MECKLENBURG COUNTY CodeEnforcement

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SCHEDULE OF SPECIAL INSPECTIONS

Code Enforcement Project No:	**Permit No:**
Project Name:	**Owner:**
Project Address:	**Date:**
RDPIRC:	
SI FIRM:	

Instructions for completing the Schedule of Special Inspections Form

1. Indicate the Inspection Type (IT-#) required for this project per NCBC sections 1704 and 1705.
2. Indicate whether Special Inspections are Continuous (C), Periodic (P) or both by checking the appropriate box.
3. Insure the scope meets NCBC section 1704 and 1705 as well as other applicable standards for each Inspection Type.

Note: *This form and the Statement of Special Inspections* ***must be included on a plan sheet*** *as part of the plan submittal for this project.*

The following Special Inspections are required for this project: *(**C**= continuous, **P**=periodic)*

IT-1 SPECIAL CASES (Refer to NCBC Section 1705.1.1)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
☐	Construction materials and systems that are alternatives to materials and systems prescribed by the 2018 NCBC	☐	☐	NCBC 1705.1.1, #1	
☐	Unusual design applications of materials described in the 2018 NCBC	☐	☐	NCBC 1705.1.1, #2	
☐	Materials and systems required to be installed in accordance with additional manufacturer's instructions that prescribe requirements not contained in this code or in standards referenced by this code			NCBC 1705.1.1, #3	
☐	Special Events (as decided / required by Code Enforcement)	☐	☐	Per Mecklenburg County Policy	
☐	Retaining Walls	☐	☐		

IT-2 STEEL CONSTRUCTION (Refer to Section 1705.2 and the Exception; Table 1705.2.3)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
☐	Structural Steel	☐	☐	AISC 360	NCBC 1705.2.1 & Exception
☐	Cold-formed Steel Deck	☐	☐	SDI QA/QC	NCBC 1705.2.2
☐	Open-web Steel Joists and Joist Girders	☐	☐		NCBC 1705.2.3 & Table
	1. Installation of open-web steel joists and joist girders				
☐	a. End connections – welding or bolted		☐	SJI specifications listed in Section 2207.1	
	b. Bridging – horizontal or diagonal				
☐	1. Standard bridging		☐	SJI specifications listed in Section 2207.1	
☐	2. Bridging that differs from the SJI specifications listed in Section 2207.1		☐		
☐	Cold-formed steel trusses spanning 60 feet or greater		☐		NCBC 1705.2.4

IT-3 CONCRETE CONSTRUCTION (Refer to NCBC Section & Table1705.3; Ch. 19)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
☐	1. Inspect reinforcement, including pre-stressing tendons and verify placement	☐	☐	ACI 318 Ch 20, 25.2, 25.3, 26.6.1 – 26.76.3; & NCBC 1908.4	
☐	2. Reinforcing Bar welding: a. Verify weldability of reinforcing bars other than ASTM A706; b. Inspect single-pass fillet welds, maximum 5/16" ; and c. Inspect all other welds.	☐	☐	AWS D1.4; ACI 318:26.6.4	
☐	3. Inspect anchors cast in concrete.		☐	ACI 318: 17.8.2	
☐	4. Inspect anchors post-installed in hardened concrete members a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads b. Mechanical anchors and adhesive anchors not defined in 4.a.	☐	☐	ACI 318: 17.8.2.4 ACI 318: 17.8.2	

☐	5. Verify use of required design mix.		☐	ACI 318: Ch. 19, 26.4.3, 26.4.4, NCBC 1904.1, 1904.2. 1908.2, 1908.3	
☐	6. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete	☐		ASTM C 172; ASTM C 31; ACI 318: 26.4, 26.12	
☐	7. Inspect concrete and shotcrete placement for proper application techniques	☐		ACI 318: 26.5, NCBC 1908.6, 1908.7. 1908.8	
☐	8. Verify maintenance of specified curing temperature and techniques		☐	ACI 318: 26.5.3-26.5.5 NCBC 1908.9	
☐	9. Inspect of pre-stressed concrete for: a. Application of pre-stressing forces; and b. Grouting of bonded pre-stressing tendons	☐ ☐		ACI 318: 26.10	
☐	10. Inspect erection of precast concrete members		☐	ACI 318: Ch. 26.8	
☐	11. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs		☐	ACI 318: 26.11.2	
☐	12. Inspect formwork for shape, location and dimensions of the concrete members being formed		☐	ACI 318:26.11.1.2(b)	

