

Part I General

I.1 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CSA-A165 Series-04, Standards on Concrete Masonry Units.
 - .2 CSA A179-04, Mortar and Grout for Unit Masonry.
 - .3 CSA-A371-04, Masonry Construction for Buildings.
- .2 International Masonry Industry All-Weather Council (IMIAC)
 - .1 Recommended Practices and Guide Specification for Hot and Cold Weather Masonry Construction.

I.2 ADMINISTRATIVE REQUIREMENTS

- .1 Pre-installation meetings: comply with Section 01 31 19 - Project Meetings. Conduct pre-installation meeting one week prior to commencing work of this Section on-site installations to:
 - .1 Verify project requirements, including mock-up requirements.
 - .2 Verify substrate conditions.
 - .3 Co-ordinate products, installation methods and techniques.
 - .4 Sequence work of related sections.
 - .5 Co-ordinate with other building subtrades.
 - .6 Review manufacturer's installation instructions.
 - .7 Review masonry cutting operations, methods and tools and determine worker safety and protection from dust during cutting operations.
 - .8 Review warranty requirements.
- .2 Sequencing: sequence with other work in accordance with Section Section 01 32 16.07 - Construction Progress Schedules - Bar (GANTT) Chart. Comply with manufacturer's written recommendations for sequencing construction operations.
- .3 Scheduling: schedule with other work in accordance with Section 01 32 16.07 - Construction Progress Schedules - Bar (GANTT) Chart.

I.3 ACTION SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Provide manufacturer's printed product literature, specifications and datasheet and include product characteristics, performance criteria, limitations and colours.
 - .2 Provide two copies of Workplace Hazardous Materials Information System (WHMIS) - Material Safety Data Sheets (MSDS) in accordance with Section 01 35 29.06 - Health and Safety Requirements 01 35 43 - Environmental Procedures.

I.4 INFORMATION SUBMITTALS

- .1 Certificates: provide manufacturer's product certificates certifying materials comply with specified requirements.
- .2 Test and Evaluation Reports:
 - .1 Provide certified test reports in accordance with Section 01 29 83 - Payment Procedures for Testing Laboratory Services.
 - .2 Test reports to certify compliance of masonry units and mortar ingredients with specified performance characteristics and physical properties.
 - .3 Provide data for masonry units, in addition to requirements set out in referenced CSA and ASTM Standards, indicating initial rates of absorption.
- .3 Installer Instructions: provide manufacturer's installation instructions, including storage, handling, safety and cleaning.
- .4 Manufacturer's Reports: provide written reports prepared by manufacturer's on-site personnel to include:
 - .1 Verification of compliance of work with Contract.
 - .2 Site visit reports providing detailed review of installation of work, and installed work.

I.5 CLOSEOUT SUBMITTALS

- .1 Provide manufacturer's instructions for care, cleaning and maintenance of prefaced masonry units for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

I.6 EXTRA MATERIALS

- .1 Provide manufacturer's instructions in accordance with Section 01 78 00 - Closeout Submittals covering maintenance requirements and parts catalogue, with cuts and identifying numbers.

I.7 QUALITY ASSURANCE

- .1 Qualifications:
 - .1 Manufacturer: capable of providing field service representation during construction and approving application method.
 - .2 Installer: experienced in performing work of this section who has specialized in installation of work similar to that required for this project.
 - .3 Masons: company or person specializing in masonry installations with 5 years experience with masonry work similar to this project.

I.8 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .3 Storage and Handling Protection:

- .1 Keep materials dry until use except where wetting of bricks is specified.
- .2 Store under waterproof cover on pallets or plank platforms held off ground by means of plank or timber skids.
- .3 Packaging Waste Management:
 - .1 Remove for reuse and return by manufacturer of pallets, crates, padding, packaging materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.

1.9 SITE CONDITIONS

- .1 Ambient Conditions: assemble and erect components when temperatures are above 4 degrees C.

1.10 WARRANTY

- .1 For Work in this Section 04 05 00 - Common Work Results for Masonry, 12 months warranty period is extended to 24 months.

