

1 General

1.1 **SECTION INCLUDES**

- .1 Labour, Products, equipment and services necessary for masonry work in accordance with the Contract Documents.

1.2 **REFERENCES**

- .1 ASTM A167, Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip.
- .2 ASTM A1064/A1064-M, Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.
- .3 ASTM C97, Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone.
- .4 ASTM C207, Specification for Hydrated Lime for Masonry Purposes.
- .5 CAN/CSA A82, Fired Masonry Brick Made From Clay or Shale.
- .6 CSA A165 Series, CSA Standards on Concrete Masonry Units.
- .7 CSA A179, Mortar and Grout for Unit Masonry.
- .8 CSA A370, Connectors for Masonry.
- .9 CSA A371, Masonry Construction for Buildings.
- .10 CAN/CSA A3001, Cementitious Materials for Use in Concrete.
- .11 CSA G30.18, Carbon Steel Bars for Concrete Reinforcement.
- .12 CSA S304.1, Design of Masonry Structures.

1.3 **DESIGN REQUIREMENTS**

- .1 Design unit masonry in accordance with following Climatic Design Data for Toronto contained in the Ontario Building Code:
 - .1 Design temperature: January 1%, July 2 1/2%.
 - .2 Hourly wind pressures: 1 in 50 year occurrence.
 - .3 Seismic design: Class "D".

1.4 **SUBMITTALS**

- .1 Shop drawings:
 - .1 Submit shop drawings in accordance with Section 01 33 00 indicating.
 - .2 Wall sections details and plan details, reinforcing and anchors, special detailing, patterning, locations and details of control joints and window/door headers.

- .3 Information in the shop drawings should also include material standards, design criteria (i.e. depth of members, deflection limits etc.) and design loads to be used for the design).
- .4 Seismic anchors, supports and accessories for complete installation.
- .2 Samples:
 - .1 Submit samples in accordance with Section 01 33 00:
 - .2 Submit samples of each type and colour of masonry unit used prior to placing order.
 - .3 Submit samples of coloured mortar to match masonry samples.
 - .4 Submit samples of masonry anchors, and ties.
 - .5 Submit 250 x 200 mm samples of dampproof course and flashing.
 - .6 Submit samples in tandem with those of sections 07 41 13, 07 46 19, 07 62 00, 07 71 23, 08 44 00, 08 53 13, 08 91 00 and 09 97 13. All submissions must be completed prior to consultant review. The Consultant will commence review and return the documentation only upon receipt of all required samples from all required listed sections.
- .3 Reports and certificates:
 - .1 Submit manufacturer's certificates stating that materials supplied are in accordance with this Specification.
 - .2 Submit copy of membership in good standing of OMCA.
 - .3 Submit written certificate of Contractor's work experience.

1.5 QUALITY ASSURANCE

- .1 Qualification: Perform work of this Section by a company that is a member in good standing of the OMCA. Company and foreman, with minimum 10 years demonstrated experience, and; any laborer, with minimum 2 years demonstrated experience, in masonry work of comparable complexity and scope.
 - .1 Provide proof of current OMCA membership.
 - .2 Provide résumés of company, foreman and all and any laborers that will be performing the work. No foreman and or laborers for which résumé is not provided will be admissible on site.
- .2 Provide plain and reinforced masonry in accordance with CSA A370, CSA A371, and CSA S304.1.
- .3 Retain a licensed Professional Engineer, registered in Province of Ontario, to perform following services for unit masonry work:
 - .1 Design of unit masonry work.
 - .2 Design of brick ties and anchors, including requirements necessary to meet seismic requirements.
 - .3 Review, stamp and sign shop drawings.
 - .4 Professional engineer to include confirmation in a conspicuous location in the shop drawings that "The proposed Work will conform to the 2024 Ontario Building Code (OBC, Ontario Regulation 163/24, as amended by 247/25), applicable CSA standards and any other applicable standards and regulations related to the work".