IT-4 MASONRY (Refer to NCBC Section 1705.4)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
☐	Masonry Construction	☐	☐	TMS 402/ ACI 530/ ASCE 5 and TMS 602/ACI 530.1/ASCE 6,	See NCBC 1705.4 Exceptions
☐	Empirically designed masonry (per 2109), glass unit masonry (per 2110) or masonry veneer (per Ch 14) in Risk Category IV	☐	☐	TMS 402/ ACI 530/ ASCE 5, Level B Quality Assurance	

IT-5 WOOD (Refer to NCBC Section 1705.5)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
☐	Prefabricated wood structural elements and assemblies to be in accordance with	☐	☐	NCBC 1704.2.5	

	the requirements set forth in NCBC Section 1704.2.5				
☐	High Load Diaphragms	☐	☐	NCBC 1705.5.1 & 1704.2	
☐	Temp & permanent bracing on metal-plate-connected trusses spanning ≥60'	☐	☐	NCBC 1705.5.2	

IT-6 SOILS (Refer to NCBC Table 1705.6 & Section 1705.6)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
☐	1. Verify materials below shallow foundation are adequate to achieve the design bearing capacity		☐	NCBC 1705.6; geotechnical report & construction documents from RDPIRC	See NCBC 1705.6 exception
☐	2. Verify excavations are extended to proper depth and have reached proper material		☐	NCBC 1705.6; geotechnical report & construction documents from RDPIRC	
☐	3. Perform classification and testing of compacted fill materials		☐	NCBC 1705.6; geotechnical report & construction documents from RDPIRC	
☐	4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill	☐		NCBC 1705.6; geotechnical report & construction documents from RDPIRC	
☐	5. Prior to placement of compacted fill, inspect sub-grade and verify that site has been prepared properly		☐	NCBC 1705.6; geotechnical report & construction documents from RDPIRC	

IT-7 DRIVEN DEEP FOUNDATIONS (Refer to NCBC Section 1705.7)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
☐	1. Verify element materials sizes and lengths comply with the requirements	☐		NCBC 1705.7; geotechnical report & construction documents from RDPIRC	

☐	2. Determine capacities of test elements and conduct additional load tests as required.	☐		NCBC 1705.7; geotechnical report & construction documents from RDPIRC	
☐	3. Inspect driving operations and maintain complete and accurate records for each element	☐		NCBC 1705.7; geotechnical report & construction documents from RDPIRC	
☐	4. Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element	☐		NCBC 1705.7; geotechnical report & construction documents from RDPIRC	
☐	5. For steel elements, perform additional inspections in accordance with Section 1705.2			NCBC 1705.7; geotechnical report & construction documents from RDPIRC	
☐	6. For concrete elements and concrete-filled elements, perform tests and additional special inspections in accordance with Section 1705.2			NCBC 1705.7; geotechnical report & construction documents from RDPIRC	
☐	7. For specialty elements, perform additional inspections as determined by the registered design professional in responsible charge			NCBC 1705.7; geotechnical report & construction documents from RDPIRC	

IT 8 CAST-IN-PLACE DEEP FOUNDATIONS (Refer to NCBC Section 1705.8)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
☐	1. Inspect drilling operations and maintain complete and accurate records for each element	☐		NCBC 1705.8; geotechnical report & construction documents from RDPIRC	
☐	2. Verify placement locations and plumbness, confirm element diameters, bell diameters (if	☐		NCBC 1705.8; geotechnical report &	

	applicable), lengths, embedment into bedrock (if applicable) and adequate end-bearing strata capacity. Record concrete or grout volumes			construction documents from RDPIRC	
☐	3. For concrete elements, perform tests and additional special inspections in accordance with section 1705.3	☐		NCBC Section 1705.8; geotechnical report & construction documents from RDPIRC	

