Inspection, plans, specifications, and applicable sections of the North Carolina State Building Code.
7. It is the contractor's responsibility to verify that all work requiring special inspections is inspected and/or tested prior to concealment.
8. After each inspection, the Special Inspector or his agent shall complete a Special Inspector's Daily Report. A copy of the Special Inspector's Daily Report shall be left in the contractor's field office. A suggested format for this report is included in Appendix B. This report should be distributed according to the matrix in Table 8.1.

9. If the Special Inspector or his agent notes a discrepancy, a Notice of Discrepancy form (see Appendix B for a suggested format) must be completed and distributed within 24 hours according to the matrix in Table 8.1. All discrepancies should be brought to the immediate attention of the contractor.
10. As discrepancies are resolved, the Special Inspector or his agent shall complete the “Discrepancy Resolution” portion of the Notice of Discrepancy Form (see Appendix B for a suggested report format). The completed form shall be distributed within 24 hours of correction as per the matrix in Table 8.1.
11. The Special Inspector shall maintain a Log of Discrepancies and Corrections in order to track resolution of all discrepancies.
12. The Special Inspector shall prepare a Monthly Report of Special Inspections. This report should be distributed per the matrix in Table 8.2. The suggested contents of this report are included in Table 8.3.
13. When all work requiring Special Inspections is completed and all discrepancies have been resolved, the Special Inspector shall prepare and submit a Final Report of Special Inspections. This report shall be distributed per the matrix in Table 8.2. The suggested contents of this report are shown on Table 8.4.
14. For the present, the owner should maintain paper work sufficient to meet post-construction and operations and maintenance requirements of the project. The SCO is in the process of defining additional criteria related to retention of Special Inspections documents.

**TABLE 8.1 – DOUCUMENTATION REQUIREMENTS FOR SPECIAL INSPECTION FIELD ACTIVITES**

<b>ACTIVITY</b>	<b>DOCUMENTATION REQUIRED</b>	<b>DISTRIBUTION <sup>1</sup></b>
Field Inspection by Special Inspector or Agent of Special Inspector	Daily Report	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Included in SI Monthly Report</li> </ul>
	Discrepancy Notice (if required)	<ul style="list-style-type: none"> <li>• Designer</li> <li>• SER</li> <li>• Contractor</li> <li>• SCO</li> <li>• Owner</li> <li>• Included in SI Monthly Report</li> </ul>
	"Resolution of Discrepancy" portion of Discrepancy Notice	<ul style="list-style-type: none"> <li>• Same as Discrepancy Notice</li> </ul>
Testing Event by ITL	Daily Report	<ul style="list-style-type: none"> <li>• Special Inspector</li> <li>• Contractor</li> <li>• Owner</li> <li>• Included in SI Monthly Report</li> </ul>
Site Visit by SER	Field Observation Report	<ul style="list-style-type: none"> <li>• Designer</li> <li>• Special Inspector</li> <li>• Contractor</li> <li>• Included in SI Monthly Report</li> </ul>

<sup>1</sup> Actual distribution may vary due to contractual requirements and/or as agreed to in the pre-construction meeting.

**TABLE 8.2 – DISTRIBUTION REQUIREMENTS FOR MONTHLY AND FINAL REPORTS**

<b>SUBMITTAL</b>	<b>SCHEDULE</b>	<b>DISTRIBUTION</b>
Monthly Report	Monthly	<ul style="list-style-type: none"> <li>• SCO</li> <li>• Owner</li> <li>• SER</li> <li>• Designer</li> <li>• Contractor</li> </ul>
Final Report	Upon completion of all work requiring Special Inspections and resolution of all discrepancies.	<ul style="list-style-type: none"> <li>• SCO</li> <li>• Owner</li> <li>• SER</li> <li>• Designer</li> <li>• Contractor</li> </ul>

**TABLE 8.3**  
**SUGGESTED CONTENTS**  
**FOR**  
**MONTHLY REPORT OF SPECIAL INSPECTIONS**

1. Executive Summary
2. Statement of Special Inspections
3. Daily Reports
4. Discrepancy Notices
5. Log of Discrepancies and Corrections
6. ITL Reports
7. SER Reports
8. Supportive Documents
  - a. Photos
  - b. Drawings / Sketches
9. Checklist of Certification Requirements

**TABLE 8.4**  
**SUGGESTED CONTENTS**  
**FOR**  
**FINAL REPORT OF SPECIAL INSPECTIONS**

1. Executive Summary
2. Statement of Special Inspections
3. Completed Forms – Final Report of Special Inspections
4. Completed Forms – Final Report: Agent of Special Inspector
5. Final Material Certification Checklist
6. Final Log of Discrepancy and Correction

## **CHAPTER 9 DEVIATIONS FROM NCSBC CHAPTER 17**

Code Section 1704.1 grants the Building Official (in this case, the State Construction Office) discretion in the implementation of Special Inspections as prescribed in Section 1704. Exercising that discretion, the SCO has determined that several deviations from, and additions to, Section 1704 are warranted.