- .5 Conduct shop and on-site inspections, prepare and submit written inspection reports verifying that this part of the Work is in accordance with Contract documents and reviewed shop drawings.
- .6 Refer to Section 01 78 00 regarding submission requirements for the subject licensed Professional Engineer as it relates to sign-off letter.
- .4 Cold Weather Protection:
 - .1 To CAN/CSA-A371 and as follows:
 - .1 Maintain temperature of mortar between 5°C and 50°C until batch is used or becomes stable.
 - .2 Maintain ambient temperature of masonry work and its constituent materials between 5°C and 50°C and protect site from windchill.
 - .3 Maintain temperature of masonry above 0°C for minimum of 3 days, after mortar is installed.
 - .4 Preheat unheated wall sections in enclosure for minimum 72 hours above 10°C, before applying mortar.
 - .5 Do not use scorched aggregate. Do not use salts or anti-freezes. Only use approved smokeless heaters.
- .5 Hot Weather Requirements:
 - .1 To CAN/CSA-A371 and as follows:
 - .1 Plan in advance for hot weather construction. Protect freshly laid masonry from drying too rapidly, by means of waterproof, non-staining coverings.
 - .2 Avoid using dry masonry in hot weather conditions. Use predampened masonry unit nominally saturated, but surface dry at time of laying. Do not dip masonry unit in bucket of water.
 - .3 Spread only enough mortar to permit soft setting of masonry units; do not over mix mortar materials; do not retemper mortar after 2 hours of use; do not retemper pigment coloured mortar; do not spread more than 900 mm of mortar for placement of masonry unit.
- .6 Mock-up:
 - .1 Construct mock-up panels of unit masonry construction for each colour and/or bond pattern listed below, 1200 mm wide x 1200 mm high in a location accepted by Consultant.
 - .2 Each panel to incorporate one brick and architectural block colour and pattern as selected by the Consultant. Refer to elevation for details on pattern:
 - .1 **BR-1** or **BR-11**: Running Bond, Modular (45mm Vented Cavity).
 - .2 **BR-1a** or **BR-11a**: Running Bond, ¾" Recessed, Modular (25mm Vented Cavity).
 - .3 **BR-1b** or **BR-11b**: Soldier Course, ¾" Recessed, Modular (25mm Vented Cavity).
 - .4 **BR-1c** or **BR-11c**: Stacked Bond, ¾" Recessed, Modular (25mm Vented Cavity).
 - .5 **BR-2** or **BR-22**: Soldier Course, ¾" Recessed, 2-1/4" Meridian (25mm Vented Cavity). Use solid core bricks at building corners.
 - .6 **BR-2a** or **BR-22a**: Stacked Bond, ¾" Recessed, 2-1/4" Meridian (25mm Vented Cavity).

- .7 **BR-3 or BR-33:** Rowlock Course, angled minimum 15°, @ Brick windowsills, Modular. Use solid core bricks at both ends of each windowsill.
 - .3 Demonstrate use of reinforcement, ties, through-wall flashing, weep holes, jointing, coursing, coping and sills, mortar, bonding, control joints, and workmanship.
 - .4 Rejected mock-ups: Correct rejected mock-ups and requested re-review by Consultant.
 - .5 Once accepted by the consultant, apply anti-graffiti coating in accordance with Section 09 91 00 to half of the mock-up areas for consultant review.
 - .6 Mock-ups may not form part of Work unless expressively accepted in writing by the consultant.
 - .7 Mock-ups not forming part of Work are to remain in place until masonry work is complete.
 - .8 Mock-ups which do not form part of Work are to be removed from Site during final cleanup, or when directed by Consultant.
- .7 Pre-installation meeting:
- .1 Arrange meeting on Site to be attended by Consultant and Contractor to review installation procedures, interfaces with adjacent work, conditions under which work will be performed, inspect substrates, and to review installation procedures 48 hours in advance of installation.

1.6 **DELIVERY, STORAGE, AND HANDLING**

- .1 Deliver, store and handle Products in accordance with the Conditions of the Contract and as specified herein.
- .2 Remove unacceptable materials from Site and replace to acceptance of Consultant. Store materials off ground protected from wetting by rain, snow or ground water, or inter-mixture with earth or other materials. Store metal ties and reinforcement to prevent corrosion.
- .3 Do not concentrate storage of materials on any part of structure beyond design load, take particular care not to overload unsupported portions of structure which may have not attained their full design strength.
- .4 Comply with CSA A371. Do not use salt or calcium-chloride to remove ice from masonry surfaces.
- .5 Deliver mortar materials in original unbroken and undamaged packages with the maker's name and brand distinctly marked thereon. Prevent damage to units.
- .6 Keep masonry materials free from ice and frost. Keep units protected from concrete, mortar and other materials which could cause staining.

1.7 MAINTENANCE

- .1 Submit extra masonry units which are part of the same production run as installed Products, in the following percentages of gross area covered:
 - .1 5% additional brick veneer and 2.5% architectural block in all colours, finishes shapes and sizes from manufacturer's standard range.
 - .2 Provide one unopened grout sac or each colour provided.
 - .3 Deliver to address as instructed by Owner for storage.
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- .3 Deliver to address as instructed by Owner for storage.

1.8 EXTENDED WARRANTY

- .1 General Framework: The warranty clauses specified herein are extended warranties and shall be executed in accordance with the requirements of the General Conditions of the Contract.
- .2 Contractor / Installer Warranty: Submit an extended warranty, co-signed by the Masonry Subcontractor and the General Contractor, warranting the work of this Section in accordance with General Conditions, except that warranty period is extended for a period of two (2) years from date of Substantial Performance of the Work:
 - .1 Warrant against defects include, but not be limited to: water penetration through the masonry assembly; systemic cracking or joint degradation; failure of masonry ties, anchors, or structural attachments; failure of flashings, weep holes, or venting components; and displacement or detachment of brick units from the structural backing.
 - .2 The Contractor shall remedy all defects, including the full cost of labor, scaffolding, staging, removal, and replacement of affected materials, at no additional cost to the Owner.
- .3 Manufacturer's Product Warranty: Submit a written warranty issued by the brick manufacturer, warranting the brick masonry units against structural degradation, structural spalling, and disintegration due to normal weathering or freeze-thaw cycles for a period of ten (10) years from the date of Substantial Performance
 - .1 Manufacturer's warranty shall comply with physical property requirements specified in CSA A179 and CSA A82.
 - .2 Warranty shall specify the provision of replacement material matching original specifications for any units found defective within the warranty period.

