Which Projects Require......

Special Inspections?

How to Determine the Scope of Special Inspections

Special Inspections (SI) are required by Chapter 17 of the North Carolina State Building Code (NCSBC). The basis of SI is to provide a certain level of quality control for selected structural systems and other safety related issues of the project.

Determining Scope

The Design Professional in Responsible Charge (DPIRC) is responsible for determining the Scope of Special Inspections. The Inspections Division has adopted the Scope of SI and the exceptions as set forth in Chapter 17 of the NCSBC. Based on the code sections and the specific project parameters, the DPIRC would complete the Statement of Special Inspections (SSI).

Submitting the Scope for Approval

For Commercial Plan Review, complete the SSI in addition to the SI check boxes on Appendix B, and reproduce on the plans. The Building Plans Examiner will review the document for compliance with Chapter 17 of the NCSBC and make any comments on the drawings if required. The DPIRC may find it helpful to work with the Structural Engineer of Record, and an approved Special Inspection Firm (SIF) when determining the scope of SI for their specific project.

Construction Scope Changes

Scope changes during construction must be brought to the attention of the Inspections Division and approved by the Building Inspector prior to implementation.

The Scope of Special Inspections and the Exceptions

The Scope of SI and the exceptions are set forth in Chapter 17 of the NCSBC. Please see all changes to scope listed in the following documents: SI Scope Change and SI Interim Scope.

Types of Special Inspections

- IT-01 Verification of Soils
- IT-02 Excavation and Filling
- IT-03 Piling and Drilled Piers
- IT-04 Modular Retaining Walls
- IT-05 Reinforced Concrete
- IT-06 Post Tension Slabs-on-Ground and Post-Tension Concrete
- IT-07 Precast Concrete Erection
- IT-08 Prestressed Concrete
- IT-09 Inspection of Pre-Cast Concrete Fabricators
- IT-10 Inspection of Structural Steel Fabricators
- IT-11 Structural Masonry
- IT-12 Welding
- IT-13 High-Strength Bolting and Steel Frame Inspection
- IT-14 Sprayed Fire-Resistant Materials
- IT-15 Exterior Insulation and Finish System (EIFS)
- IT-16 Seismic Resistance
- IT-17 Smoke Control
- IT-18 Detention Basin
- IT-19 Special Cases

The Special Inspections Process

Step 1

Design Professional in Responsible Charge (DPIRC) determines the project specific SI scope and includes it on the contract document submission for commercial plan review. The scope of SI is set forth in the NC State Building Code (NCSBC) Chapter 17. The commercial plans reviewer reviews the project specific SI scope and either concurs or requests revisions. After all revisions are made, the plans are approved.

Step 2

Upon payment for permit work may begin.

Step 3

During construction, the Special Inspections Firm (SIF) will visit the site at appropriate intervals to perform the tasks outlined in the Statement of Special Inspections (SSI). The SIF will complete documents which will include the Daily Logs, Test Results, Non-Conforming Work Log, and other SI documents as required. The Designated Special Inspector (DSI) will review these documents, sign and seal them as required, and submit them to the Building Inspector. In the event of Non-Conforming Work, the DSI will follow the Non-Conforming Work Procedure. If structural members are being fabricated off site, the Special Inspections Firm (SIF) shall verify that the Fabricator conforms to the requirements set forth in the NCSBC Section 1704.2.2. At the conclusion of the Fabricator's work, the Fabricator shall submit a Fabricator's Certificate of Compliance to the DSI.

Step 4

At the conclusion of the construction process, any remaining SI documents shall be submitted to the Building Inspector. Each DSI will review the project and complete a Final Report for each type of SI work performed. The DSI shall sign and seal the Final Report and send it to the Building Inspector and the DPIRC. After all Final Reports are received, the DPIRC will review all the Final Reports, the Statement of Special Inspections (SSI), complete the DPIRC Letter, and submit it to the Building Inspector. The Certificate of Completion or the Certificate of Occupancy will be issued only after the DPIRC Letter is received and found to be in compliance by the Department.

