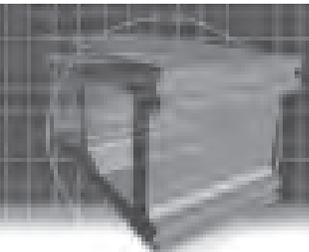




Canadian Concrete Masonry Producers' Association

CSA 165.1 Specifications & General Specifications Notes



CCMPA SPECIFICATIONS

All concrete masonry units are manufactured to CCMPA and C.S.A. Standard CAN3-A165.1 requirements. This Standard sets forth the required physical properties for concrete masonry units which are shown in the table below.

TABLE 9.0 - CCMPA SPECIFICATIONS				
FACET	SYMBOL	PHYSICAL PROPERTIES		NOTES
FIRST	H	HOLLOW		1.0
	S	SOLID (AS DEFINED)		1.0
	Sc	SOLID (WITHOUT CORES)		3.0
SECOND		MINIMUM MPa COMPRESSIVE STRENGTH		
		AVERAGE OF 3 UNITS	UNIT MINIMUM	
	15	15	12.8	1.0
	20	20	17.0	3.0
	30	30	25.5	3.0
THIRD		CONCRETE DENSITY (kg/m³)	ABSORPTION MAXIMUM (kg/m³)	
	A	GREATER THAN 2000	175	1.0
	B	1800 - 2000	200	2.0
	C	1700 - 1800	225	1.0
	D	LESS THAN 1700	300	3.0
	N	NO LIMITS	NO LIMITS	
FOURTH		LINEAR SHRINKAGE	MOISTURE CONTENT MAXIMUM AS % OF ABSORPTION MAXIMUM	
			RH > 75%	RH < 75%
	M	LESS THEN 0.03%	45	40
		0.03% - 0.045%	40	35
	GREATER THAN 0.045%	35	30	
O	NO LIMITS	NO LIMITS		

CCMPA SPECIFICATIONS COMMENTARY

Designers should take note that all facet combinations are not normally produced. However, a wide selection of product is commonly available from all Members, thereby ensuring that the majority of technical design challenges can be immediately satisfied with readily available material.

This specification format however, does not address the other familiar block properties such as fire resistance ratings, thermal resistance, sound transmission classifications and unit size. For this information, one must refer to the specific sections within this manual.

This specification identification reference is known as the "Four Facet" system. Each facet is referred to by either a letter or number, never by a combination of two or more symbols per facet and each facet is separated by a slash. e.g. H/15/A/M refers to Hollow 15 MPa Normal Weight block with known moisture content. Unit size distinction is generally placed on the drawings, i.e. floor plan(s) and/or wall section(s).

Explanation

The specification facet breakdown is as follows:

FIRST FACET

This facet identifies the percentage content of the unit. The symbols H, S and Sf indicate less than 75%, greater than 75% but less than 100% and 100% solid content respectively. This percentage is determined by the net cross sectional area as a percentage of the gross cross sectional area of the unit.

SECOND FACET

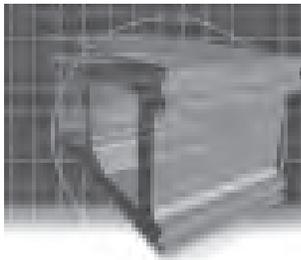
The concrete material strength is shown in this facet. The metric term "MPa" is an absolute unit of measurement, however for engineering purposes this measurement correlates to kN/mm². Therefore 15MPa equals 15 kN/mm². The specified strength of the unit is based on test results of three units with a minimum strength as noted.

THIRD FACET

Reference to oven dry concrete density (kg/m³) in addition to the allowable absorption maximum as a percentage of concrete density. The aggregates that are used in the manufacturing process of concrete block are siliceous gravel, limestone and expanded slag.

FOURTH FACET

This facet represents the maximum moisture content at time of delivery to the job site expressed as a percentage of actual absorption as it relates to climactic relative humidity and linear shrinkage of the concrete unit.



GENERAL SPECIFICATION NOTES
MASONRY PROCEDURES

1 GENERAL

1.1 RELATED WORK

- 1.1.1 Mortar and Grout for Masonry Section 04100
- 1.1.2 Masonry Accessories Section 04150
- 1.1.3 Masonry Reinforcing and Connectors Section 04160

1.2 REFERENCE STANDARD

- 1.2.1 Do masonry work in accordance with CAN3-A371 except where specified otherwise.

