
Part 1 GENERAL

1.1 Related Work

- .1 Refer to other Specification Sections for related information.
- .2 Refer to Section 01 33 00 for Shop Drawing/ Submission requirements.
- .3 Section 03 30 00 – Cast-in-Place Concrete.

1.2 Reference Standards

- .1 CSA A23.1:19, Concrete Materials and Methods of Concrete Construction.
- .2 Reinforcing Steel Manual of Standard Practice (latest edition) by Reinforcing Steel Institute of Ontario.
- .3 CSA G30.18-09 (R2021), Carbon Steel Bars for Concrete Reinforcement.
- .4 ASTM A1064/A1064M-18, Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.

1.3 Submissions

- .1 Shop Drawings:
 - .1 Clearly indicate bar sizes, spacing, location and quantities of reinforcement and mesh with identifying code marks to permit correct placement without reference to structural drawings; to Reinforcing Steel Manual of Standard Practice.
 - .2 Detail placement of reinforcing where special conditions occur.
 - .3 Design and detail lap lengths and bar development lengths to CSA standard A23.1, unless otherwise specified on drawings.
- .2 Product Data/Samples:
 - .1 Provide product data for supports and spacers.
- .3 Test Results:
 - .1 Provide Mill Test Certificates cross referenced to the product supplied to the site.
- .4 Provide submissions in accordance with Section 01 33 00.

1.4 Storage

- .1 Store reinforcing steel on racks or sills that will permit easy access for identification and handling and prevent it from becoming coated with material which would adversely affect bond.
- .2 Do not store reinforcing steel in direct contact with the ground.

1.5 Measurement for Payment

- .1 This item will not be measured separately.
 - .2 Wire ties and spacers to be considered incidental to supply and placing of reinforcement.
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Part 2 PRODUCTS

2.1 Materials

- .1 Reinforcing steel: to CSA G30.18; billet steel grade 400 deformed bars.
- .2 Wire ties: to ASTM A1064/A1064m-18a plain, cold drawn annealed steel wire.
- .3 Spacers: PVC, Fabricated to suit site dimensions.

2.2 Reinforcing Steel Fabrication

- .1 Fabricate reinforcing to CSA standard A23.1
- .2 Fabrication tolerances for reinforcing steel to Reinforcing Steel Manual of standard Practice.
- .3 Obtain *Departmental Representative's* acceptance for locations of reinforcement splices other than those shown on reinforcing shop drawings.
- .4 Ship bundles of bar reinforcement clearly identified in accordance with bar list.
- .5 Do not weld reinforcing steel.

Part 3 EXECUTION

3.1 Placing

- .1 Accurately place reinforcing in positions indicated and hold firmly during placing, compacting and setting of concrete.
- .2 Tie reinforcement where spacing in each direction is:
 - .1 Less than 300 mm: - tie at alternate intersections.
 - .2 300 mm or more: - tie at each intersection.

3.2 Field Bending

- .1 Do not field bend reinforcement except where indicated or authorized by *Departmental Representative*.
- .2 When authorized, bend reinforcement without heat, by applying slow and steady pressure.
- .3 Replace bars which develop cracks or splits.

3.3 Cleaning

- .1 Clean reinforcing before placing concrete.

3.4 Inspection

- .1 Do not place concrete until *Departmental Representative* has inspected and accepted reinforcement work in place.

3.5 Surface Conditions

- .1 Reinforcement, at time concrete is placed, to be free from mud, oil or other non-metallic coatings that adversely affect bonding capacity.
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- .2 Reinforcement, with rust, mill scale, or combination of both may be considered as satisfactory provided the minimum nominal dimensions, nominal weight, and average height of deformations of a hand wire brushed test specimen are not less than specified requirements in applicable CSA Standards.

END OF SECTION