

SPECIAL INSPECTIONS NOTES

- SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE DEPARTMENT OF BUILDING SAFETY AND SHALL NOT BE CONSIDERED TO RELIEVE THE OWNER OR HIS AUTHORIZED AGENT FROM REQUESTING THE PERIODIC AND CALLED INSPECTIONS BY THE BUILDING CODE.
- OWNER OR OWNER'S AGENT SHALL EMPLOY AND PAY A QUALIFIED INDEPENDENT TESTING AGENCY TO PERFORM TESTS AND INSPECTIONS SPECIFIED IN INSPECTION TABLES ON THIS SHEET, AND THOSE REQUIRED BY AUTHORITIES HAVING JURISDICTION. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING INSPECTIONS AND TESTS.
- THE INSPECTOR(S) SHALL HAVE THE RELEVANT TRAINING & EXPERIENCE REQUIRED TO PERFORM THE NECESSARY INSPECTIONS. THE INSPECTOR SHALL WORK UNDER THE SUPERVISION OF AN ENGINEER LICENSED IN THE STATE OF JURISDICTION.
- THE GENERAL CONTRACTOR SHALL ENSURE THE WORK REMAINS ACCESSIBLE FOR INSPECTION UNTIL THE WORK HAS BEEN INSPECTED AND APPROVED.
- THE INSPECTOR(S) SHALL MAINTAIN RECORDS OF INSPECTIONS. COPIES OF THE RECORDS SHALL BE PROVIDED TO THE BUILDING OFFICIAL AND OWNER. IF WORK IS NOT PASSING INITIAL INSPECTION, THE INSPECTOR SHALL PROVIDE A REPORT TO THE STRUCTURAL ENGINEER OF RECORD, ARCHITECT AND GENERAL CONTRACTOR WITHIN 24 HOURS. THE WORK SHALL BE CORRECTED BY THE CONTRACTOR AND RE-INSPECTED PRIOR TO COVERING UP THE WORK. A REPORT INDICATING THE DISCREPANCIES HAVE BEEN CORRECTED SHALL BE FURNISHED TO ALL PARTIES BY THE INSPECTOR.
- THE SPECIAL INSPECTOR SHALL NOTIFY THE ENGINEER OF RECORD AND GENERAL CONTRACTOR IN WRITING WHEN ALL INSPECTIONS HAVE BEEN COMPLETED AND ANY DISCREPANCIES HAVE BEEN CORRECTED AND APPROVED.
- IN THESE TABLES, THE INSPECTION TASKS ARE AS FOLLOWS:
 O - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
 P - PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER.

SCHEDULE OF SPECIAL INSPECTION SERVICES

| | | |
|---|---------------------------------|--|
| X | SOLS AND FOUNDATIONS FRAMING | SPRAY FIRE RESISTANT |
| X | CAST-IN-PLACE CONCRETE MATERIAL | SPECIAL INSPECTIONS FOR WIND RESISTANCE |
| | PRECAST CONCRETE | SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE |
| X | MASONRY | WOOD CONSTRUCTION |
| X | STRUCTURAL STEEL | EXTERIOR INSULATION AND FINISH SYSTEM |
| | COLD-FORMED STEEL | SPECIAL CASES |

REQUIRED VERIFICATION & INSPECTION OF CONCRETE CONSTRUCTION
(NC 2018 TABLE 1705.3)

| APPLICABLE TO PROJECT | VERIFICATION AND INSPECTION | CONTINUOUS | PERIODIC | REFERENCED STANDARDS ¹⁾ | BC REFERENCE |
|-----------------------|---|------------|----------|---|------------------------|
| X | 1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS AND PLACEMENT | -- | X | ACI 318 3.5, 7.1-7.7 | 1908.4 |
| | 2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1705.2.2, ITEM 2b | -- | -- | AWS D1.4 ACI 318 3.5.2 | -- |
| X | 3. INSPECTION OF ANCHORS CAST IN CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WERE STRENGTH DESIGN (SLS) USED | -- | X | ACI 318 8.1.3, 21.2.8 | 1908.5, 1909.1 |
| X | 4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS ²⁾ | -- | X | ACI 318 3.8.6, 8.1.3, 21.2.8 | 1909.1 |
| X | 5. VERIFYING USE OF REQUIRED DESIGN MIX | -- | X | ACI 318 CH. 4, 5.2.6.4 | 1904.2, 1910.2, 1910.3 |
| X | 6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE | X | -- | ASTM C 172 ASTM C 31 ACI 318 5.6, 5.8 | 1910.10 |
| X | 7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES | X | -- | ACI 318 5.9, 5.10 | 1910.6, 1910.7, 1910.8 |
| | 8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES | -- | X | ACI 318 5.11 - 5.13 | 1910.9 |
| | 9. INSPECTION OF PRESTRESSED CONCRETE | | | | |
| | a. APPLICATION OF PRESTRESSING FORCES | X | -- | ACI 318 18.20 ACI 318 18.18.4 | -- |
| | b. GROUING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC FORCE-RESISTING SYSTEM | X | -- | | -- |
| | 10. ERECTION OF PRECAST CONCRETE MEMBERS | -- | X | ACI 318 CH. 16 | -- |
| | 11. VERIFICATION OF IN-SITU CONCRETE STRENGTH PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS | -- | X | ACI 318 6.2 | -- |
| | 12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF CONCRETE MEMBER BEING FORMED | -- | X | ACI 318 6.1.1 | -- |

