
Part 1 General

1.1 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CAN/CSA A165 SERIES-04(R2009), CSA Standards on Concrete Masonry Units (Consists of A165.1, A165.2, A165.3).
 - .2 CAN/CSA A179-04(R2009), Mortar and Grout for Unit Masonry.
 - .3 CAN/CSA-A370-04(R2009), Connectors for Masonry.
 - .4 CAN/CSA-A371-04(R2009), Masonry Construction for Buildings.
 - .5 CSA G30.18-09, Carbon Steel Bars for Concrete Reinforcement.
 - .6 CSA-S304.1-04(R2010), Design of Masonry Buildings.

1.2 SUBMITTALS

- .1 Submit samples in accordance with Sections 01 33 00 - Submittal Procedures.
 - .1 Submit duplicate full size samples of each type masonry units.
- .2 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Sections 01 33 00 - Submittal Procedures.
 - .2 Submit WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Indicate VOC's for epoxy coatings and galvanized protective coatings and touch-up products.
 - .2 Indicate VOC's for mortar, grout, parging, colour additives and admixtures.
- .3 Shop Drawings :
 - .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Shop drawings consist of bar bending details, lists and placing drawings.
 - .3 On placing drawings, indicate sizes, spacing, location and quantities of reinforcement and connectors.

1.3 STORAGE AND HANDLING

- .1 Protect on site stored or installed material from moisture damage in accordance with manufacturer's printed instructions.

Part 2 Products

2.1 MASONRY UNITS

- .1 Standard concrete block units: to CAN3-A165 Series (CAN3-A165.1).
 - .1 Classification: H/15/C/M.

- .2 Size: modular.
- .3 Special shapes: provide square units for exposed corners. Provide purpose-made shapes for lintels and bond beams. Provide additional special shapes as indicated.

2.2 REINFORCEMENT AND CONNECTORS

- .1 Bar reinforcement: to CSA-A371 and CAN/CSA G30.18, Grade 400.
- .2 Wire reinforcement: to CSA-A371, truss type.
- .3 Connectors shall be corrosion resistant: to CSA-A370 and CSA-S304.

2.3 MORTAR AND GROUT

- .1 Mortar: to CSA A179.
 - .1 Use aggregate passing 1.18 mm sieve where 6 mm thick joints are indicated.
- .2 Mortar Type: N based on property specifications,
- .3 Following applies regardless of mortar types and uses specified above:
 - .1 Mortar for grouted reinforced masonry: type S based on property specifications.
- .4 Grout: to CSA A179, Table 3.

2.4 ACCESSORIES

- .1 Nailing Inserts: 0.5 mm minimum thickness, galvanized.
- .2 Bolts: 12 mm diameter x 150 mm long with ends bent 50 mm at 90 degrees.

Part 3 Execution

3.1 INSTALLATION

- .1 Do masonry work in accordance with CSA-A371 except where specified otherwise.
 - .1 Bond: running stretcher bond with vertical joints in perpendicular alignment and centred on adjacent stretchers above and below.
 - .2 Coursing height: 200 mm for one block and one joint.
 - .3 Jointing: tool where exposed or where paint or other finish coating is specified to provide smooth compressed concave surface.
- .2 Build masonry plumb, level, and true to line, with vertical joints in alignment.
- .3 Layout coursing and bond to achieve correct coursing heights, and continuity of bond above and below openings, with minimum of cutting.

3.2 CONSTRUCTION

- .1 Exposed masonry:

- .1 Remove chipped, cracked, and otherwise damaged units, in exposed masonry and replace with undamaged units.
- .2 Cut out for electrical switches, outlet boxes, and other recessed or built-in objects. Make cuts straight, clean, and free from uneven edges.
- .2 Building-In:
 - .1 Install masonry connectors and reinforcement where indicated on drawings.
 - .2 Build in items required to be built into masonry.
 - .3 Prevent displacement of built-in items during construction. Check plumb, location and alignment frequently, as work progresses.
 - .4 Brace door jambs to maintain plumb. Fill spaces between jambs and masonry with mortar.
 - .5 Install loose steel lintels over openings where indicated.
- .3 Concrete block lintels:
 - .1 Install reinforced concrete block lintels over openings in masonry where steel or reinforced concrete lintels are not indicated.
 - .2 End bearing: not less than 200 mm.
- .4 Support of loads:
 - .1 Use noted MPa concrete to Section 03 30 00 - Cast-in-Place Concrete, where concrete fill is used in lieu of solid units.
 - .2 Use grout to CSA A179 where grout is used in lieu of solid units.
- .5 Provision for movement:
 - .1 Leave 3 mm space below shelf angles.
 - .2 Leave 6 mm space between top of non-load bearing walls and partitions and structural elements. Do not use wedges.
 - .3 Built masonry to tie in with stabilizers, with provision for vertical movement.
- .6 Interface with other work:
 - .1 Cut openings in existing work as indicated.
 - .2 Openings in walls: approved by Departmental Representative.
 - .3 Make good existing work. Use materials to match existing.
- .7 Build in flashings in masonry in accordance with CSA-A371.
 - .1 Install flashings under exterior masonry bearing on foundation walls, slabs, shelf angles, and steel angles over openings. Install flashings under weep hole courses and as indicated.
 - .2 In cavity walls and veneered walls, carry flashings from front edge of masonry, under outer wythe, then up backing not less than 150 mm, and as follows:
 - .1 For masonry backing embed flashing 25 mm in joint.
 - .2 For concrete backing, insert flashing into reglets.
 - .3 For wood frame backing, staple flashing to walls behind sheathing paper.
 - .4 For gypsum board backing, bond to wall using manufacturer's recommended adhesive.
 - .3 Lap joints 150 mm and seal with adhesive.

- .8 Install weep hole vents in vertical joints immediately over flashings, in exterior wythes of cavity wall and masonry veneer wall construction, at maximum horizontal spacing of 600 mm on centre.

3.3 REINFORCING AND CONNECTING

- .1 Install masonry connectors and reinforcement in accordance with CSA-A370, CSA-A371 and CSA-S304.1 unless indicated otherwise.
- .2 Prior to placing concrete, mortar, and grout, obtain Engineer's approval of placement of reinforcement and connectors.

3.4 BONDING AND TYING

- .1 Bond walls of two or more wythes using metal connectors in accordance with CSA-S304, CSA-A371 and as indicated.
- .2 Tie masonry veneer to backing in accordance with NBC, CSA-S304.1, CSA-A371 and as indicated.

3.5 REINFORCED LINTELS AND BOND BEAMS

- .1 Reinforce masonry lintels and bond beams as indicated.
- .2 Place and grout reinforcement in accordance with CSA-S304.1, CSA-A371, and CSA-A179.

3.6 GROUTING

- .1 Grout masonry in accordance with CSA-S304.1, CSA-A371 and CSA-A179 and as indicated.

3.7 ANCHORS

- .1 Supply and install metal anchors as indicated.

3.8 LATERAL SUPPORT AND ANCHORAGE

- .1 Supply and install lateral support and anchorage in accordance with CSA-S304.1 and as indicated.

3.9 SITE TOLERANCES

- .1 Tolerances in notes to Clause 5.3 of CSA-A371 apply.

3.10 FIELD QUALITY CONTROL

- .1 Inspection and testing will be carried out by Testing Laboratory designated by Engineer.

3.11 CLEANING

- .1 Perform cleaning after installation to remove construction and accumulated environmental dirt.

- .2 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

3.12 PROTECTION

- .1 Protect masonry and other work from marking and other damage. Protect completed work from mortar droppings. Use non-staining coverings.

END OF SECTION