1.3 JOB MOCK-UP

NOTE: For federal government projects refer to 0

- 1.3.1 Submit mock-ups in accordance with Shop Drawings, Product Data, Samples and Mock-ups.

NOTE: For private sector projects refer to 0

- 1.3.2 Submit mock-ups in accordance with Quality Control.

1.4 SOURCE QUALITY CONTROL

NOTE: For federal government projects refer to 0

- 1.4.1 Submit laboratory test reports in accordance with Shop Drawings, Product Data, Samples and Mock-ups and O.C.B.A. Quality Assurance test certificate and the Department of National Defence Construction Materials Board (DND/CMB) Product Acceptance Certificate.

NOTE: For private sector projects refer to 0 and 0

- 1.4.2 Submit laboratory test reports in accordance with submittal requirements.

- 1.4.3 Submit laboratory test and O.C.B.A. Quality Assurance test certificate [certifying compliance of masonry units (and mortar ingredients) with specification requirements].

2 PRODUCTS

2.1 SAMPLES

NOTE: For federal government projects refer to 0

- 2.1.1 Submit samples in accordance with Shop Drawings, Product Data, Samples and Mock-ups.

NOTE: Use 0 for private sector projects

- 2.1.2 Submit samples in accordance with Submittal requirements.

MASONRY PROCEDURES CONTINUED...

- 2.1.3 Submit samples:
 - 2.1.3.1 [two] of each type of masonry unit specified
 - 2.1.3.2 [one] of each type of masonry accessory specified
 - 2.1.3.3 [one] of each type of masonry reinforcement and tie proposed for use
 - 2.1.3.4 as required for testing purposes

2.2 PRODUCT DELIVERY, STORAGE AND HANDLING

- 2.2.1 Deliver materials to job site in dry condition.
- 2.2.2 Keep materials dry until use.
- 2.2.3 Store under waterproof cover on pallets or plank platforms held off ground by means of plank or timber skids.
- 2.2.4 Protect masonry units from damage.

NOTE: Extra on-site handling of lightweight concrete units should be avoided.

2.3 COLD WEATHER REQUIREMENTS

- 2.3.1 General Contractor shall provide heat enclosures and heat as required.
- 2.3.2 Work to be undertaken shall be carried out according to CAN3-A371, Clause 5.15.2.

2.4 HOT WEATHER REQUIREMENTS

- 2.4.1 Protect freshly laid masonry from drying too rapidly, by means of waterproof, non-staining coverings.

2.5 PROTECTION

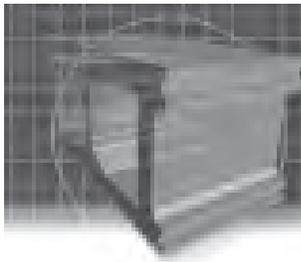
- 2.5.1 Keep masonry dry using waterproof, non-staining coverings that extend over walls and down sides sufficient to protect walls from wind driven rain, until masonry work is completed and protected by flashings or other permanent construction.
- 2.5.2 Protect masonry and other work from marking and other damage. Protect completed work from mortar droppings. Use non-staining coverings.

3 EXECUTION

3.1 WORKMANSHIP

- 3.1.1 Build masonry plumb, level, and true to line, with vertical joints in alignment.
- 3.1.2 Lay out coursing and bond to achieve correct coursing heights, and continuity of bond above and below openings, with minimum of cutting.

NOTE: Mason Contractor must have proven experience on similar job.



MASONRY PROCEDURES CONTINUED...

3.2 TOLERANCES

3.2.1 Tolerances in notes to Clause 5.3 of CAN3-A371 apply.

3.3 EXPOSED MASONRY

3.3.1 Do not use chipped, cracked, and otherwise damaged units in exposed and loadbearing masonry walls.

3.4 MORTAR JOINT

3.4.1 Mortar joint thickness shall conform to CAN3-A371 Standard, Clause 5.2.5.

3.4.2 *Exterior - Exposed Wall*

3.4.2.1 Allow joints to set just enough to remove excess water, then tool with round jointer to provide smooth, compressed, uniformly concave joints.

NOTE: All exposed mortar joints shall be concave.