FOR S1 (1 INCH x 24 INCH)
 (a) Where applicable, also see Section 1705.11 Special Inspection for Seismic Resistance.
 (b) Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with ACI 308.2 or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the building official prior to the commencement of the work.

REQUIRED VERIFICATION & INSPECTION OF STRUCTURAL STEEL
(AISC 360-16 CHAPTER N)

| APPLICABLE TO PROJECT | VERIFICATION AND INSPECTION | OC | QA | REFERENCED STANDARDS ¹⁾ |
|-----------------------|---|----|----|------------------------------------|
| | 1. INSPECTION TASKS PRIOR TO WELDING | | | |
| X | a. WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE | P | O | AISC 360-10, TABLE N5.4.1 |
| X | b. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE | P | O | |
| X | c. MATERIAL IDENTIFICATION (TYPE/GRADE) | O | O | |
| X | d. WELDER IDENTIFICATION SYSTEM ²⁾ | O | O | |
| | e. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) JOINT PREPARATION • DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION) • BACKING TYPE AND FIT (IF APPLICABLE) | O | O | |
| | f. CONFIGURATION AND FINISH OF ACCESS HOLES | O | O | |
| | g. FIT-UP OF FLLET WELDS • DIMENSIONS (ALIGNMENT, GAPS AT ROOT) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION) | O | O | |
| | h. CHECK WELDING EQUIPMENT | O | -- | |
| | 2. INSPECTION TASKS DURING WELDING | | | |
| X | a. USE OF QUALIFIED WELDERS | O | O | AISC 360-10, TABLE N5.4.2 |
| X | b. CONTROL AND HANDLING OF WELDING CONSUMABLE • PACKAGING • EXPOSURE CONTROL | O | O | |
| X | c. NO WELDING OVER CRACKED WELDS | O | O | |
| X | d. ENVIRONMENTAL CONDITIONS • WIND SPEED WITH LIMITS • PRECIPITATION AND TEMPERATURE | O | O | |
| X | e. WPS FOLLOWED • SETTINGS ON WELDING EQUIPMENT • TRAVEL SPEED • SELECTED WELDING MATERIALS • WELDING GAS TYPE/FLOW RATE • PREHEAT APPLIED • INTERPASS TEMPERATURE MAINTAINED (MIN. MAX.) • PROPER POSITION (F, V, H, OH) | O | O | |
| X | f. WELDING TECHNIQUES • INTERPASS FINAL CLEANING • EACH PASS WITH PROFILE LIMITATIONS • EACH PASS MEETS QUALITY REQUIREMENTS | O | O | |
| | 3. INSPECTION TASKS AFTER WELDING | | | |
| X | a. WELDS CLEANED | P | P | AISC 360-10, TABLE N5.4.3 |
| X | b. SIZE, LENGTH AND LOCATION OF WELDS | P | P | |
| X | c. WELDS MEET VISUAL ACCEPTANCE CRITERIA • CRACK PROHIBITION • WELD METAL FUSION • CRATER CROSS SECTION • WELD PROFILES • WELD SIZE • UNDERCUT • POROSITY | P | P | |
| | d. ARC STRIKES | P | P | |
| | e. k-AREA ²⁾ | P | P | |
| | f. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED) | P | P | |
| | g. REPAIR ACTIVITIES | P | P | |
| X | h. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER | P | P | |
| | 4. INSPECTION TASKS PRIOR TO BOLTING | | | |
| X | a. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIAL | O | P | AISC 360-10, TABLE N5.6.1 |
| X | b. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS | O | P | |
| X | c. PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, LENGTH) IF THREAD LENGTHS ARE TO BE EXCLUDED FROM SHEAR PLANE | O | O | |
| X | d. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL | O | O | |
| X | e. CONNECTION ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS | O | O | |
| | f. PRE-INSTALLATION INSPECTION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSESSMENTS AND METHODS USED | P | O | |
| X | g. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS | O | O | |
| | 5. INSPECTION TASKS DURING BOLTING | | | |
| | a. FASTENER ASSEMBLY IN SERVICEABLE CONDITION, PLACED IN ALL HOLES AND FASTENERS POSITIONED AS REQUIRED | O | O | AISC 360-10, TABLE N5.6.2 |
| | b. HOLE BRIDGES TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION | O | O | |
| | c. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING | O | O | |
| | d. FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES | O | O | |
| | 6. INSPECTION TASKS AFTER BOLTING | | | |
| | a. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS | P | P | AISC 360-10, TABLE N5.6.3 |
| | 7. INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT | | | |
| | a. PLACEMENT AND INSTALLATION OF STEEL DECK | P | P | AISC 360-10, TABLE N6.1 |
| | b. PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS | P | P | |
| | c. DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS | P | P | |

- The Fabricator or Erector, as applicable, shall maintain a system by which a welder who has welded a joint or member can be identified. Stamps, if used, shall be the low-45° type.
- When welding of double flanges, continuity plates or stiffeners has been performed in the k-area, visually inspect the web-k-area for cracks within 3 inches (75mm) of the weld.