Special Inspections Scope

NC Building Code (1704 Special Inspections)

1704.1 General.

Where application is made for construction as described in this section, the owner or the registered design professional in responsible charge acting as the owner's agent shall employ one or more special inspectors to provide inspections during construction on the types of work listed under Section 1704 per Section 1704.1.2. The special inspector shall be a person who shall demonstrate competence, to the satisfaction of the building official, for inspection of the particular type of construction or operation requiring special inspection. These inspections are in addition to the inspections specified in the *North Carolina Administrative Code and Policies*.

1704.1.1 Building permit requirement. The permit applicant shall submit a statement of special inspections prepared by the registered design professional in responsible charge in accordance with Section 106.1 as a condition for permit issuance. This statement shall include a complete list of materials and work requiring special inspections by this section, the inspections to be performed and a list of the individuals, approved agencies or firms intended to be retained for conducting such inspections.

1704.1.2 Special Inspections requirement.

Special inspections per Section 1704 are required for building, building components or other structures per the following:

- 1. Buildings or other structures listed in Table 1604.5 in category II if:
 - a. Building height exceeds 45 feet or three stories, or
 - b. The building is an Underground building per 405.1;
 - 2. Buildings or other structures listed in table 1604.5 in categories III or IV;
 - 3. Piles, piers and special foundations;
 - 4. Retaining walls exceeding 5 feet height (See Section 1806);
 - 5. Smoke control and smoke exhaust systems;
 - 6. Sprayed fire-resistant materials; or
 - 7. Special case described in 1704.13.

1704.1.3 Report requirement. Special inspectors shall keep records of inspections. The special inspector shall furnish inspection reports to the building official, and to the registered design professional in responsible charge. Reports shall indicate that work inspected was done in conformance to approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the building official and to the registered design professional in responsible charge prior to the completion of that phase of the work. A final report of inspections documenting required special inspections and correction of any discrepancies noted in the inspection shall be submitted periodically at a frequency agreed upon by the permit applicant and the building official prior to the start of work.

Statement of Special Inspections

Statement Date:				
Project Name:				
Building Permit Number: Project Address:				
Design Professional in Responsi	ble Charge (I	OPIRC):		
The following information is being provisions of the North Carolina Stanspections (SSI) required for this	submitted in a	ccordance with the		<u>al</u>
This completed form is required to Special Inspection Firms (SIF) and type shall be attached to this form.				
This and all subsequent reports, log submitted to the Building Inspector documents that are prepared by Au Designated Special Inspectors (DSI inspector. The DSI will notify the negate the result of any information	within 10 bus thorized Special I) are valid and Department up	iness days of the event in the land inspectors (ASI) at are permitted to be son the discovery of	ent documented. Or and signed/sealed by sent to the Building information that wo	nly '
The DSI is responsible for verifying and submitting it. The DSI is also document. The DSI is responsible focurse of the project, as failure to a document. At the conclusion of earlinal Report and e-mail it to the Buthe DPIRC Letter at the conclusion	responsible for for verifying al naintain curren ch individual Suilding Inspecto	verifying each docu l ASIs maintain curr t certifications may pecial Inspection typer. The DPIRC is re	ument is the correct rent certifications du result in a voided pe, the DSI will con	ring th
The Special Inspection program ou entity of any contractual duties, inc Contractor is solely responsible for adhere to the SI program as outline Department.	luding quality construction n	control, quality assuneans, methods, and	rance, or safety. The job site safety. Fail	ne lure to
Respectfully submitted, Γhe Design Professional in Respon	sible Charge,			
Гуре or Print Name				
Signature	Date	Lie	ensed Professional	Seal



