

**06020 Plain and Reinforced Concrete****Index**

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**06020-1     General**

The General Conditions, Specific Conditions and Instructions to Bidders form an integral part of this Specification and are to be read in conjunction herewith.

**06020-2     Scope**

The Contractor shall provide all materials, labour, equipment and incidentals necessary to complete the work of this trade. The work shall consist of supplying and storing aggregates, reinforcing steel, cement and admixtures, building forms and falsework, placing reinforcing steel, mixing concrete and placing in forms, finishing surfaces, protection, curing and cleanup all as specified.

**06020-3     Concrete Production and Delivery**

All concrete shall be centrally manufactured with a controlled mix designed to produce the requirements specified herein. Components shall be separately measured by dry weight and batched at a batching plant. Concrete components, admixtures, storage, handling, mixing and delivery shall all be in accordance with CSA Specification A23.1.

- The Contractor shall submit a copy of all delivery slips to the Engineer.
- All concrete at or below ground level shall be made with Portland Sulphate Resisting Cement.
- Concrete shall develop a 28 day compressive strength as shown on the drawings or stated elsewhere in the Specifications.
- The maximum size of aggregate for all concrete shall be 38 mm except where a reduction in size is required for proper finishing or is otherwise specified.
- Air entraining agent shall be added to all concrete to produce an air content of 5% - 8% by volume.
- Water/cement ratio shall not exceed 0.50 by weight.
- Slumps shall be in accordance with Table 8 of CSA Specification A23.1.

**06020-4     Concrete Construction**

All phases of concrete construction work including forming, bedding, placement, finish, curing and protection shall be in accordance with CSA Specification A23.1.

Type of finish shall be as specified on the drawings. Approved curing compound shall be used on all concrete placed at or above ground level.

**06020-5     Reinforcing Steel**

Reinforcing steel shall be as shown on the drawings. Before ordering steel, all order lists and bending diagrams shall be submitted for approval by the Engineer, and no materials shall be ordered until such lists and bending diagrams have been approved.

Bars shall be intermediate grade deformed steel billet bars conforming to current CSA Specifications.

Mesh shall be welded steel wire fabric for concrete reinforcement conforming to the current CSA Specifications.

Details of construction with reinforcing steel including care and handling, cleaning, bending, placing, spacing, splicing and concrete protection shall be in accordance with CSA Specification A23.1.

**06020-6     Testing**

All testing shall be carried out in accordance with CSA Specification A23.2.

The Contractor shall, at his own expense, undertake all tests necessary for concrete mix design, and for this purpose shall engage an independent testing laboratory approved by the Engineer. Test results shall be submitted to the Engineer not less than 7 days prior to commencement of concrete construction.

Field Tests for concrete quality shall be the responsibility of the Engineer. The Contractor shall provide unhindered access to the work for purposes of inspection and selection of samples. The Owner shall pay for all field testing but there shall be no charge to the Owner for any materials taken for testing purposes.

All aspects of field tests for concrete quality shall be in accordance with CSA Specification A23.1.

**End of Specification 06020**