Part 2 Products

2.1 MANUFACTURERS

- .1 Ensure manufacturer has minimum 5 years experience in manufacturing components similar to or exceeding requirements of project.

2.2 MATERIALS

- .1 Masonry materials are specified elsewhere in related Sections:
 - .1 Section 04 22 00 – Concrete Unit Masonry.

Part 3 Execution

3.1 INSTALLERS

- .1 Experienced and qualified masons to carry out erection, assembly and installation of masonry work.

3.2 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.

3.3 EXAMINATION

- .1 Examine conditions, substrates and work to receive work of this Section.
 - .1 Co-ordinate with Section 01 71 00 - Examination and Preparation.
- .2 Examine openings to receive masonry units. Verify opening size, location, and that opening is square and plumb, and ready to receive work of this Section.

- .1 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
- .2 Proceed with installation after unacceptable conditions have been remedied and after receipt of written approval from Departmental Representative.
- .3 Verification of Conditions:
 - .1 Verify that:
 - .1 Substrate conditions which have been previously installed under other sections or contracts, are acceptable for product installation in accordance with manufacturer's instructions prior to installation of concrete block.
 - .2 Field conditions are acceptable and are ready to receive work.
 - .3 Built-in items are in proper location, and ready for roughing into masonry work.
 - .2 Commencing installation means acceptance of existing substrates.

3.4 PREPARATION

- .1 Surface Preparation: prepare surface in accordance with manufacturer's written recommendations and co-ordinate with Section 01 71 00 - Examination and Preparation.
- .2 Establish and protect lines, levels, and coursing.
- .3 Protect adjacent materials from damage and disfiguration.

3.5 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, respecting construction tolerances permitted by CSA-A371.
- .3 Layout coursing and bond to achieve correct coursing heights, and continuity of bond above and below openings, with minimum of cutting.

3.6 CONSTRUCTION

- .1 Exposed masonry:
 - .1 Remove chipped, cracked, and otherwise damaged units, in accordance with CSA A-165, 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.
 - .2 Allow joints to set just enough to remove excess water.
 - .3 Strike flush joints concealed in walls and joints in walls to receive plaster, tile, insulation, or other applied material except paint or similar thin finish coating.
- .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 Provision for movement:
 - .1 Leave 6 mm space between top of non-load bearing walls and partitions and structural elements. Do not use wedges.
 - .2 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 reviewed by Departmental Representative.
 - .3 Make good existing work. Use materials to match existing.

3.7 SITE TOLERANCES

- .1 Tolerances in notes to CSA-A371 apply.

3.8 FIELD QUALITY CONTROL

- .1 Site Tests, Inspection:
 - .1 Perform field inspection and testing in accordance with Section 01 45 00 - Quality Control.
 - .2 Notify inspection agency minimum of 24 hours in advance of requirement for tests.

3.9 CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning.
- .2 Progress Cleaning: in accordance with related masonry sections.
- .3 Final Cleaning:
 - .1 Perform cleaning after installation to remove construction and accumulated environmental dirt.
 - .2 Upon completion of installation and verification of performance of installation, remove surplus materials, rubbish, tools and equipment barriers.
- .4 Waste Management: separate waste materials for recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal
 - .1 Divert unused or damaged masonry units and glass block from landfill as specified in Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

3.10 PROTECTION

- .1 Temporary Bracing:
 - .1 Provide temporary bracing of masonry work during and after erection until permanent lateral support is in place.
 - .2 Bracing approved by Departmental Representative.
 - .3 Brace masonry walls as necessary to resist wind pressure and lateral forces during construction.

END OF SECTION

Part I General

I.1 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CAN/CSA-A23.1/A23.2-04, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.
 - .2 CAN/CSA A179-04, Mortar and Grout for Unit Masonry.
 - .3 CAN/CSA A371-04, Masonry Construction for Buildings.
 - .4 CAN/CSA-A3000-03, Cementitious Materials Compendium; CAN/CSA-A3002-03, Masonry and Mortar Cement.

