

## S-17 REINFORCING STEEL

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#### 17.01 SCOPE OF WORK

This specification covers the requirements for reinforcing steel, in conformity with the contract drawings or directions of the Engineer.

#### 17.02 REFERENCES

This specification refers to the following standards, specifications, or publications:

- CSA Specification W 59

#### 17.03 MATERIALS

Unless otherwise specified, all reinforcing steel shall be hard grade deformed bars or steel wire or mesh and shall be supplied by the Contractor. The Contractor shall be responsible for unloading the reinforcing steel on delivery and for checking for and reporting any shortages or errors. The Contractor shall be responsible for the storage and proper care of the reinforcing steel until it is incorporated into the final work.

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#### **17.04 PROTECTION**

Reinforcing steel shall be stored above ground on wooden platforms, skids, racks, or other means taken to protect it against dirt or injury. When placed in the work it shall be free from dirt, loose scale, paint, oil, or other foreign substances.

If reinforcing steel becomes soiled with dirt, scale, paint, oil, or other foreign substances, it shall be cleaned at the Contractor's expense.

#### **17.05 PLACING**

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

#### **17.06 SUPPORTING**

Reinforcing steel shall be supported and firmly held in the required positions at all times. Only approved supports and chairs, of strong, durable, and non-corrodible materials and which fasten or tie securely to the reinforcing steel, shall be used. Galvanized metal or plastic chairs, concrete blocks, or other devices may be used for this purpose provided they satisfy the requirements as herein specified and are approved by the Engineer.

#### **17.07 FIELD BENDING**

No field bending of reinforcing steel shall be done, except as called for on the plans, or as authorized by the Engineer.

When field bending is authorized it shall be done with or without heat, as directed by the Engineer, and shall be done slowly with a steady even pressure.

Bars developing cracks or splits at the bends shall be rejected and replaced at the Contractor's expense.

#### **17.08 WELDING**

No welding of reinforcing steel shall be done under any circumstances unless authorized in writing by the Engineer and when so authorized it shall be done in accordance with CSA Specification W 59.

## **17.09 MEASUREMENT AND PAYMENT**

Reinforcing steel shall be measured by weight based on the total computed weight for the sizes and lengths of bars shown on the plans or authorized.

Unless specifically provided otherwise, payment for placing reinforcing steel in culverts and bridge approach slabs shall be included in the Contract Unit Price for the class of concrete specified, which price will be payment in full for furnishing all labour and equipment, including wire ties and supports, necessary for placing the reinforcing steel in the finished work, and for storing, protecting, placing and field bending when called for on the plans.

Payment for placing reinforcing steel in bridges shall be made at the contract Unit price per ton for placing reinforcing steel, which price shall be payment in full for furnishing all labour and equipment, including wire ties and supports, necessary for placing the reinforcing steel in the finished work, and for storing, protecting, placing and field bending when called for on the plans.