City of Greenville

North Carolina
P.O. Box 7207 - Greenville, NC 27835-7207

Pro	ject Na	nme:			=					
		 vate:		Permit #: Building Address:						
Ins	tructio	ons for completing the Sc	hedul	e of S	Spec	ial Ins	spections F	<u>Form</u>		
The	 Instructions for completing the Schedule of Special Inspections Form Indicate the Inspection Type (IT#) required for this project per NCSBC Section 1704. Indicate whether Special Inspections are continuous, periodic or both, by checking the appropriate box. Insure the scope meets NCSBC Section 1704 and other applicable standards for each Inspection Type. The construction divisions which require inspections for this project are as follows:									
СНЕ	ECK IF UIRED	INSPECTION TASK (Standard & Code Reference)	CONTIN INSPECT			RIODIC ECTIONS	SPECIAL INSPECTIONS FIRM	NOTES & SCOPE		
	Verifica	tion of Soils, 1704.7 & Chapter 18 NCS	SBC							
IT-	2 EXC	AVATION AND FILLING								
_	ECK IF UIRED	INSPECTION TASK (Standard & Code Reference)	CONTIN INSPECT			RIODIC ECTIONS	SPECIAL INSPECTIONS FIRM	NOTES & SCOPE		
	Excavat 3304	ion and Filing, NCSBC Section 1704.7	and							

IT-	3 PILII	NG AND DRILLED PIERS	S								
	ECK IF OUIRED	INSPECTION TASK (Standard & Code Reference)	CONTIN INSPEC			RIODIC ECTIONS	SPECIAL INSPECTIONS FIRM	NOTES & SCOPE			
		nd Drilled Piers, NCSBC Section 1704 4 and 1807-11	.8-9,								
IT-	4 MOD	ULAR RETAINING WAI	LLS								
_	ECK IF OUIRED	INSPECTION TASK (Standard & Code Reference)	CONTIN INSPEC			RIODIC ECTIONS	SPECIAL INSPECTIONS FIRM	NOTES & SCOPE			
	Modular 1704.13	r Retaining Walls, NCSBC Section 161	0 and								
T	z DEN	TOD CED CONCRETE									
		FORCED CONCRETE					CDECK I				
_	ECK IF OUIRED	INSPECTION TASK (Standard & Code Reference)	CONTIN INSPEC			RIODIC ECTIONS	SPECIAL INSPECTIONS FIRM	NOTES & SCOPE			
	tendons,	on of reinforcing steel, including pretes, and placements. ACI 318:3.5, 7.1-7.7 1907.7, 1914.4									
	with Tal	on of reinforcing steel welding in according 1704.3, Item 5B. AWS D1.4, ACU 2, 1903.5.2	dance								
	during p	bolts to be installed in concrete prior to									
		en increased. 1912.5	loads								
	5.2-5.4, Samplin content :	en increased. 1912.5 Ing use of required design mix. ACI 318 1904, 1905.2, 1905.4, 1914.2, 1914.3 Ing fresh concrete and performing slump and determining the temperature of frest at the time of making specimens for st STM C 172, ASTMC 31, ACI 318: 5.6	: Ch. 4,								
	5.2-5.4, Samplin content concrete tests. AS 1905.6, Inspection proper a	en increased. 1912.5 Ing use of required design mix. ACI 318 1904, 1905.2, 1905.4, 1914.2, 1914.3 Ing fresh concrete and performing slump and determining the temperature of frest at the time of making specimens for st STM C 172, ASTMC 31, ACI 318: 5.6	: Ch. 4, , air sh trength , 5.8,								

Inspection of prestressed concrete: (A) Application of prestressing forces. (B) Grouting of bonded

prestressing tendons in the seismic-force-resisting system. ACI 318: 18.18, ACI 318: 18.16.4 Erection of precast concrete members. ACI 318: Ch.

