New Jersey Department of Transportation
1035 Parkway Avenue, PO Box 600, Trenton, New Jersey 08625-0600

Baseline Document Change Announcement

ANNOUNCEMENT: BDC15S-06

DATE: July 30, 2015

SUBJECT: Materials related Changes
- **Revision to Subparts 511.03.01, 606.03.02, 903.02.04, 903.06.02, 904.01.01, 904.01.02, 904.02.02, 904.03.01, 904.03.02, 904.04.02, 905.01.03, 906.04.05, Subsections 906.01, 908.03, 915.05, and Test Method NJDOT C-2 of the 2007 Standard Specification.**

Subparts 511.03.01, 606.03.02, 903.02.04, 903.06.02, 904.01.01, 904.01.02, 904.02.02, 904.03.01, 904.03.02, 904.04.02, 905.01.03, 906.04.05, Subsections 906.01, 908.03, 915.05, and Test Method NJDOT C-2 of the *2007 Standard Specifications* have been revised.

The revisions are as follows:

511.03.01 : Corrected an error regarding the dry film thickness of the coating.

606.03.02 : A statement has been added regarding concrete placing during the winter months.

903 : Slump flow requirement values have been revised.

904 : Various subsections of Section 904 have been revised for clarity and better referencing.

915.05 : AWPA Standards have been revised

NJDOT C-2 : AASHTO Standard reference has been revised

The following revisions have been incorporated into the Standard Input SI2007 as of July 30, 2015.

511.03.01 Bulkhead, Fender, and Dolphin Systems
C. Coating Steel
THE SECOND PARAGRAPH PART 1 IS CHANGED TO:

1. Immediately after blast cleaning, apply 2 coats of coal tar epoxy paint at a maximum coverage rate of 125 square feet per gallon. Ensure that the total dry film thickness of the 2 coats is not less than 16 mils at any point. Apply the coating by brush, roller, or spray. The Contractor may thin the first coat with a maximum of 10 percent of solvent according to the coating manufacturer; however, the Contractor may not thin the second coat.

Allow the first coat to thoroughly dry before applying the second coat. Allow the second coat to dry and harden before handling the steel.

606.03.02 Concrete Sidewalks, Driveways, and Islands

F. Placing Concrete.
THE ENTIRE PART F. IS CHANGED TO:

Obtain RE approval of forms and joint placement before placing concrete. Place concrete according to the limitations specified in 504.03.02.C. To place concrete between November 1 and March 15, submit to RE for approval a plan detailing the method of protecting the concrete from salt for at least 30 days after placing. Do not begin placing concrete until this plan is approved. Place concrete across the formed area to minimize rehandling. Ensure that concrete is not discharged into windrows or piles. Continuously place concrete between transverse joints without the use of intermediate bulkheads. To prevent bowing or misalignment of the transverse joints, place concrete simultaneously on both sides of transverse joints without disturbing the joints. Consolidate the concrete by hand spading or using internal mechanical vibrators. If a slab is not completed from transverse joint to transverse joint, remove the incomplete slab and replace. Terminate each day's placement at a transverse joint. If concrete becomes segregated during placement, cease operations and correct handling operations. Protect concrete as specified in 504.03.02.I.

903.02.04 Viscosity Modifying Admixture
THE FIRST SENTENCE IS CHANGED TO:

Use a viscosity modifying admixture that is listed on the QPL and that, when evaluated according to the test methods and mix design proportions in AASHTO M 194, conforms to the following physical requirements:

903.06.02 SCC For Precast Concrete
THE ENTIRE PART B. IS CHANGED TO:

B. Mix Design and Verification. Design the mix, as specified in 903.03.02 or 903.05.02, to conform to the strength, water-cement ratio, and air content requirements for the specified class of concrete for the item that is being cast. In addition, ensure that the SCC conforms to the requirements specified in Table 903.06.02-1.

