AMENDMENTS TO OPSS 905 (MAY 94) – CONSTRUCTION SPECIFICATION FOR STEEL REINFORCEMENT FOR CONCRETE [1]

OPSS 905.01 is amended by the addition of the following:

Unless otherwise noted in the Special Specifications, no epoxy coated reinforcing steel shall be used in the work and all references to epoxy coated reinforcing steel in this specification shall be ignored.

OPSS 905.02 is amended by the addition of the following:

Ministry of Transportation Publications:
Ontario Highway Bridge Design Code - 1991

OPSS 905.04.02.02 The first paragraph is superseded by the following:

Reinforcing steel shall be detailed according to the Ontario Highway Bridge Design Code.

Six (6) copies of complete bar lists and placing drawings of reinforcing steel shall be submitted a minimum of three weeks before commencing the placing of steel reinforcement.

Where bar marks are indicated on the Contract drawings, and reinforcing bar lists show the same bar marks, placing drawings are not required.

OPSS 905.04.02.03 is superseded by the following:

905.04.02.03 Prestressed Concrete - Precast Members

Submission of proposals and shop drawings for prestressed concrete - precast members shall conform to TS 909.

OPSS 905.04.02.04 is superseded by the following:

905.04.02.04 Prestressed Concrete - Cast-In-Place Concrete

1. **All references to OPS specifications that have been amended (as noted in LIST T1) are superseded by references to the replacement City of Toronto specifications (as given in LIST T1).**

Submission of post-tensioning drawings and stressing details for prestressed concrete - cast-in-place concrete shall conform to TS 910. Drawings shall include the detailing of reinforcement in the local zone as required by the anchorage supplier.

OPSS 905.05.01 is superseded by the following:

905.05.01 Steel Reinforcement

Reinforcing steel shall meet the requirements of OPSS 1440.

Welded steel wire fabric shall meet the following requirements:

The wire fabric shall be galvanized and shall conform to C.S.A. G30.5 welded steel wire fabric for concrete reinforcement 102 mm x 102 mm - MW 25.8 x MW 25.8 and galvanized to C.S.A. G164-M and shall be securely anchored at 300 mm centres to existing reinforcement by approved spacers and galvanized wire. Where no reinforcement is available to anchor the galvanized wire, the Contractor shall provide concrete anchors which shall be galvanized to C.S.A. 164-M.

Prestressing steel, anchorages, ducts, grout and connectors shall meet the requirements of OPSS 1440.

Reinforcing steel bars installed in bridges, culverts and headwalls shall be grade 400, except bars to be welded, which shall be grade 400 W.

Reinforcing steel bars to be welded and installed in other structure types, shall be type W.

OPSS 905.07.02.02 is superseded by the following:

905.07.02.02 Placing

Reinforcing steel shall be accurately placed in the positions shown on the plans and firmly held during the placing, compacting and setting of the concrete. Bars shall be tied at all intersections except where spacing is less than 300 mm in each direction when alternate intersections shall be tied.

For slab-on-girder type decks, the top layer of deck reinforcement shall be tied to the shear studs or shear stirrups on each girder at approximately 1.5 m centres.

Spacers for spirals shall be equally spaced around the spiral and shall be such that the specified pitch of the spiral is maintained.

Reinforcement shall be placed in conformance with the tolerances given in Table 1. The tolerances listed include fabrication tolerances.

Unless otherwise indicated, the clear cover measured from the face of concrete to the face of any reinforcing bar shall be as follows:

Deck Top	80±10 mm
Deck Bottom	50±10 mm
Remainder	80±10 mm

Unless otherwise indicated on the drawings, the lap distance for straight reinforcing steel shall not be less than 30 bar diameters and for steel rod and welded wire steel fabric not less than 150 mm. Laps and splices in reinforcing shall only occur at the locations indicated on the drawings or indicated in the bar schedule unless otherwise permitted by the Commissioner.

OPSS 905.08 is superseded by the following:

905.08.01 Acceptance Sampling and Testing

All acceptance sampling and testing necessary to determine conformance with the Contract requirements will be performed by the Commissioner.

905.08.02 Acceptance Criteria

Reinforcing and prestressing steel shall be accepted on the basis of conformance to the required specifications as provided on the mill certificates for the steel.

OPSS 905.09 is superseded by the following:

905.09.01 Measurement for Payment

Reinforcing steel shall be measured in place as the actual mass in Mg of steel placed and embedded in the concrete in accordance with the drawings or as directed by the Commissioner. The mass of reinforcing steel shall be computed on the basis of the tabulated weights given in the appropriate CSA Standards. No allowance shall be made for fasteners, wire ties, chairs, spacers, etc. or for extra steel in splices not shown on the plans.

No measurement will be made for reinforcing couplers unless mentioned in the specifications. The contract price for reinforcing steel shall be full compensation for all labour, equipment and material involved in placing the reinforcing steel coupler.

No measurement shall be made for welded wire steel fabric. Payment shall be deemed to be included in the appropriate concrete tender item.

905.09.02 Basis for Payment

Payment at the contract price for reinforcing steel shall be made under the items for and at the unit prices bid per Mg for reinforcing steel and shall be payment in full for furnishing, bending, placing and securing in place the reinforcing steel, all materials, labour, equipment and all else necessary to complete the work.

Prestressing steel, ducts and anchorages shall be considered incidental to the work of providing the prestressed members as shown on the plans.