

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 01 33 00 - Submittals.
- .2 Section 04 05 12 - Mortar and Masonry Grout.
- .3 Section 04 05 19 - Masonry Anchorage and Reinforcing.
- .4 Section 04 22 00 - Concrete Unit Masonry.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA International).
 - .1 CSA-A165 Series-14, Standards on Concrete Masonry Units.
 - .2 CSA A179-14, Mortar and Grout for Unit Masonry.
 - .3 CSA-A371-14, Masonry Construction for Buildings.

1.3 SUBMITTALS

- .1 Product Data.
 - .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittals.
- .2 Samples.
 - .1 Submit samples in accordance with Section 01 33 00 - Submittals.
 - .2 Submit samples.
 - .1 One each type of masonry accessory specified.
 - .2 One of each type of masonry reinforcement, tie and connector proposed for use.
- .3 Manufacturer's Instructions.
 - .1 Submit manufacturer's installation instructions.

1.4 QUALITY ASSURANCE

- .1 Test Reports.
 - .1 Certified test reports showing compliance with specified performance characteristics and physical properties.
 - .2 Submit laboratory test reports certifying compliance of masonry units with specification requirements.
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.5 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver materials to job site in dry condition.
- .2 Storage and Protection.
 - .1 Keep materials dry until use.
 - .2 Store under waterproof cover on pallets or plank platforms held off ground by means of plank or timber skids.

1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal packaging material for recycling.
- .4 Unused metal materials are to be diverted from landfill to a metal recycling facility.
- .5 Unused or damaged masonry materials must be diverted from landfill to a local facility.

1.7 SITE CONDITIONS

- .1 Site Environmental Requirements.
 - .1 Cold weather requirements.
 - .1 Supplement Clause 5.15.2 of CSA-A371 with following requirements.
 - .1 Maintain temperature of mortar between 5 degrees C and 50 degrees C until batch is used or becomes stable.
 - .2 Maintain ambient temperature between 5 degrees C and 50 degrees C and protect site from windchill.
 - .2 Hot weather requirements.
 - .1 Protect freshly laid masonry from drying too rapidly, by means of waterproof, non-staining coverings.
 - .2 Keep masonry dry using waterproof, non-staining coverings that extend over walls and down sides sufficient to protect walls from wind driven rain, until masonry work is completed and protected by flashings or other permanent construction.

Part 2 Products

2.1 MATERIALS

- .1 Masonry materials are specified in Related Sections.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.2 PREPARATION

- .1 Provide temporary bracing of masonry work during and after erection until permanent lateral support is in place.
- .2 Bracing approved by Engineer.

3.3 INSTALLATION

- .1 Do masonry work in accordance with CSA-A371 except where specified otherwise.
- .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.

3.4 CONSTRUCTION

- .1 Exposed masonry.
 - .1 Remove chipped, cracked, and otherwise damaged units, in accordance with CSA A-165, Clause 82.1, in exposed masonry and replace with undamaged units.
- .2 Jointing.
 - .1 Allow joints to set just enough to remove excess water, then tool with round jointer to provide smooth, joints true to line, compressed, uniformly concave joints where concave joints are indicated.
- .3 Cutting.
 - .1 Cut out for electrical switches, outlet boxes, and other recessed or built-in objects.
 - .2 Make cuts straight, clean, and free from uneven edges.
- .4 Building-In.
 - .1 Build in items required to be built into masonry.
 - .2 Prevent displacement of built-in items during construction. Check plumb, location and alignment frequently, as work progresses.
 - .3 Brace door jambs to maintain plumb. Fill spaces between jambs and masonry with mortar.
- .5 Interface with other work.

- .1 Cut openings in existing work as indicated.
- .2 Make good existing work. Use materials to match existing.

3.5 SITE TOLERANCES

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

3.6 FIELD QUALITY CONTROL

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

3.7 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.

3.8 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

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 01 33 00 - Submittals.
- .2 Section 04 05 10 - Common Work Results for Masonry.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA International).
 - .1 CSA A179-14, Mortar and Grout for Unit Masonry.

1.3 SUBMITTALS

- .1 Product Data.
 - .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittals.
 - .2 Submit two copies of WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 33 00 - Submittals. Indicate VOC's mortar, grout, parging, colour additives and admixtures.
- .2 Samples.
 - .1 Submit samples in accordance with Section 01 33 00 - Submittals.
 - .2 Submit two size samples of mortar.
- .3 Manufacturer's Instructions.
 - .1 Submit manufacturer's installation instructions.

1.4 QUALITY ASSURANCE

- .1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.5 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal packaging material for recycling.