3.4.3 *Interior - Exposed and Non-Exposed Walls*

3.4.3.1 Allow joints to set just enough to remove excess water, then tool with round jointer to provide smooth, compressed, uniformly concave joints as indicated on drawings.

3.4.3.2 Allow joints to set just enough to remove excess water, then rake joints uniformly to 6 mm depth and compress with square tool to provide smooth, compressed, raked joints of uniform depth where raked joints are indicated on drawings.

3.4.3.3 Strike flush all joints concealed in walls and joints in walls to receive plaster, tile insulation, or other applied material except paint or similar thin finishing coating.

*NOTES: 1. Unique designs and applications may require special considerations.
2. Indicate non-concave joint locations.*

3.5 CUTTING

3.5.1 Cut out neatly for electrical switches, outlet boxes, and other recessed or built-in objects.

3.5.2 Make cuts straight, clean, and free from uneven edges.

3.6 PRODUCTS BUILT-IN BUT NOT SUPPLIED UNDER THIS SECTION

3.6.1 Build in items required to be built into masonry.

3.6.2 Prevent displacement of built-in items during construction. Check plumb, location and alignment frequently, as work progresses.

3.6.3 Brace door jambs to maintain plumb. Fill spaces between jambs and masonry with mortar.

3.6.4 Metal Fabrications - Section 05500: supply of miscellaneous metal fabrications for installation by this section.

3.6.5 Metal Doors and Frames - Section 08100: supply and setting of metal frames for building in by this section.

MASONRY PROCEDURES CONTINUED...

3.7 PARGING

- 3.7.1 Use parging mortar specified in 'Mortar and Grout' Section 04100.
- 3.7.2 Parging shall be applied in two coats not less than 10 mm thick.
- 3.7.3 First coat shall be roughened to provide a good bond for the second coat.
- 3.7.4 The first coat shall be at least 24 hours old before second coat is applied.
- 3.7.5 The first coat shall be dampened with water before second coat is applied.

3.8 SUPPORT OF LOADS

- 3.8.1 Use [_____]MPa strength concrete, where concrete fill is used in lieu of solid units.
- 3.8.2 Use grout to CSA A179 where grout is used in lieu of solid units.
- 3.8.3 Install building paper below voids to be filled with grout; keep paper 25 mm back from faces of units.

3.9 PROVISION FOR MOVEMENT

- 3.9.1 Leave [_____] mm deflection space below shelf angles.
NOTE: Re 0 Drawings should show means of stabilizing masonry, and treatment at shelf angles. Specify caulking, angle retainers, and filling of spaces in other Sections, as appropriate.
- 3.9.2 Leave [_____] mm space between top of non-loadbearing walls/partitions and structural elements. Do not use wedges.

3.10 LOOSE STEEL LINTELS

- 3.10.1 Install loose steel lintels. Centre over opening width.

3.11 TEMPORARY WALL BRACING

- 3.11.1 General Contractor shall be responsible for temporary engineered wall bracing design.
- 3.11.2 Brace masonry walls as indicated by engineered drawing(s) to resist wind pressure and other lateral loads during construction period.

3.12 CONTROL JOINTS

- NOTE: Re 12.1 Drawing should show locations and type(s) of control joint(s).*
- 3.12.1 Provide continuous control joints [as indicated].
- 3.12.2 Contractor shall break vertical mortar bond with [extruded neoprene gasket] or [building paper].
- 3.12.3 Control joint shall be primed to prevent drying out of caulking material.



MASONRY PROCEDURES CONTINUED...

3.13 TESTING

3.13.1 Inspection and testing will be carried out by Testing Laboratory designated by [Owner] or [Consultant] or his [General Contractor].

NOTE: Use 0 for federal government projects

3.13.2 [Consultant] or [Owner] will pay costs for testing.