	stressing to remov	tion of in-situ concrete strength, prior to g of tendons in positioned concrete, add val of shores and forms from beams and al slabs. ACI 318: 6.2, 1906.2	l prior					
IT-	6 POST	Γ TENSION SLAB-ON-GR	ROUNI) AN	D PO	OST T	ENSION C	ONCRETE
	ECK IF UIRED	INSPECTION TASK (Standard & Code Reference)	CONTIN INSPECT			CODIC COTIONS	SPECIAL INSPECTIONS FIRM	NOTES & SCOPE
		tressed concrete design in construction nce with ACI 318.99 (NCSBC), 1704.4						
TT /	7 DDE/	CAST CONCRETE EREC	TION					
			IION				SPECIAL	
CHE		CK IF INSPECTION TASK CONTINUOUS (Standard & Code Reference) INSPECTIONS		UOUS	PERIODIC INSPECTION			
	UIRED	(Standard & Code Reference)		TIONS	INSPE	CCTIONS	INSPECTIONS FIRM	NOTES & SCOPE
		(Standard & Code Reference) Concrete Erection, NCSBC Table 1704	INSPECT	TIONS	INSPE	CCTIONS	INSPECTIONS	NOTES & SCOPE
REQ	Precast (9)		INSPECT			ECTIONS	INSPECTIONS	NOTES & SCOPE
REQ	Precast (9)	Concrete Erection, NCSBC Table 1704	INSPECT			CCTIONS	INSPECTIONS	NOTES & SCOPE
REQ	Precast (9)	Concrete Erection, NCSBC Table 1704	INSPECT			CCTIONS	INSPECTIONS	NOTES & SCOPE
REQ	Precast 9 Precast certified	Concrete Erection, NCSBC Table 1704 concrete fabricated in a plant, which is l. NCSBC 1704.2	INSPECT			CCTIONS	INSPECTIONS	NOTES & SCOPE
IT-:	Precast 9 Precast certified	Concrete Erection, NCSBC Table 1704	INSPECT	Uous	PER	CIONS	INSPECTIONS	NOTES & SCOPE
IT-:	Precast of precast of certified services and precast of certified services and precast of precast o	Concrete Erection, NCSBC Table 1704 concrete fabricated in a plant, which is 1. NCSBC 1704.2 STRESSED CONCRETE INSPECTION TASK (Standard & Code Reference) tressed concrete design and constructio	.4, Item CONTIN INSPECT	Uous	PER	NIODIC	SPECIAL INSPECTIONS	
IT-:	Precast of precast of certified services and precast of certified services and precast of precast o	Concrete Erection, NCSBC Table 1704 concrete fabricated in a plant, which is I. NCSBC 1704.2 STRESSED CONCRETE INSPECTION TASK (Standard & Code Reference)	.4, Item CONTIN INSPECT	Uous rions	PER	NIODIC	SPECIAL INSPECTIONS	
IT-3	Precast of precast of certified services and precast of certified services and precast of precast o	Concrete Erection, NCSBC Table 1704 concrete fabricated in a plant, which is 1. NCSBC 1704.2 STRESSED CONCRETE INSPECTION TASK (Standard & Code Reference) tressed concrete design and constructio	.4, Item CONTIN INSPECT	UOUS FIONS	PERINSPE	NIODIC	SPECIAL INSPECTIONS	

IT-9 INSPECTION OF PRE-CAST CONCRETE FABRICATORS

_	ECK IF UIRED	INSPECTION TASK (Standard & Code Reference)	CONTINU INSPECT		AIODIC ECTIONS	SPECIAL INSPECTIONS FIRM	NOTES & SCOPE
	Inspection of fabricators to be in accordance with the requirements set forth in the NCSBC Sec. 1704.2						

IT-10 INSPECTION OF STRUCTURAL STEEL FABRICATORS

_	ECK IF UIRED	INSPECTION TASK (Standard & Code Reference)	CONTINUOUS INSPECTIONS				SPECIAL INSPECTIONS FIRM	NOTES & SCOPE
	AWSD1	inspections shall be in compliance wit .1. The base for welding for qualificat AWSD1.1. (NCSNC)						