Part 2 Products

2.1 MATERIALS

- .1 Use same brands of materials and source of aggregate for entire project.
- .2 Mortar and grout: CSA A179.
- .3 Mortar for masonry.
 - .1 Loadbearing: type S based on Property specifications.
- .4 Following applies regardless of mortar types and uses specified above:
 - .1 Mortar for grouted reinforced masonry: type S based on Property specifications.
- .5 Grout: to CSA A179, Table 3.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.2 CONSTRUCTION

- .1 Do masonry mortar and grout work in accordance with CSA A179 except where specified otherwise.

3.3 CLEANING

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

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 01 33 00 - Submittals.
- .2 Section 04 05 10 - Common Work Results for Masonry.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA International).
 - .1 CAN/CSA-A23.1/A23.2-14, Concrete Materials and Methods of Concrete Construction/Methods of Test for Concrete.
 - .2 CSA-A370-14, Connectors for Masonry.
 - .3 CSA-A371-14, Masonry Construction for Buildings.
 - .4 CSA G30.14-M1983(R1998), Deformed Steel Wire For Concrete Reinforcement.
 - .5 CAN/CSA G30.18-09(R2014), Carbon Steel Bars for Concrete Reinforcement.
 - .6 CSA-S304-14, Design of Masonry Structures.
 - .7 CSA W186-M1990(R2012), Welding of Reinforcing Bars in Reinforced Concrete Construction.
 - .8 CSA A179-14, Mortar and Grout For Unit Masonry.

1.3 SUBMITTALS

- .1 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittals.
 - .2 Submit two copies of WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 33 00 – Submittals. Indicate VOC's for epoxy coatings and galvanized protective coatings and touch-up products.
- .2 Shop Drawings:
 - .1 Submit shop drawings in accordance with Section 01 33 00 - Submittals.
 - .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.
- .3 Manufacturer's Instructions:
 - .1 Submit manufacturer's installation instructions.

1.4 QUALITY ASSURANCE

- .1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.

- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.5 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal packaging material for recycling.
- .4 Divert unused metal materials from landfill to metal recycling facility.

Part 2 Products

2.1 MATERIALS

- .1 Bar reinforcement: to CSA-A371 and CAN/CSA G30.18, Grade 400R.
- .2 Wire reinforcement: to CSA-A371 and CSA G30.14, ladder type.
- .3 Connectors: to CSA-A370 and CSA-S304.
- .4 Corrosion protection: to CSA-S304, galvanized to CSA-S304 and CSA-A370.

2.2 FABRICATION

- .1 Fabricate reinforcing in accordance with CAN/CSA-A23.1 and Reinforcing Steel Manual of Standard Practice by the Reinforcing Steel Institute of Ontario.
- .2 Fabricate connectors in accordance with CSA-A370.
- .3 Obtain Departmental Representative's approval for locations of reinforcement splices other than shown on placing drawings.
- .4 Welding of reinforcement not permitted.
- .5 Ship reinforcement and connectors, clearly identified in accordance with drawings.

2.3 SOURCE QUALITY CONTROL

- .1 Upon request, provide Departmental Representative with certified copy of mill test report of reinforcement steel and connectors, showing physical and chemical analysis.
- .2 Upon request inform Departmental Representative of proposed source of material to be supplied.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.2 GENERAL

- .1 Supply and install masonry connectors and reinforcement in accordance with CSA-A370, CSA-A371, CAN/CSA-A23.1 and CSA-S304.1 unless indicated otherwise.
- .2 Prior to placing concrete, mortar or grout, obtain Departmental Representative's approval of placement of reinforcement and connectors.
- .3 Supply and install additional reinforcement to masonry as indicated.

3.3 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.

3.4 GROUTING

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

3.5 ANCHORS

- .1 Supply and install metal anchors as indicated.

3.6 LATERAL SUPPORT AND ANCHORAGE

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

3.7 FIELD BENDING

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

3.8 FIELD TOUCH-UP

- .1 Touch up damaged and cut ends of epoxy coated or galvanized reinforcement steel and connectors with compatible finish to provide continuous coating.

3.9 CLEANING

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

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 04 05 10 - Common Work Results for Masonry.
- .2 Section 04 05 12 - Mortar and Masonry Grout.
- .3 Section 04 05 19 - Masonry Anchorage and Reinforcing.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CAN/CSA A165 SERIES-14, CSA Standards on Concrete Masonry Units.

1.3 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal packaging material for recycling.
- .4 Divert damaged or unused concrete materials from landfill to local facility.

Part 2 Products

2.1 MATERIALS

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

Part 3 Execution

3.1 INSTALLATION

- .1 Concrete block units.
 - .1 Bond: running.
 - .2 Coursing height: 200 mm for one block and one joint.

- .3 Jointing: concave where exposed or where paint or other finish coating is specified.
- .2 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 400 mm.

3.2 CLEANING

- .1 Standard block: Allow mortar droppings on masonry to partially dry then remove by means of trowel, followed by rubbing lightly with small piece of block and finally by brushing.

END OF SECTION