NOTE: Use 0 for private sector projects

3.13.3 Cost of testing will be paid from General Contractor's cash allowance.

MORTAR AND GROUT FOR CONCRETE BLOCK

01 GENERAL

1.1 RELATED WORK

1.1.1 Masonry Procedures Section 04050

1.2 REFERENCE STANDARD

1.2.1 Masonry mortar and grout work should be in accordance with CSA A371 except where specified otherwise.

1.2.2 Type S hydrated lime mortar shall conform to ASTM C-207.

1.3 SAMPLES

NOTE: Use 0 for federal government projects

1.3.1 Submit samples in accordance with Shop Drawings, Product Data, Samples and Mock-Ups.

NOTE: Use 0 for private sector projects

1.3.2 Submit samples in accordance with Submittal requirements.

1.3.3 Submit two [_____] size samples of [mortar] [coloured mortar].

2 PRODUCTS

2.1 MATERIALS

2.1.1 Mortar shall conform to CSA A179.

2.1.2 Mortar aggregate shall conform to CSA-A82.56-M1976.

2.1.3 Use aggregate passing 1.18 mm sieve where 6 mm thick joints are indicated.

2.1.4 Colour: ground coloured natural aggregates or metallic oxide pigments.

2.1.5 Dirt resistant additives: aluminum tristearate, calcium stearate or ammonium stearate.

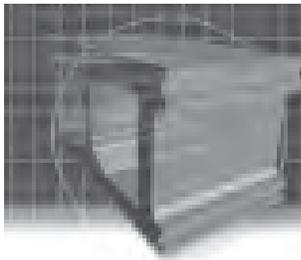
2.1.6 Water: free of deleterious matter and acids or alkalis.

2.2 MATERIAL SOURCE

2.2.1 Use same brands of materials and source of aggregate for entire project.

2.2.2 Air entrained cement and air entrained lime shall not be combined in the same mix.

2.2.3 Admixtures for mortar shall not be used without approval.



MORTAR AND GROUT FOR CONCRETE BLOCK CONTINUED...

2.3 MORTAR TYPES

2.3.1 Mortar for exterior masonry above grade:

2.3.1.1 *Loadbearing:* Type ([N] [S]) based on ([Property] [Proportion]) specifications.

2.3.1.2 *Non-loadbearing:* Type ([N] [S]) based on ([Property] [Proportion]) specifications.

2.3.1.3 *Parapet Walls, Chimneys, Unprotected Walls:* Type ([N] [S]) based on [Property] [Proportion] specifications.

2.3.2 Mortar for foundation walls and other exterior masonry at or below grade:
Type 'S' based on ([Property] [Proportion]) specifications.

2.3.3 Mortar for interior masonry:

2.3.3.1 *Loadbearing:* Type ([N] [S]) based on ([Property] [Proportion]) specifications.

2.3.3.2 *Non-loadbearing:* Type ([N]) based on ([Property] [Proportion]) specifications.

2.3.4 Following applies regardless of mortar types and uses specified above:

2.3.4.1 *Mortar for Grouted Reinforced Masonry:* Type ([S]) based on ([Property] [Proportion]) specifications

2.3.4.2 *Mortar for Pointing:* Type [_____] based on Proportion specifications.

2.4 WHITE MORTAR

NOTE: White sand should be used to retain colour balance with concrete masonry units.

2.4.1 *White mortar:* use [white silica sand (or No.6 dolomite sand), white portland cement, and lime] [white silica sand (or No.6 dolomite sand) and white masonry cement] to produce applicable mortar type.

NOTE: Re 0 Indicate area for white mortar.

2.4.2 Use white mortar for [_____].

2.5 COLOURED MORTAR

NOTE: Re 0 Colour match is normally achieved when admixture is between 4 - 5% o cement content by mass.

2.5.1 *Coloured mortar:* colour admixture shall not exceed 10% of cement content by mass, or integrally coloured masonry cement, to produce coloured mortar to match approved sample.

NOTE: Re 0 Indicate masonry work requiring use of coloured mortar. Sample of coloured mortar must be available at time of tendering, as costs vary with colour. Note that when admixtures are used, property specifications alternative of CSA A179 applies.

2.5.2 Use coloured mortar for [_____].

NOTE: Material Source - Refer to CCMPA MASONRY REINFORCING & ACCESSORY SUPPLIERS (Page 1-4)

MORTAR AND GROUT FOR CONCRETE BLOCK

2.6 DIRT-RESISTANT MORTAR

2.6.1 For dirt-resistant mortar add aluminium tristearate, calcium stearate, or ammonium stearate to mortar in amount not exceeding 3% of portland cement weight.

NOTE: Re 0 Indicate masonry requiring use of dirt-resistant mortar. Use where maximum dirt-resistance is desired. Note that when admixtures are used, the Property Specification alternative of CSA A179 applies.