IT-11 STRUCTURAL MASONRY

_	ECK IF UIRED	INSPECTION TASK (Standard & Code Reference)					SPECIAL INSPECTIONS FIRM	NOTES & SCOPE
	be verifi site prep (C) Loca	onry construction begins, the following ed to ensure compliance: (A) Proportionared mortar. (B) Construction of mortation of reinforcement and connectors. Int. 3.3B, Art. 3.4	ns of r joints.					
	location location anchora or other type of 1 bars. (E) (temperabove 99 2104.4,	pection program shall verify: (A) Size a of structural elements. (B) Type, size a of anchors, including other details of ge of masonry to structural members, fr construction. (C) Specified size, grade einforcement. (D) Welding of reinforci Protection of masonry during weather ature below 40° F) or hot weather (temp)° F). Sec. 2108.9.2.11, Item 2, Sec. 210 ACI Sec. 1.15.4, 2.1.2, Sec. 1.12, Sec 20, ACI 3.3G, Art. 2.4, 3.4, Art.1.8	rames and ng perature 04.3,					

	ensure c Placeme Proporti	grouting, the following shall be verified compliance: (A) Grout space is clean. (Eart of reinforcement and connectors. (C ons of site-prepared grout. (D) Constructions. Sec. 1.12, Art. 3.2D, Art. 3.4, Art B	B)) ction of								
		Grout placement shall be verified to ensure compliance with code and construction provisions. Art. 3.5									
	Preparation of any required group specimens, mortar specimens and/or prisms shall be observed. Sec. 2105.3, 2105.4, 2105.5, Art. 1.4										
	construc	nce with required inspection provisionation documents and the approved submoverified. Art. 1.5	s of the iittals								
	IT-12 WELDING CHECK IE INSPECTION TASK GOVERNOUS SPECIAL SPECIAL										
	ECK IF UIRED	INSPECTION TASK (Standard & Code Reference)	CONTIN			CODIC COTIONS	INSPECTIONS FIRM	NOTES & SCOPE			
	AWSD1	g inspections shall be in compliance wit .1. The base for welding for qualificat AWSD1.1. (NCSNC)	h ions								
IT-1	13 HIG	H-STRENGTH BOLTING	G AND	STE	EL I	FRAM	E INSPEC'	ΓΙΟΝ			
	ECK IF UIRED	INSPECTION TASK (Standard & Code Reference)	CONTIN INSPECT			RIODIC ECTIONS	SPECIAL INSPECTIONS FIRM	NOTES & SCOPE			
	win acco	ion of high strength bolts shall be inspected ordance with AISC specifications (ASTMA 490) Bolts must be in accordant SD or AISC LRFD	ГМА								
	Material verification of high-strength bolts, nuts and washers. (A) Identification markings to conform to										
		on of high-strength bolting: Bearing-typions. AISC LRFD Sec. M2.5, 1704.3.3	pe .								
		on of high-strength bolting: Slip-critica ions. AISC LRFD Sec. M2.5, 1704.3.3	1					_			