### **1. Definition of “Approved Fabricator”, Section 1702.1:**

Substitute the following definition: “An established and qualified person, firm, or corporation maintaining current certification by a nationally recognized industry organization such as AISC, PCI, etc.”

The Building Official (the SCO) does not administer or maintain a list of approved fabricators.

### **2. Inspection of Concrete, Table 1704.4, Item 5:**

“Sampling fresh concrete and performing slump, air content and determining the temperature of fresh concrete at the time of making specimens for strength tests.”

Deviation: If ITL personnel preparing the strength test specimens meet the related qualification requirements of this Guidelines’ Chapter 5, then the slump, air content, and temperature tests may be performed by the ITL without observation by the SI.

### **3. Inspection of Masonry, Table 1704.5.1, Item 5 and Table 1704.5.3, Item 3:**

”Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.”

Deviation: If ITL personnel, preparing the specimens and/or prisms, meet the related qualification requirements of this Guidelines’ Chapter 5, then oversight by the SI is not required.

### **4. Soils, Section 1704.7:**

Change “approved soils report” and “approved report” to “contract documents”.

## **5. Qualifications**

The Qualifications of Special Inspectors contained in Chapter 5 of this manual are the minimum requirements for Special Inspectors on projects where the North Carolina State Construction Office is the designated Building Official.



# APPENDIX A DEFINITIONS AND ABBREVIATIONS

## DEFINITIONS

### 1. CONTINUOUS INSPECTION

The definition of continuous inspection shall be specific to material and inspection as outlined below.

#### Steel

**Steel Table 1704.3, Item 2:** This item is well addressed by referenced Section 1704.3.3.

**Steel Table 1704.3, Item 5:** 100% of cited welds are to be inspected. A single inspector may observe (handling of electrodes, general welding practices, etc.) multiple welders, provided that the inspector can move freely from one welding site to another on a regular and timely basis during each work day. Testing (ultrasonic testing, etc.) shall be performed at the frequency prescribed in the project specifications.

#### Concrete

**Concrete Table 1704.4, Item 3:** 100% of cited bolts shall be observed before placement of concrete. During placement of concrete, a single inspector may monitor concrete placement at several locations if the inspector can move freely from one placement site to another on a regular and timely basis during each work day.

**Concrete Table 1704.4, Item 5:** Perform slump, air content, and temperature tests whenever strength test specimens are taken (at whatever frequency required by the contract documents). If ITL personnel, preparing the strength test specimens, meet the related qualification requirements of the SCO Special Inspections Guidelines, then the slump, air content, and temperature tests may be performed by the ITL without observation by the SI.

**Concrete Table 1704.4, Item 6:** During placement of concrete or shotcrete, a single inspector may monitor concrete placement at several locations if the inspector can move freely from one placement site to another on a regular and timely basis during each work day.

**Concrete Table 1704.4, Item 8:** Inspector must view tensioning of 100% prestressing tendons. The inspector must view grouting of 100% prestressing tendons that are part of the seismic force resisting system.

#### Masonry Level 1

**Masonry Level 1 Table 1704.5.1, Item 2d:** 100% of cited welds are to be inspected. A single inspector may observe (handling of electrodes, general

welding practices, etc.) multiple welders, provided that the inspector can move freely from one welding site to another on a regular and timely basis during each work day. Testing (ultrasonic testing, etc.) shall be performed at the frequency prescribed in the project specifications.

**Masonry Level 1 Table 1704.5.1, Item 4:** During placement of grout, a single inspector may monitor grout placement at several locations if the inspector can move freely from one placement site to another on a regular and timely basis during each work day. Placement of non-structural grout, such as ordinary core fill below grade in foundation walls, may be inspected periodically.

**Masonry Level 1 Table 1704.5.1, Item 5:** Observe preparation of 100% of specimens and/or prisms whenever such specimens and/or prisms are prepared (at whatever frequency required by the contract documents). If ITL personnel, preparing the specimens and/or prisms, meet the related qualification requirements of the SCO Special Inspections Guidelines, then oversight by the SI is not required.

## **Masonry Level 2**

**Masonry Level 2 Table 1704.5.2, Item 1d:** Inspect 100% of grout spaces prior to placement of grout. Grout spaces that do not contain reinforcing, such as ordinary core fill below grade in foundation walls, may be inspected periodically.

**Masonry Level 2 Table 1704.5.2, Item 1e:** During placement of grout, a single inspector may monitor grout placement at several locations if the inspector can move freely from one placement site to another on a regular and timely basis during each work day. Placement of non-structural grout, such as ordinary core fill below grade in foundation walls, may be inspected periodically.