2.6.2 Use dirt-resistant mortar for [____].

2.7 GROUT

2.7.1 Grout shall conform to CSA A179 Table 3.

2.7.2 Minimum compressive strength [____] MPa at 28 days.

2.7.3 Grout following masonry components [____].

2.7.4 Water shall be free of deleterious matter and acids or alkalis.

2.7.5 Grout slump shall be not less than 200 mm and not more than 250 mm.

NOTE: Grout aggregate shall be clean, un-coated grains of sound material and conform to CAN3-A23.1-M90.

2.8 PARGING

NOTE: Re 0 Mortar Types 'S' OR 'N', are suitable for parging. Match mortar used for masonry, or use Type 'N' if masonry mortar is weaker than aforementioned types, or if type is not known.

2.8.1 Parging mortar shall be Type [____] to CSA A179.

3 EXECUTION

3.1 MIXING

3.1.1 Mix grout to semi-fluid consistency.

3.1.2 Grout Testing shall be in accordance with CSA-A179.

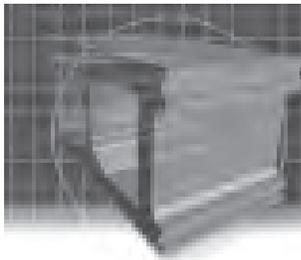
3.1.3 Incorporate [colour] [and (admixtures)] into mixes in accordance with manufacturer's instructions.

3.1.4 Use clean mixer for coloured mortar.

3.1.5 Lime mortar ingredients shall be mixed dry, then mixed again adding just enough water to produce damp unworkable mix that will retain its form when pressed into ball. Allow to stand for not less than 1 hour nor more than 2 hours then remix with sufficient water to produce mortar of proper consistency for pointing.

3.1.6 Use mortar within 2 hours after mixing.

3.1.7 Testing of mortar shall be in accordance with CSA-A179.



MASONRY ACCESSORIES

1 GENERAL

1.1 RELATED WORK

- 1.1.1 Masonry Procedures Section 04050
- 1.1.2 Masonry Reinforcing and Connectors Section 04160

1.2 RELATED SECTIONS

- 1.2.1 Section 03300: Cast-In-Place Concrete
- 1.2.2 Section 03400: Precast Concrete
- 1.2.3 Section 05510: Anchors to Masonry
- 1.2.4 Section 07196: Air Barriers
- 1.2.5 Section 07270: Fire Stops
- 1.2.6 Section 07900: Sealants
- 1.2.7 Section 07620: Parapets and Coping Flashing

2 PRODUCTS

2.1 MATERIALS

NOTE: Re 0 Revise text to suit selected filler

- 2.1.1 Control joint filler: purpose-made elastomer [_____] durometer hardness to ASTM D2240 of size and shape indicated.
- 2.1.2 Nailing inserts: 0.6 mm thick purpose-made galvanized steel inserts for setting in mortar joints.

NOTE: Re 0 This is by no means an all inclusive list of approved flashing materials.

2.1.3 Concealed composite masonry flashing:

- 2.1.3.1 Two (2) 0.05 mm polyethylene film bonding 81.35 g/m² asphalt treated crepe kraft and fibreglass scrim.
- 2.1.3.2 610 g/m² copper sheet asphalt bonded to two layers of crepe paper [bonded together with asphalt and] reinforced with 50 x 50 mm glass fiber scrim.
- 2.1.3.3 0.18 mm metal foil and polyester film bonded to fibreglass scrim.
- 2.1.3.4 0.50 mm minimum thick polyethylene bonded to asphalt treated crepe paper reinforced with 50 x 50 mm glass fibre scrim.
- 2.1.3.5 0.20 mm vinyl ethylene film bonded to fibreglass reinforcement.
- 2.1.3.6 Or approved equal to one of the above materials.

- 2.1.4 Weep hole vents shall be made from [PVC] [galvanized steel], [polypropylene 6 polymer], designed to drain cavity moisture to exterior.

MASONRY ACCESSORIES CONTINUED...

3 EXECUTION

3.1 CONTROL JOINTS

3.1.1 Install control joints at locations indicated to maintain construction integrity.

3.2 WEEP HOLE VENTS

3.2.1 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 800 mm O.C.