Table 903.06.02-1 Requirements for SCC for Precast Concrete

Property	Test Method	Requirement
Slump Flow	NJDOT C-4	16 to 24 inches
Visual Stability Index		
Plastic Concrete	NJDOT C-4	1 maximum
Hardened Concrete	NJDOT C-5	1 maximum

Perform mix design verification as specified in 903.03.02 or 903.05.02. For the verification batch, ensure that the air content is in the top half of the allowable range and the slump flow is between 22 and 24 inches. Perform air content, slump flow, and visual stability index (plastic concrete) testing on the verification batch. Make concrete cylinders for compression testing as specified in 903.03.02 or 903.05.02 and make 2 additional 4 × 8 inch cylinders for visual stability index on the hardened concrete. Saw the additional cylinders length-wise according to NJDOT C-5. The ME will perform the compressive strength testing and the visual evaluation to assign a visual stability index in order to approve the mix.

SECTION 904 – PRECAST AND PRESTRESSED CONCRETE

904.01.01 Component Materials
THE FOLLOWING SENTENCE IS ADDED AT THE END:

For Precast Concrete, the minimum cement content specified in Table 903.03.06-3 is not required for Class A or Class B concrete.

904.01.02 Fabrication

2. Placing Concrete.

THE FIRST SENTENCE IS CHANGED TO:

Place concrete as specified in 504.03.02.B, 504.03.02.C, 504.03.02.D, and 504.03.02.E.

904.02.01 Component Materials
THE FOLLOWING SENTENCE IS ADDED AT THE END:

For Precast Concrete, the minimum cement content specified in Table 903.03.06-3 is not required for Class A or Class B concrete.

904.02.02 Fabrication

3. Placing Concrete.

THE FIRST SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Place concrete as specified in 504.03.02.C, 504.03.02.D, and 504.03.02.E.

904.03.01 Component Materials
THE FOLLOWING IS ADDED AT THE END:

For Precast Concrete, the minimum cement content specified in Table 903.03.06-3 is not required for Class A or Class B concrete.

904.03.02 Fabrication

2. Placing Concrete.

THE FIRST SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Place concrete as specified in 504.03.02.B, 504.03.02.C, 504.03.02.D, and 504.03.02.E.

904.04.02 Fabrication

3. Placing Concrete.

THE SECOND SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Place concrete as specified in 504.03.02.B, 504.03.02.C, 504.03.02.D, and 504.03.02.E.

905.01.03 Welded Wire Reinforcement
THE FIRST PARAGRAPH IS CHANGED TO:

Use plain or deformed steel welded wire reinforcement according to ASTM A1064. When used for concrete pavement, use welded wire reinforcement mats at least 5 feet in width.

906.01 STRUCTURAL STEEL MATERIALS
THE ENTIRE SUBSECTION IS CHANGED TO:

Provide structural steel materials conforming to the requirements in Table 906.01-1 and as shown on the Plans.

Table 906.01-1 Structural Steel Materials Requirements

Product	Test Method	Type/Grade/Class
Structural Steel Plate1	ASTM A 709	Grade 36, 50, 50W, or HPS70W2
Tie rods, plate washers, tie backs, turnbuckles, plates, shapes, and shims	ASTM A 709	Grade 36
Steel tube and pipe for Sign Structures 3, 4, 5	ASTM A 53 or ASTM A 500	Type S, Grade B or Type E, Grade B Grade B or C
Steel Piles		
Steel H-piles	ASTM A 572	Grade 50
Steel sheet piles	ASTM A 572	Grade 50
Steel pipe piles	ASTM A 252	Grade 2
Casings for Drilled Shafts6	ASTM A 252	Grade 2
Flooring		
Grid Flooring	ASTM A 709	Grade 36
Formed Steel Flooring	ASTM A 1011	Grade 30
Steel Forgings	ASTM A 668	Class C
Shear Connector Studs7	ASTM A 108	Grades G1015, 1018, or 1020
Stay-In-Place (SIP) Forms8	ASTM A 653	Grades 33, 37, 40, 49, or 80

1. For steel used in tension zones, ensure that the steel conforms to Zone 2 impact testing requirements.
2. For the manufacture of Grade HPS70W, the Department will allow the use of the Thermo-Mechanical Controlled Process.
3. For sizes less than or equal to 24 inches in diameter, only use electric resistance welded single seam pipe.
4. For pipe with wall thickness greater than 1/2 inch, the fabricator may substitute API Specification 5L, Grade B.
5. ASTM A 500 Grade B or C is approved for use only with equivalent tensile and yield strengths as that specified for ASTM A 53 Grade B, Type E or S, with additional CVN testing for materials with wall thickness ½ inch or greater. Provide mill certs for approval by the ME prior to fabrication.
6. For casings, use smooth, non-corrugated steel pipe.
7. For shear connector studs, use cold-drawn bars that are killed or semi-killed.
8. For SIP, use a galvanized coating designation G235 or Z700.