**Masonry Level 2 Table 1704.5.2, Item 2b:** 100% of structural anchorages shall be inspected.

**Masonry Level 2 Table 1704.5.2, Item 2d:** 100% of cited welds are to be inspected. A single inspector may observe (handling of electrodes, general welding practices, etc.) multiple welders, provided that the inspector can move freely from one welding site to another on a regular and timely basis during each work day. Testing (ultrasonic testing, etc.) shall be performed at the frequency prescribed in the project specifications.

**Masonry Level 2 Table 1704.5.2, Item 3:** Observe preparation of 100% of specimens and/or prisms whenever such specimens and/or prisms are prepared (at whatever frequency required by the contract documents). If ITL personnel, preparing the specimens and/or prisms, meet the related qualification requirements of the SCO Special Inspections Guidelines, then oversight by the SI is not required.

## **2. PERIODIC INSPECTION**

Periodic is determined by the SI. The SI must inspect regularly to ensure the construction materials and methods are in conformance with contract documents. Periodic observations must be sufficient for the SI to issue the final report.

The SER shall provide periodic inspections as outlined in the State Construction Manual, a minimum of once per week.

## **3. SIMPLE DEFICIENCIES**

Indisputable items such as quantities of reinforcing bars in place while complex deficiencies require engineering judgment for resolution.

## **4. APPROVED FABRICATOR**

An established and qualified person, firm, or corporation maintaining current certification by a nationally recognized industry organization such as AISC, PCI, etc.

## **ABBREVIATIONS**

ACI	American Concrete Institute
AISC	American Institute of Steel Construction
AWCI	Association of the Wall and Ceiling Industries
AWS	American Welding Society
CASE	Council of American Structural Engineers
EI	Engineering Intern
GIT	Geologist in Training
IBC	International Building Code
ICC	International Code Council
ITL	Independent Testing Lab
NCSBC	North Carolina State Building Code
NICET	National Institute for Certification in Engineering Technologies
PCI	Precast Concrete Institute
SCO	State Construction Office
SER	Structural Engineer of Record
SI	Special Inspector
SSI	Statement of Special Inspections

## **APPENDIX C RESOURCES**

### **American Concrete Institute (ACI)**

38800 Country Club Drive  
Farmington Hills, Michigan 48331 USA  
Phone: 248-848-3700  
Fax: 248-848-3701  
<http://www.aci-int.org>

### **American Council of Engineering Companies (ACEC)**

1015 15<sup>th</sup> Street, 8<sup>th</sup> floor  
N.W. Washington D.C., 20005-2605  
Phone: 202-347-7474  
Fax: 202-898-0068  
<http://www.acec.org>

### **American Council of Engineering Companies of North Carolina (ACEC/NC)**

3724 National Drive, Suite 111  
Raleigh, NC 27612  
Phone: 919-781-7934  
Fax: 919-781-7319  
<http://www.acecnc.org>

### **American Institute of Architects of North Carolina (AIA/NC)**

115 West Morgan Street  
Raleigh, NC 27601  
Phone: 919-833-6656  
Fax: 919-833-2015  
<http://www.aianc.org>

### **American Institute of Steel Construction (AISC)**

1 East Wacker Drive, Suite 3100  
Chicago, IL 60601-2001  
Phone: 312-670-2400  
Fax: 312-670-5403  
<http://www.aisc.org>

### **American Welding Society (AWS)**

550 N.W. LeJeune Road  
Miami, Florida 33126  
Phone: 800-443-9353  
<http://www.aws.org>

**Association of General Contractors of North Carolina (AGC/NC)**

1100 Euclid Avenue  
Charlotte, NC 28203  
Phone: 704-372-1450  
Fax: 704-332-5032

<http://www.cagc.org/>

**Council of American Structural Engineers (CASE)**

1015 15th Street, N.W.  
Washington DC 20005  
Phone: 202-347-7474  
Fax: 202-898-0068  
<http://www.acec.org/about/case.cfm>

**International Code Council (ICC)**

5203 Leesburg Pike, Suite 600  
Falls Church, VA 22041

Phone: 703-931-4533  
Fax: 703-379-1546

<http://www.iccsafe.org>

**National Institute for Certification in Engineering Technologies (NICET)**

1420 King Street  
Alexandria, VA 22314-2794  
Phone: 1-888-IS-NICET

<http://www.nicet.org>

**North Carolina State Construction Office (NCSCO)**

Suite 450  
301 N. Wilmington Street  
Raleigh, NC 27603  
Phone: 919-807-4100  
Fax: 919-807-4110  
<http://interscope2.doa.state.nc.us/>