3.3 NAILING INSERTS

3.3.1 Install nailing inserts in mortar joints at 400 mm O.C. each way, for attachment of wall strapping.

3.4 MASONRY FLASHING

3.4.1 Install flashings in masonry in accordance with CAN3-A371 as follows:

3.4.1.1 Install flashings under exterior masonry walls bearing on foundation walls or slabs; shelf angles, and steel lintel angles at wall openings. Install flashing as indicated.

3.4.1.2 In double wythe walls and veneered walls, carry flashings from front edge of masonry, under outer wythes, then up backing not less than 150 mm, and as follows:

3.4.1.2.1 For masonry backing embed flashing 25 mm in joint

3.4.1.2.2 For concrete backing, insert flashing into reglets and caulk joint

3.4.1.2.3 For frame backing, secure flashing to studs (sheathing) behind moisture barrier

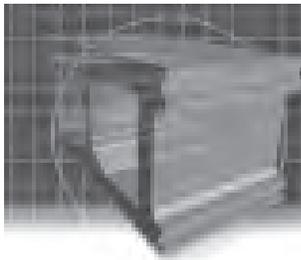
3.4.1.3 Lap joints 150 mm and seal with compatible adhesive.

3.4.1.4 Flashing over openings shall be "dams" at both ends to prevent water from travelling horizontally past the flashing ends.

3.4.1.5 Horizontal (base) flashing shall be returned a minimum of 100 mm around corner to overlap abutting flashing. Overlapped flashing shall be sealed with compatible adhesive.

3.4.1.6 Protect base wall flashing from mortar droppings

NOTE: Unprotected base flashing may be damaged during construction.



MASONRY REINFORCING AND CONNECTORS

NOTE: Details of masonry reinforcing and connectors must be indicated on drawings. Their adequacy shall be confirmed by structural design engineer.

1 GENERAL

1.1 REFERENCE STANDARDS

1.1.1 Do reinforcing and connecting of masonry in accordance with CAN3-A370 and CAN3-A371 unless specified otherwise.

1.2 DEFINITIONS

1.2.1 Moist environments referred to in Clause 4.2 of CAN3-A370.

2 PRODUCTS

2.1 MATERIALS

2.1.1 Connectors shall conform to CAN3-A370.

NOTE: Connector selection and spacing in seismic zones 3 and 4 must be engineered.

2.1.2 Reinforcement shall conform to CAN3-A371.

2.1.3 For reinforced masonry requirements refer to structural drawing and specification section [_____].

3 EXECUTION

3.1 INSTALLATION

3.1.1 Install masonry connectors and reinforcement in accordance with CAN3-A370 and as indicated.

3.1.2 Corrugated strip ties shall be spaced [mm] horizontal and [mm] vertical.

3.1.3 'Z' wire ties shall be spaced [mm] horizontal and [mm] vertical.

3.1.4 Rectangular wire ties shall be spaced [mm] horizontal and [mm] vertical.

3.1.5 Continuous welded truss ties shall be spaced [mm] horizontal and [mm] vertical.

3.1.6 Dovetail anchors shall be spaced [mm] horizontal and [mm] vertical.

3.1.7 Corrugated dovetail anchors shall be spaced [mm] horizontal and [mm] vertical.

3.1.8 Bar anchors []W x []T x []L + []hook ends shall be spaced every [mm].

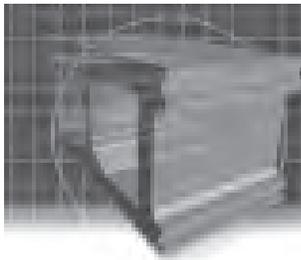
3.1.9 Anchor bolt(s) [mm]Ø/ at [mm] O.C. as indicated on drawings.

3.1.10 Vertical reinforcing steel shall have a minimum clearance of 12 mm from the masonry and not less than one bar diameter between bars.

MASONRY REINFORCING AND CONNECTORS CONTINUED...

- 3.1.11 Provide clean-out openings at the bottom of all cores containing vertical reinforcement at each lift or pour.
- 3.1.12 All block cores containing vertical reinforcement and/or anchor bolts shall be solidly filled with grout.
- 3.1.13 Steel connections shall be inspected before grouting.