I.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Product Data:
 - .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Provide manufacturer's printed product literature, specifications and datasheets. Include product characteristics, performance criteria, and limitations.
 - .3 Provide two copies of Workplace Hazardous Materials Information System (WHMIS) - Material Safety Data Sheets (MSDS) in accordance with Section 01 35 29.06 - Health and Safety Requirements 01 35 43 - Environmental Procedures. Indicate VOC's mortar, grout, parging, colour additives and admixtures. Expressed as grams per litre (g/L).
- .2 Manufacturer's Instructions:
 - .1 Provide manufacturer's installation instructions.

I.3 QUALITY ASSURANCE

- .1 Test Reports: certified test reports including sand gradation tests in accordance with CAN/CSA A179 showing compliance with specified performance characteristics and physical properties, and in accordance with Section 04 05 00 - Common Work Results for Masonry supplemented as follows:
 - .1 Submit laboratory test reports in accordance with Section 01 29 83 - Payment Procedures: Testing Laboratory Services.
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

I.4 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store and handles masonry mortar and grout materials in accordance with Section 01 61 00 - Common Product Requirements, supplemented as follows:
 - .1 Deliver prepackaged, dry-blended mortar mix to project site in labelled plastic-lined bags each bearing name and address of manufacturer, production codes or batch numbers, and colour or formula numbers.
 - .2 Maintain mortar, grout and packaged materials clean, dry, and protected against dampness, freezing, traffic and contamination by foreign materials.

- .2 Packaging Waste Management: remove for return by manufacturer of pallets crates padding packaging materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

I.5 SITE CONDITIONS

- .1 Ambient Conditions: maintain materials and surrounding air temperature to:
 - .1 Minimum 10 degrees C prior to, during, and 48 hours after completion of masonry work.
 - .2 Maximum 32 degrees C prior to, during, and 48 hours after completion of masonry work.

Part 2 Products

2.1 MATERIALS

- .1 Use same brands of materials and source of aggregate for entire project.
- .2 Cement:
 - .1 Portland Cement: to CAN/CSA-A3000, Type GU - General use hydraulic cement (Type 10).
 - .1 Use low VOC products in compliance with SCAQMD Rule 1168.
 - .2 Masonry Cement: to CAN/CSA-A3002 and CAN/CSA A179, Type N S.
 - .3 Mortar Cement: to CAN/CSA-A3002 and CAN/CSA A179, Type N S integral water repellents.
 - .1 Use low VOC products in compliance with SCAQMD Rule 1168.
 - .4 Packaged Dry Combined Materials for mortar: to CAN/CSA A179, Type N, using gray colour cement.
- .3 Aggregate: supplied by one supplier.
 - .1 Fine Aggregate: to CAN/CSA A179, natural sand or manufactured sand.
 - .2 Course Aggregate: to CAN/CSA A179.
- .4 Water: clean and potable.
- .5 Lime:
 - .1 Quick Lime: to CAN/CSA A179, Type N NA S SA.
 - .2 Hydrated Lime: to CAN/CSA A179, Type S SA.
- .6 Bonding Agent: epoxy type.
- .7 Polymer Latex: organic polymer latex admixture of butadiene-styrene type non-emulsifiable bonding admixture.

2.2 MORTAR MIXES

- .1 Mortar for interior masonry:
 - .1 Non-Loadbearing: N based on property proportion specifications.

2.3 MORTAR MIXING

- .1 Use pre-blended, pre-coloured mortar prepackaged under controlled factory conditions. Ingredients batching limitations to be within 1% accuracy.
- .2 Mix mortar ingredients in accordance with CAN/CSA A179 in quantities needed for immediate use.
- .3 Maintain sand uniformly damp immediately before mixing process.
- .4 Do not use anti-freeze compounds including calcium chloride or chloride based compounds.
- .5 Do not add air entraining admixture to mortar mix.
- .6 Use a batch type mixer in accordance with CAN/CSA A179.
- .7 Pointing mortar: prehydrate pointing mortar by mixing ingredients dry, then mix 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 no more than 2 hours then remix with sufficient water to produce mortar of proper consistency for pointing.
- .8 Re-temper mortar only within two hours of mixing, when water is lost by evaporation.
- .9 Use mortar within 2 hours after mixing at temperatures of 32 degrees C, or 2-1/2 hours at temperatures under 10 degrees C.