IT 9 HELICAL PILES (Refer to NCBC Sections 1705.9)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
☐	Inspect during installation. Record: a. Installation equipment used b. Pile dimensions c. Tip elevations d. Final depth e. Final installation torque f. Other pertinent installation data as req'd by RDPIRC	☐		NCBC Section 1705.9; geotechnical report & construction documents from RDPIRC	

IT 10 FABRICATED ITEMS (Refer to NCBC Sections 1705.10 & 1704.2.5)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
☐	Inspect during fabrication a. Structural, b. Load-bearing or c. Lateral load-resisting members or assemblies	☐	☐	NCBC Section 1705.10 or 1704.2.5.	SI are not required if the fabricator meets 1704.2.5, #1 or #2; or if the fabricator is approved per 1704.2.5.1

IT 11 WIND RESISTANCE (Refer to NCBC Sections 1705.11; 1705.11.1 – 1705.11.3; & 1609.3.1)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
	Only required in the following instances: 1. In wind Exposure Category B, where V_{asd} is ≥ 120 MPH (per 1609.3.1), or 2. In wind Exposure Category Cor D, where V_{asd} is ≥ 110 MPH (per 1609.3.1)				
☐	Structural Wood • Gluing elements of the main windforce-resisting system	☐		NCBC 1705.11.1	Not required for wood shear walls, shear panels and

	• Nailing, bolting, anchoring, etc of elements of the main windforce-resisting system		☐		diaphragms, including nailing, bolting, anchoring and other fastening to other elements of the MWR system, where the fastener spacing of the sheathing is > 4" oc
	Cold-formed steel light frame constr. • Welding operations of elements of the MWRS • Screw attachment, bolting, anchoring and other fastening of elements of the MWRS including shear walls, braces, diaphragms, collectors (drag struts) and hold-downs		☐ ☐	NCBC 1705.11.2	Not required for shear walls and diaphragms, where either of the following applies: **#1**. Sheathing is gypsum bd or fiberboard; **#2**. Sheathing is wood structural panel or steel sheets on one side of the shear wall, panel or diaphragm assembly and the fastener spacing of the sheathing is > 4"o.c.
☐ ☐	Wind-resisting components 1. Roof covering, roof deck and roof framing connections 2. Exterior wall covering and wall connections to roof and floor diaphragms and framing		☐ ☐	NCBC 1705.11.3	

IT-12 SEISMIC RESISTANCE (Refer to NCBC Sections 1705.12)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
	SI in sections 1705.12.1 – 1705.12.9 are not required for structures designed and constructed in accordance with one of the following: 1. Structure is light-frame construction, S_{DS} is not greater than 0.5; and building height is not greater than 35'. 2. SFRS of the structure is reinforced masonry or reinforced concrete, S_{DS} is not greater than 0.5; and building height is not greater than 25'.				
☐	Structural steel in the seismic force-resisting systems of buildings and structures assigned to SDC B, C, D, E or F	☐	☐	NCBC 1705.12.1.1; AISC 341	Not required in the SFRS of buildings or structures in SDC B or C not specifically detailed for seismic resistance, with