NOTE: Material Source - Refer to CCMPA MASONRY REINFORCING & ACCESSORY SUPPLIER (Page 1-4)



CONCRETE UNIT MASONRY

1 GENERAL

1.1 RELATED WORK

- 1.1.1 Masonry Procedures Section 04050
- 1.1.2 Mortar and Grout for Masonry Section 04100
- 1.1.3 Masonry Accessories Section 04150
- 1.1.4 Masonry Reinforcing and Connectors Section 04160

2 PRODUCTS

NOTE: For 0 If more than one type of masonry unit required, identify each with a code reference. Describe each type of masonry unit using a separate paragraph. Included below is text for several types.

2.1 Standard concrete masonry units [Type (____)]: to CAN3-A165.1.

NOTE: Re 0 Refer to CAN3-A165.1 and classify units using four facet system. For example, H/15/A/M means a hollow unit with a 15MPa compressive strength based on net area using normal weight concrete weighing over 2100 kg/m² and known moisture content.

- 2.1.1 Classification: [____]/[____]/[____]/[____]
- 2.1.2 Size: CCMPA Metric Modular

NOTE: Re 0 Show special shapes and face profiles on drawings

- 2.1.3 Special shapes: provide [square] [bull-nosed] units for exposed corners. Provide purpose-made shapes for lintels and bond beams. Provide additional special shapes as indicated.
- 2.1.4 Fire resistant characteristics: refer to The Supplement to the National Building Code for fire resistance ratings based on aggregate type and equivalent thickness of unit.

NOTE: Re 0 In addition to the code reference designation on drawings the fire resistance rating must be indicated for each concrete masonry unit wall requiring such rating, for example a wall requiring a 2 h fire-resistance rating would be designated as "Type [____] concrete masonry unit 2 h fire-resistance rating".

- 2.1.5 Special fire resistant concrete masonry units [Type (____)]: to CAN3-A165.1) as modified below.
- 2.1.6 Classification: [H/15/C/M] except as modified by fire resistance requirements specified below.
- 2.1.7 Size: CCMPA Metric Modular.

NOTE: Re 0 Show special shapes on drawings

- 2.1.8 Special shapes: provide [square] [bull-nosed] units for exposed corners. Provide purpose-made shapes for lintels and bond beams [and provide additional shapes as indicated].
- 2.1.9 Architectural Concrete Units
- 2.1.9.1 All units shall conform to CAN3-165.1.



CONCRETE UNIT MASONRY

- 2.1.9.2 Refer to architectural drawings for unit types, quantity required and locations.
- 2.1.9.3 Colour for architectural concrete units shall be [colour] for [type].

NOTES:

1. Architectural concrete units are custom manufactured for each order, therefore, one should ensure that correct quantity is ordered to complete the entire job.
2. Manufacturer will undertake all the necessary steps, however, colour matching on second orders cannot be guaranteed.
3. Client/Manufacturer shall not be held responsible for product over-ordering.

- 2.1.10 All damaged units not reported as damaged at time of delivery are presumed to have been damaged after delivery and therefore shall be the responsibility of the contractor to make good.

3 EXECUTION

NOTE: Include under 3.1 requirements that are not covered in Masonry Procedures.

3.1 LAYING CONCRETE MASONRY UNITS

- 3.1.1 Bond [running] [stack]
- 3.1.2 Coursing height: [200] mm for one block and one joint
- 3.1.3 Jointing: concave where exposed or where paint or other finish coating is specified.

3.2 CONCRETE MASONRY LINTELS

- 3.2.1 Install reinforced concrete block lintels over openings in masonry where steel or reinforced concrete lintels are not indicated.
 - 3.2.2 End bearing: not less than [200] mm [as indicated on drawings].
- NOTE:* Masonry end bearing area capacity should be verified.

3.3 CLEANING

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

-NOTE-

The intent of the Specification Notes is by no means an all inclusive masonry specification and therefore should only be used as a guide.

Every effort has been made to ensure that the contents are as accurate and complete as possible. The Canadian Concrete Masonry Producers' Association cannot accept responsibility for any errors or omissions. Specification Writing should be undertaken by a Registered Specification Writer (RSW). Comments for improvements are welcome and will be considered for future updating.

Please forward your comments to:
CANADIAN CONCRETE MASONRY PRODUCERS' ASSOCIATION
250 Consumers Road, Suite 301
Toronto, Ontario M2J 4V6