2.4 MIX TESTS

- .1 Testing Mortar Mix:
 - .1 Test mortar to requirements of Section 01 45 00 - Quality Control, and in accordance with CAN/CSA A179, for mortar based on property specification proportion specification. Test prior to construction for:
 - .1 Compressive strength.
 - .2 Consistency.
 - .3 Mortar aggregate ratio.
 - .4 Sand/cement ratio.
 - .5 Water content and water/cement ratio.
 - .6 Air content.
 - .7 Splitting tensile strength.

Part 3 Execution

3.1 EXAMINATION

- .1 Request inspection of spaces to be grouted.

3.2 PREPARATION

- .1 Apply bonding agent to existing concrete surfaces.
- .2 Plug clean-out holes with block. Brace masonry for wet grout pressure.

3.3 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.

3.4 CONSTRUCTION

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

3.5 MIXING

- .1 All pointing mortar can be mixed using a regular paddle mixer. Only electric motor mixers are permissible. Mixers run on hydrocarbons are not permitted, due to fumes, Mixing by hand must be pre-approved by the Departmental Representative.
- .2 Clean all mixing boards and mechanical mixing machine between batches.
- .3 Mortar must be weaker than the units it is binding.
- .4 Contractor to appoint one individual to mix mortar, for duration of project. In the event that this individual must be changed, mortar mixing must cease until the new individual is trained, and mortar mix is tested.

3.6 MORTAR PLACEMENT

- .1 Install mortar to manufacturer's instructions.
- .2 Install mortar to requirements of CAN/CSA A179.

3.7 FIELD QUALITY CONTROL

- .1 Site Tests, Inspection: in accordance with Section 04 05 00 - Common Work Results for Masonry supplemented as follows:
 - .1 Test and evaluate mortar prior to construction in accordance with CAN/CSA A179.
 - .2 Test and evaluate grout prior to construction to CAN/CSA A179; test in conjunction with masonry unit sections specified.
- .2 Manufacturer's Field Services: in accordance with Section 04 05 00 - Common Work Results for Masonry.

3.8 CLEANING

- .1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.
- .2 Remove droppings and splashings using clean sponge and water.
- .3 Clean masonry with low pressure clean water and soft natural bristle brush.
- .4 Waste Management: separate waste materials for reuse recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal

END OF SECTION

Part I General

I.1 REFERENCES

- .1 ASTM International Inc.
 - .1 ASTM A36/A36M-05, Standard Specification for Carbon Structural Steel.
 - .2 ASTM A82/A82M-05a, Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
 - .3 ASTM A167-99(R2004), Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
 - .4 ASTM A307-04, Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength.
 - .5 ASTM A580/A580M-06, Standard Specification for Stainless Steel Wire.
 - .6 ASTM A641/A641M-03, Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
 - .7 ASTM-A666-03, Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
- .2 Canadian Standards Association (CSA International)
 - .1 CAN/CSA-A23.1/A23.2-04, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.
 - .2 CAN/CSA A179-04, Mortar and Grout for Unit Masonry.
 - .3 CAN/CSA A370-04, Connectors for Masonry.
 - .4 CAN/CSA A371-04, Masonry Construction for Buildings.
 - .5 CAN/CSA G30.18-M92(R2007), Billet-Steel Bars for Concrete Reinforcement.
 - .6 CSA-S304.1-04, Design of Masonry Structures.
 - .7 CSA W186-M1990(R2007), Welding of Reinforcing Bars in Reinforced Concrete Construction.

I.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Provide manufacturer's printed product literature, specifications and datasheets illustrating products to be incorporated into project for specified products.
 - .2 Provide two copies of Workplace Hazardous Materials Information System (WHMIS) - Material Safety Data Sheets (MSDS) in accordance with Section 01 35 29.06 - Health and Safety Requirements 01 35 43 - Environmental Procedures.

I.3 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.

I.4 FIELD MEASUREMENTS

- .1 Make field measurements necessary to ensure proper fit of members.