					response modification coefficient, R, ≤3
☐	Structural steel elements in the seismic force-resisting systems of buildings or structures assigned to SDC B, C, D, E or F other than those covered in Section 1705.12.1.1, including struts, chords and foundation elements	☐	☐	NCBC 1705.12.1.2; AISC 341	Not required in the SFRS of buildings and structures in SDC B or C with response modification coefficient, R, ≤3
☐ ☐	Structural Wood in the seismic force-resisting systems of structures assigned to SDC C, D, E or F 1. Field gluing operations of elements of seismic force-resisting system 2. Nailing, bolting, anchoring and other fastening of elements of the seismic force-resisting system	☐	☐	NCBC 1705.12.2	These SI are not required for wood shear walls, shear panels and diaphragms, including nailing, bolting, anchoring and other fastening to other elements of the SFRS when the fastener spacing of the sheathing is > 4" oc Includes wood shear walls, wood diaphragms, drag struts braces, panels & hold-down's.
☐ ☐	Cold-formed steel light frame construction in the SFRS of structures in SDC C, D, E, or F 1. Welding operations of elements of the SFRS 2. Screw attachment, bolting, anchoring, and other fastening of elements of the SFRS including shear walls, braces, diaphragms, collectors (drag struts) and hold-downs		☐ ☐	NCBC 1705.12.3	Not required for shear walls and diaphragms, including screw installation, bolting, anchoring and other fastening to components of the SFRS where either of the following applies: **#1**. Sheathing is gypsum bd or fiberboard; **#2**. Sheathing is wood structural panel or steel sheets on one side of the shear wall, panel or diaphragm assembly and the fastener spacing of the sheathing is > 4"o.c
☐	Designated seismic systems for structures assigned to Seismic Design Category C, D, E or F	☐	☐	ASCE 7, Section 13.2.2	

	Verify the label, anchorage and mounting conform to the certificate of compliance				
☐	Architectural components – erection and fastening of exterior cladding, interior and exterior nonbearing walls and interior and exterior veneer in structures assigned to Seismic Design Category D, E or F		☐	NCBC 1705.12.5	Not required for: #1. Exterior cladding, interior and exterior nonbearing walls and interior and exterior veneer ≤ 30' in height above grade or walking surface #2. Exterior cladding and interior and exterior veneer weighing 5 psf or less #3. Interior nonbearing walls weighing 15 psf or less
☐	Access floors – anchorage in structures assigned to Seismic Design Category D, E or F		☐	NCBC 1705.12.5.1	
☐ ☐ ☐ ☐ ☐	Plumbing, Mechanical and electrical components: Seismic Design Categories C, D, E or F: • Anchorage of electrical equipment for emergency and standby power • Installation and anchorage of piping systems for Hazardous materials and associated mechanical units • Installation and anchorage of ductwork for Hazardous materials • Installation and anchorage of vibration isolation systems where the required clearance is ≤ 1/4" between the equipment support frame and restraint Seismic Design Categories E or F: • Anchorage of other electrical equipment		☐ ☐ ☐ ☐ ☐	NCBC 1705.12.6, #1 NCBC 1705.12.6, #3 NCBC 1705.12.6, #4 NCBC 1705.12.6, #5 NCBC 1705.12.6, #2	
☐	Storage racks ≥ 8' in height in Seismic Design Categories D, E or F		☐	NCBC 1705.12.7	
☐	Seismic isolation systems in seismically isolated structures assigned to SDC B, C, D, E, or F		☐	NCBC 1705.12.8	
☐	Installation of cold-formed steel special bolted moment frames in the SFRS of structures assigned to SDC D, E, or F		☐	NCBC 1705.12.9	

IT 13 TESTING FOR SEISMIC RESISTANCE (Refer to Section 1705.13)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
☐	Structural Steel • Nondestructive testing for seismic resistance for SFRS for buildings assigned to SDC B, C, D, E or F	☐	☐	NCBC 1705.13.1 NCBC 1705.13.1.1 or AISC 341	Exception: SDC B or C buildings with a response modification coefficient ≤ 3
☐	Structural Steel Elements • Nondestructive testing for seismic resistance of structural steel elements in the SFRS of buildings and structures assigned to SDC B, C, D, E or F if not covered in 1705.13.1.1.	☐	☐	NCBC 1705.13.1.2 AISC 341	Exception: SDC B or C buildings with a response modification coefficient ≤ 3.
☐	Nonstructural Components for structures assigned to SDC B, C, D, E or F where the requirements of Section 13.2.1 of ASCE 7 for nonstructural components, supports or attachments are met by seismic qualification as specified in Item 2 therein, the RDPIRC shall specify on the approved construction documents the requirements for seismic qualification by analysis, testing or experience data.	☐	☐	NCBC 1705.13.2	
☐	Designated seismic systems for structures assigned to SDC C, D, E or F that are subject to the requirements of Section 13.2.2 of ASCE 7 for certification, the RDPIRC shall specify on the approved construction documents the requirements to be met by analysis, testing or experience data.	☐	☐	NCBC 1705.13.3	
☐	Seismic Isolation Systems in Seismically isolated structures assigned to SDC B, C, D, E, or F			NCBC 1705.13.4; ASCE 7, section 17.8	