REQUIRED VERIFICATION AND INSPECTION OF SOILS
(NC 2018 TABLE 1705.6)

| APPLICABLE TO PROJECT | VERIFICATION AND INSPECTION TASK | CONTINUOUS DURING TASK LISTED | PERIODICALLY DURING TASK LISTED |
|-----------------------|---|-------------------------------|---------------------------------|
| X | 1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY | -- | X |
| X | 2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL | -- | X |
| X | 3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FLL MATERIALS | -- | X |
| X | 4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL | X | -- |
| X | 5. PRIOR TO PLACEMENT OF COMPACTED FLL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY | -- | X |

LEVEL 2 REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION
(NC 2018)

| APPLICABLE TO PROJECT | INSPECTION TASK | CONTINUOUS DURING TASK LISTED | PERIODIC DURING TASK LISTED | BC SECTION | TMS 602/ACI 530.1/ASCE 6a | TMS 603/ACI 530.1/ASCE 6a |
|-----------------------|--|-------------------------------|-----------------------------|------------|---------------------------|--|
| X | 1. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS | -- | X | -- | -- | ART. 1.5 |
| X | 2. VERIFICATION OF f_m AND $f_{m,c}$ PRIOR TO CONSTRUCTION AND FOR EVERY 5000 SQUARE FEET DURING CONSTRUCTION | -- | X | -- | -- | ART. 1.4B |
| X | 3. VERIFICATION OF PROPORTIONS OF MATERIALS IN PREMIXED OR PREBLENDED MORTAR AND GROUT AS DELIVERED TO THE SITE | -- | X | -- | -- | 1.9B |
| X | 4. VERIFICATION OF SLUMP, FLOW AND VSI AS DELIVERED TO THE SIDE FOR SELF-CONSOLIDATING GROUT | X | -- | -- | -- | 1.9.3 |
| X | 5. THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE | | | | | |
| X | a. PROPORTIONS OF SITE-PREPARED MORTAR, GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS | -- | -- | -- | -- | ART. 2.6A |
| X | b. PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS | -- | X | -- | -- | ART. 3.3B |
| X | c. PLACEMENT OF REINFORCEMENT, CONNECTORS AND PRESTRESSING TENDONS AND ANCHORAGE | X | -- | -- | -- | SEC. 1.15 ART. 3.4, 3.6A |
| X | d. GROUT SPACE PRIOR TO GROUT | -- | -- | -- | -- | ART. 3.2D |
| X | e. PLACEMENT OF GROUT | X | -- | -- | -- | ART. 3.5 |
| X | f. PLACEMENT OF PRESTRESSING GROUT | X | -- | -- | -- | ART. 3.6C |
| X | g. SIZE AND LOCATION OF NATURAL ELEMENTS | -- | X | -- | -- | ART. 3.3F |
| X | h. TYPE, SIZE AND LOCATION OF MEMBERS, INCLUDING DETAILS OF ANCHORAGE OF MEMBERS TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION | X | -- | -- | -- | SEC. 1.2.2(a) 1.16.1 |
| X | i. SPECIFIED SUBGRADE AND TYPE OF REINFORCEMENT, ANCHOR OR PRESTRESSING TENDONS AND ANCHORAGES | -- | X | -- | -- | SEC. 1.15 ART. 2.4, 3.4 |
| X | j. PREPARATION OF CONSTRUCTION AND PROTECTION OF MASONRY SURFACES COULD BE DAMAGED BY BELOW 40°F OR HOT (WATER TEMPERATURE ABOVE 80°F) | -- | X | -- | -- | SEC. 2104.3, 2104.4 ART. 1.8 C, 1.8 D |
| X | k. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE | X | -- | -- | -- | ART. 3.6 B |
| X | l. PREPARATION OF ANY REQUIRED GROUT SPECIMENS AND/OR PRISMS SHALL BE OBSERVED | X | -- | -- | -- | SEC. 2105.2.2, 2105.3 ART. 1.4 |

FOR S1 (1 INCH x 24 INCH)
 The specific standards referenced are those listed in chapter 35.

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JACKSON COUNTY
 ANIMAL RESCUE CENTER AND GREEN ENERGY PARK
 DILLSBORO, NORTH CAROLINA

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 PROJECT ENGINEER: CP
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