I.5 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store and handle masonry anchorage and reinforcing materials in accordance with Section 01 61 00 - Common Product Requirements, supplemented as follows:
 - .1 Deliver reinforcement and connectors, identified in shop and placement drawings.
- .2 Packaging Waste Management:
 - .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

Part 2 Products

2.1 MATERIALS

- .1 Bar reinforcement: Steel to CAN/CSA A371 and CAN/CSA G30.18, Grade stainless steel to ASTM A167.
- .2 Connectors: to CAN/CSA A370 and CSA-S304.1.

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 Canada.
- .2 Fabricate connectors in accordance with CAN/CSA A370.
- .3 Obtain Departmental Representative's approval for locations of reinforcement splices other than shown on placing drawings.
- .4 Upon approval of Departmental Representative, weld reinforcement in accordance with CSA W186.
- .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, minimum 5 weeks prior to commencing reinforcement work.
- .2 Upon request inform Departmental Representative of proposed source of material to be supplied.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 PREPARATION

- .1 Direct and coordinate placement of metal anchors for masonry supplied to other Sections.

3.3 INSTALLATION

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

3.4 REINFORCED LINTELS AND BOND BEAMS

- .1 Reinforce masonry beams, masonry lintels and bond beams as indicated.
- .2 Place and grout reinforcement in accordance with CSA-S304.1, CAN/CSA A371, and CAN/CSA A179.
- .3 Support and position reinforcing bars in accordance with CAN/CSA A371.

3.5 GROUTING

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

3.6 ANCHORS

- .1 Supply and install metal anchors in accordance with CAN/CSA A370 and CAN/CSA A371.

3.7 LATERAL SUPPORT AND ANCHORAGE

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

3.8 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.

3.9 FIELD QUALITY CONTROL

- .1 Site inspections in accordance with Section 04 05 00 - Common Work Results for Masonry.
- .2 Obtain Departmental Representative approval of placement of reinforcement and connectors, prior to placing mortar grout.

3.10 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.

3.11 CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Remove surplus materials, excess materials, rubbish, tools and equipment.
- .2 Waste Management: separate waste materials for reuse recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

END OF SECTION

Part I General

I.1 REFERENCES

- .1 ASTM International Inc.
 - .1 ASTM E336-07, Standard Test Method for Measurement of Airborne Sound Attenuation Between Rooms in Buildings.
- .2 Canadian Standards Association (CSA International)
 - .1 CAN/CSA-A165 Series-2004, CSA Standards on Concrete Masonry Units covers: A165.1, A165.2, A165.3.
 - .2 CAN/CSA A371-04, Masonry Construction for Buildings.
 - .3 CSA S304.1-04, Design of Masonry Structures.
- .3 Underwriters' Laboratories of Canada (ULC)
 - .1 CAN/ULC-S101-07, Standard Methods of Fire Endurance Tests of Building Construction and Materials.

I.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Product Data: provide product data, including manufacturer's printed data sheets and catalog pages illustrating products to be incorporated into project for specified products.
- .3 Manufacturer's Written Instructions: provide in accordance with Section 04 05 00 - Common Work Results for Masonry.

I.3 QUALITY ASSURANCE SUBMITTALS

- .1 Certificates: provide in accordance with Section 04 05 00 - Common Work Results for Masonry.
- .2 Test and Evaluation Reports: provide certified test reports in accordance with Section 04 05 00 - Common Work Results for Masonry.

I.4 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store and handle concrete unit masonry in accordance with manufacturers written instructions.
- .2 Packaging Waste Management:
 - .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

Part 2 Products

2.1 MATERIALS

- .1 Standard concrete block units Type standard 15cm units to CAN/CSA-A165 Series (CAN/CSA-A165.1) .
 - .1 Classification: H/15/A/0.
 - .2 Dimensions – see Construction drawings.
 - .3 Colour:
 - .1 Standard colour.

2.2 REINFORCEMENT

- .1 Reinforcement in accordance with Section 04 05 19 - Masonry Anchorage and Reinforcing .

2.3 CONNECTORS

- .1 Connectors in accordance with Section 04 05 19 - Masonry Anchorage and Reinforcing .