IT-14 SPRAYED FIRE-RESISTANT MATERIALS (Refer to NCBC Sections 1705.14)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
	Sprayed fire-resistant materials				
☐	1. Floor, roof and wall assemblies	☐	☐	NCBC 1705.14.4.2 & ASTM E605	4/1000sf
☐	2. Cellular Decks	☐	☐	NCBC 1705.14.4.3	4 @12”x12”
☐	3. Fluted Decks	☐	☐	NCBC 1705.14.4.4	4 @12”x12”
☐	4. Structural members	☐	☐	NCBC 1705.14.4.5	25%
☐	5. Beams and Girders	☐	☐	NCBC 1705.14.4.6	9@12”
☐	6. Joists and Trusses	☐	☐	NCBC 1705.14.4.7	7@12”

☐	7. Wide-flanged columns	☐	☐	NCBC 1705.14.4.8	12@12”
☐	8. Hollow structural section and pipe columns	☐	☐	NCBC 1705.14.4.9	4@12”

IT 15 MASTIC AND INTUMESCENT FIRE-RESISTANT COATING 1705.15

Check if required	Inspection Task	C	P	Standard	Notes / Comments
☐	Mastic and Intumescent fire-resistant coating applied to structural elements and decks	☐	☐	NCBC 1705.15; AWCI 12-B	

IT-16 EXTERIOR INSULATION & FINISH SYSTEM (EIFS)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
☐	EIFS application	☐	☐		Not required for: 1. EIFS applications installed over a water-resistive barrier that drains to the exterior 2. EIFS applications installed over masonry or concrete walls
☐	Water-resistive barrier coating when installed over a sheathing substrate	☐	☐	ASTM E2570	

IT 17 FIRE-RESISTANT PENETRATIONS AND JOINTS (Refer to NCBC Sections 1705.17; 1705.17.1; & 1705.17.2)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
	Applies to all new high-rise buildings and all new buildings in Risk Category III or IV. Additions, Changes of Use, NCEBC Ch 14 evaluated buildings and Level 3 Alterations within existing high-rises and / or Risk Category III or IV buildings will also require these special inspections.				
☐ ☐ ☐	Inspection of tested and listed penetration firestop systems: a. Through penetrations: 1. Verify materials before installation 2. Verify against design (Cutsheet or EJ)	☐	☐	NCBC 1705.17.1; ASTM E2174-10ae1	

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	3. For **each type** of firestop, • Witness 10% of installations, or • Destructive testing on 2% of installations 4. Verify all firestops are installed b. Membrane penetrations: 1. Verify materials before installation 2. Verify against design (Cutsheet or EJ) 3. For **each type** of firestop, • Witness 10% of installations or • Destructive testing on 2% of installations 4. Verify all firestops are installed				10% of installations per floor or per area. Area = 1sf – 10,000 sf 2% of installations per floor or per area. Area = 1sf – 10,000 sf 10% of installations per floor or per area. Area = 1sf – 10,000 sf 2% of installations per floor or per area. Area = 1sf – 10,000 sf
☐ ☐ ☐ ☐	Installation of tested and listed fire-resistant joint systems: 1) Verify materials before installation 2) Verify against design (cutsheet or EJ) 3) For **each type** of joint system, • Witness installation of 5% min of total lineal feet of joint system being installed, or • Destructive testing, disassembly or visual inspection at the rate of at least 1 sample for every 500 lineal feet of the joint system	☐	☐	NCBC 1705.17.2; ASTM E2393-10a	

IT-18 SMOKE CONTROL (Refer to NCBC Section 1705.18)

Check if required	Inspection Task	C	P	Standard	Notes / Comments
☐	Inspection of smoke control system	☐	☐	NCBC 1705.18	