	Identific standard documen	verification of structural steel: (A) ation markings to conform to ASTM is specified in the approved construction ints. (B) Manufacturer's certified mill te. ASTM A 6 or ASTM A 568, 1708.4						
	Identific specifica (B) Man	Material verification of weld filler materials. (A) Identification markings to conform to AWS specification in the approved construction documents. (B) Manufacturer's certificate of compliance required. AISC, ASD, Sec. A3.6, AISC LRFD, Sec. A3.5						
	Inspection of welding: (A) Structural steel. (1) Complete and partial penetration groove welds. (2) Multi-pass filet welds. (3) Single-pass filet welds . 5/16" (7.9 mm). (4) Floor and deck welds. (B) Reinforcing steel. (1) Verification of weldability of reinforcing steel other than ASTM A 706. (2) Reinforcing steel-resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special reinforced concrete shear walls, and shear reinforcement. (3) Shear reinforcement. (4) Other reinforcing steel. AWS D1.1, AWS D1.3, AWS D1.4, ACI 318: 3.5.2, 1704.3.1, 1903.5.2							
	with app	on of steel frame joint details for completoroved construction documents: (A) Debracing and stiffening. (B) Member location of joint details at each connection	tails ations.					
IT-	14 SPR	AYED FIRE-RESISTANT	MAT	ERI	ALS			
	ECK IF QUIRED	INSPECTION TASK (Standard & Code Reference)	CONTIN INSPECT			RIODIC ECTIONS	SPECIAL INSPECTIONS FIRM	NOTES & SCOPE
	Spray - a	applied fire resistant materials, NCSBC						
IT-	15 EXT	TERIOR INSULATION AN	ND FIN	NISH	SYS	STEM	(EIFS)	
	ECK IF UIRED	INSPECTION TASK (Standard & Code Reference)	CONTIN INSPECT			RIODIC ECTIONS	SPECIAL INSPECTIONS FIRM	NOTES & SCOPE
	EIFS, N	CSBC 1704.5						
	i			П	П			

IT-16 SEISMIC RESISTANCE

IT-16 SEIS		1					
CHECK IF REQUIRED	INSPECTION TASK (Standard & Code Reference)	CONTIN INSPECT			RIODIC ECTIONS	SPECIAL INSPECTIONS FIRM	NOTES & SCOPE
A qualit	y assurance plan with seismic requirem provided in accordance with Section 17	ents 705.					
IT-17 SM(OKE CONTROL						
CHECK IF REQUIRED	INSPECTION TASK (Standard & Code Reference)	CONTIN			RIODIC ECTIONS	SPECIAL INSPECTIONS FIRM	NOTES & SCOPE
Inspecti	on of smoke control, NCSBC 1704.14.2	2					
			_				
IT-18 DET	TENTION BASIN INSPECTION TASK (Standard & Code Reference)	CONTIN	uous	PER	RIODIC	SPECIAL INSPECTIONS FIRM	NOTES & SCOPE
IT-18 DET	INSPECTION TASK		uous	PER		INSPECTIONS	NOTES & SCOPE
IT-18 DET	INSPECTION TASK (Standard & Code Reference)		UOUS	PER INSPF		INSPECTIONS	NOTES & SCOPE
IT-18 DET CHECK IF REQUIRED	INSPECTION TASK (Standard & Code Reference)		UOUS FIONS	PER INSPE		INSPECTIONS	NOTES & SCOPE
IT-18 DET CHECK IF REQUIRED Detention	INSPECTION TASK (Standard & Code Reference)		UOUS FIONS	PER INSPE		INSPECTIONS	NOTES & SCOPE
IT-18 DET CHECK IF REQUIRED Detentio	INSPECTION TASK (Standard & Code Reference) on basin, NCSBC 1704.13		UOUS ITONS	PER INSPE		INSPECTIONS	NOTES & SCOPE NOTES & SCOPE
IT-18 DET CHECK IF REQUIRED Detention	INSPECTION TASK (Standard & Code Reference) on basin, NCSBC 1704.13 CCIAL CASES INSPECTION TASK	CONTIN	UOUS ITONS	PER INSPE	RIODIC	SPECIAL INSPECTIONS	



City of Greenville

North Carolina

P.O. Box 7207 - Greenville, NC 27835-7207

Date: _____

Special Inspection Final Report

Project Name: _____

Permit Number: Address:	
Design Professional in Responsible Charge (DPIRC)	_
Designated Special Inspector (DSI)	
List all Special types included in this report:	-
n my professional opinion, to the best of my information, knowledge and belief, t inspections required for this project, and itemized in the Statement of Special Insp submitted for permit, have been performed, and all discovered discrepancies have and resolved.	ections
Respectfully submitted, Designated Special Inspector	
Special Inspection Firm Name:	
Print name of DSI:	
Signature of DSI: DSI- Licensed Profess	sional Seal