2.4 MORTAR MIXES

- .1 Mortar and mortar mixes in accordance with Section 04 05 12 - Masonry Mortar and Grout.

2.5 GROUT MIXES

- .1 Grout and grout mixes in accordance with Section 04 05 12 - Masonry Mortar and Grout.

2.6 CLEANING COMPOUNDS

- .1 Use low VOC products in compliance with SCAQMD Rule 1168.
- .2 Compatible with substrate and acceptable to masonry manufacturer for use on products.
- .3 Cleaning compounds compatible with concrete unit masonry and in accordance with manufacturer's written recommendations and instructions.

2.7 TOLERANCES

- .1 Tolerances for standard concrete unit masonry tolerances in accordance with CAN/CSA A165.1, supplemented as follows:
 - .1 Maximum variation between units within specific job lot not to exceed 2 mm.
 - .2 No parallel edge length, width or height dimension for individual unit to differ by more than 2 mm.
 - .3 Out of square tolerance not to exceed 2 mm.

Part 3 Execution

3.1 EXAMINATION

- .1 Verify surfaces and conditions are ready to accept work of this Section.
- .2 Commencing installation means acceptance of existing substrates.

3.2 PREPARATION

- .1 Protect adjacent finished materials from damage due to masonry work.

3.3 INSTALLATION

- .1 Concrete block units:
 - .1 Bond: running.
 - .2 Coursing height: 200mm for one block and one joint.
 - .3 Jointing: concave raked flush where exposed or where paint or other finish coating is specified.

3.4 REINFORCEMENT

- .1 Install reinforcing in accordance with Section 04 05 19 - Masonry Anchorage and Reinforcing .

3.5 CONNECTORS

- .1 Install connectors in accordance with Section 04 05 19 - Masonry Anchorage and Reinforcing.

3.6 MORTAR PLACEMENT

- .1 Place mortar in accordance with Section 04 05 12 - Masonry Mortar and Grout.

3.7 GROUT PLACEMENT

- .1 Place grout in accordance with Section 04 05 12 - Masonry Mortar and Grout.

3.8 CONSTRUCTION

- .1 Cull out masonry units, in accordance with CAN/CSA A165 and reviewed approved range of colour samples, with chips, cracks, broken corners, excessive colour and texture variation.
- .2 Build in miscellaneous items such as bearing plates, steel angles, bolts, anchors, inserts, sleeves and conduits.
- .3 Construct masonry walls using running bond unless otherwise noted.
- .4 Build around frames previously set and braced. Fill behind hollow frames within masonry walls with mortar or grout and embed anchors.
- .5 Fit masonry closely against electrical and plumbing outlets so collars, plates and covers overlap and conceal cuts.
- .6 Install movement joints and keep free of mortar where indicated.

- .7 Hollow Units: spread mortar setting bed from outside edge of face shells. Gauge amount of mortar on top and end of unit to create full joints, equivalent to shell thickness. Avoid excess mortar.
- .8 Solid Units: apply mortar over entire vertical and horizontal surfaces. Avoid bridging of airspace between brick veneer and backup wall with mortar.
- .9 Ensure compacted head joints. Use full or face-shell joint as indicated.
- .10 Tamp units firmly into place.
- .11 Do not adjust masonry units after mortar has set. Where resetting of masonry is required, remove, clean and reset units in new mortar.
- .12 Tool exposed joints concave strike concealed joints flush.
- .13 After mortar has achieved initial set up, tool joints.
- .14 Do not interrupt bond below or above openings.

3.9 REPAIR/RESTORATION

- .1 Upon completion of masonry, fill holes and cracks, remove loose mortar and repair defective work.

3.10 CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning, supplemented as follows.
 - .1 Progress Cleaning:
 - .1 Standard Concrete Unit Masonry:
 - .1 Allow mortar droppings on masonry to partially dry then remove by means of trowel, followed by rubbing lightly with small piece of block. Clean wall surface with suitable brush or burlap.
 - .2 Waste Management: separate waste materials for reuse recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

3.11 PROTECTION

- .1 Brace and protect concrete unit masonry in accordance with Section 04 05 00 - Common Work Results for Masonry.

END OF SECTION