Before using, submit to the ME a representative sample of each size for material testing and approval. Provide a mill certification that indicates the chemical and physical properties for each heat of material. For SIP forms, steel forgings and shear connector studs, submit certifications of compliance, as specified in 106.07, with the mill certifications attached.

906.04.05 Quality Control and Acceptance
THE FOURTH PARAGRAPH IS CHANGED TO:

Inspect and test structural steel bridge members according to ANSI/ AASHTO/ AWS D1.5 Bridge Welding Code, as modified by the following:

1. Assembly and fabrication may not continue until completed work has been inspected and accepted by the ME.
2. Grind flush complete-penetration butt welds scheduled for ultrasonic testing.
3. Test 100 percent of complete joint penetration groove and butt welds, including butt welds in longitudinal stiffeners.

908.03 DIRECT TENSION INDICATORS (DTI)
THE ENTIRE SUBSECTION IS CHANGED TO:

Use direct tension indicators conforming to ASTM F 959. If galvanizing of the bolt assembly is required, mechanically galvanize DTIs according to ASTM B 695, Class 50. Test DTIs according to ASTM F 959 and verify according to NJDOT S-3.

Provide manufacturer's certification and attach test results.

915.05 TIMBER TREATMENT
THE ENTIRE SUBSECTION IS CHANGED TO:

Treat wood species according to AASHTO M 133 and AWPA Standards U1-11 and T1-11 as summarized in Table 915.05-1, Table 915.05-2, and Table 915.05-3.

915.05-1 Treatment for SawnTimber Posts

Type of Wood	Location/Environment	Allowable Treatments	AWPA Standard Reference for Minimum Retention Level
Southern Pine	Soil or Fresh Water	CCA or Pentachlorophenol	UC4A
Douglas Fir	Soil or Fresh Water	ACZA	UC4A

915.05-2 Treatment for Round Timber Piles

Type of Wood	Location/Environment	Allowable Treatments	AWPA Standard Reference for Minimum Retention Level
Southern Pine	Soil or Fresh Water	CCA	UC4C
Southern Pine	Marine	CCA	UC5B
Douglas Fir	Soil or Fresh Water	ACZA	UC4C
Douglas Fir	Marine	ACZA	UC5B

915.05-3 Treatment for Timber Sheet Piling and Timber for Structures

Type of Wood	Location/Environment	Allowable Treatments	AWPA Standard Reference for Minimum Retention Level
Southern Pine	Soil or Fresh Water	CCA, or Pentachlorophenol	UC4B
Southern Pine	Marine	CCA	UC5B
Douglas Fir	Soil or Fresh Water	ACZA	UC4B
Douglas Fir	Marine	ACZA	UC5B

Notify the ME at least 14 days before treating timber. If directed by the ME, perform an assay to determine the retention of preservative according to AASHTO M 133. Submit certification of compliance as specified in 106.07. Attach the assay report to the certification.

NJDOT C-2 – QUICK-SETTING PATCH MATERIALS

C. Procedure.

2. Tests. Test materials according to the following:

THE B. IS CHANGED TO:

b. Strength Development. For Type 1 and 2, test 2 cubes per test according to AASHTO T 106. For Type 1A and 1B, make two 4 × 8-inch cylinders per test according to AASHTO R 39. Cure specimens covered with a plastic cover over the cylinder for 3 hours and then cure without the plastic cover at 70.4 to 76.4 °F and 50 percent relative humidity until testing. Test according to AASHTO T 22

Implementation Code R (ROUTINE)

Changes must be implemented in all applicable Department projects scheduled for Final Design Submission at least one month after the date of the BDC announcement. This will allow designers to make necessary plan, specifications, and estimate/proposal changes without requiring the need for an addenda or postponement of advertisement or receipt of bids.

Recommended By:

ORIGINAL SIGNED

Richard Jaffe, P.E.
Director
Capital Program Support

Approved By:

ORIGINAL SIGNED

Richard T. Hammer
Assistant Commissioner
Capital Program Management

RJ: KS: HP
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