2 Products

2.1 MASONRY UNITS

- .1 Concrete block units (**CMU1**): Normalweight units, CSA A165 Series, with gaseous carbon dioxide sequestered into concrete as solid calcium carbonate during formation of units. Thickness as indicated on Contract Drawing, classifications as follows:
 - .1 H/15/A/M.
 - .2 SS/15/A/M.
 - .3 SF/15/A/M
- .2 Burned clay brick: CAN/CSA A82, Type X, Grade EG, 57 x 92 x 194 mm (3-5/8 x 2-1/4 x 7-5/8 in), in the following types:
 - .1 Brick Type **BR-1, BR-1a, BR-1b, BR-1c** and **BR-3**: Medium Ironspot #46, Smooth, Modular, by Endicott Clay Products Co., as supplied by Thames Valley Brick and Tile.
 - .2 Brick Type **BR-2** and **BR-2a**: Medium Ironspot #46, Smooth, 2-1/4" Meridian, by Endicott Clay Products Co., as supplied by Thames Valley Brick and Tile.
 - .3 Brick Type **BR-11, BR-11a, BR-11b, BR-11c** and **BR-33**: Medium Ironspot #46, Velour, Modular, by Endicott Clay Products Co., as supplied by Thames Valley Brick and Tile.
 - .4 Brick Type **BR-22** and **BR-22a**: Medium Ironspot #46, Velour, 2-1/4" Meridian, by Endicott Clay Products Co., as supplied by Thames Valley Brick and Tile.
- .3 Architectural Block 4 x 16 **ACB1**: Smooth finish, normal weight units, 90 x 190 x 390 mm (3 9/16 x 3 9/16 x 15 3/8 in), colour Charcoal, running bond layout pattern, unless otherwise indicated in Drawings, CAN/CSA A371, CAN/CSA A165 series; H/15/A/M; S/15/A/M; Sc/15/A/M; Refer to Exterior Elevations shown on Drawings for architectural concrete block type. Profiled concrete block to have profile on face and on exposed end where special shaped are required. Manufactured by Techo-Bloc or approved alternative by Brampton Brick.
- .4 Concrete block units: Normal weight units, CSA A165 Series, 250 mm thick unless otherwise indicated on Contract Drawing, classifications as follows:
 - .1 H/15/A/M.
 - .2 SS/15/A/M.
 - .3 SF/15/A/M.
- .5 Special shapes: Unless indicated otherwise, supply and install corner returns, bull-nosed or double bull-nosed units for exposed and external corners, bond beams, sash blocks for control joints, solid block where noted, concrete block lintels over openings in concrete block walls and any additional special shapes as indicated.
- .6 Obtain each masonry unit type from same manufacturer. Supply and install units of uniform texture and colour for each kind required.
- .7 Supply masonry units with exposed surfaces free of cracks, chips, blemishes, and broken corners.

2.2 ACCESSORIES

- .1 Reinforcement: CSA A370, CSA A371, and ASTM A1064/A1064-M, all components to be stainless steel Type 304 unless otherwise specified, complete with separator or isolator or prevent galvanic reaction:
 - .1 This specification is based on products manufactured by Blok-Lok Limited. Products by Hohmann & Barnard, Inc. and Fero Corporation
 - .2 Type 1 (single wythe): Truss type; 'Blok-Trus BL30'.
 - .3 Type 2 (cavity wall block back-up).
 - .4 Type 3 (cavity wall stud and cast in place back -up): Anchors fabricated from 1.5mm plate with 4.76 mm wire, complete with screws; 'BL-407S Shear Anchor' with 'Flex-O-Lok tie' – lengths as required to accommodate different vented cavity dimensions -, and 'Wedge-Lok' insulation retainer. Insulation retainer to straddle anchor bridging the cavity. 'Thermal 2-Seal Wing Nut Anchor' by Hohmann & Barnard, Inc. is an approved alternative.
 - .5 Anchors to be thermally separated (broken) to prevent thermal bridging.
 - .6 Connectors: CSA A370 and CSA S304.1.
 - .7 Reinforcing steel: CSA G30.18, Grade 400, refer to Contract Drawings for number, size, and location.
 - .8 Design of anchors, supports and accessories to meet seismic requirements.
- .2 Z-girts: CAN/CSA S136-M; Minimum 1.2 mm thick, Z275 galvanized. Depth as indicated on Contract Drawings. Z-girts to be thermally broken at mid-point of insulation thickness.
- .3 Cavity wall insulation: In accordance with Section 07 21 00.
- .4 Loose steel lintels and lateral support angles: Supplied as part of work of Section 05 50 00.
- .5 Through wall flashings: Prefinished metal flashings in accordance with Section 07 62 00, continuous strips with a 19 mm folded drip edge.
- .6 Dampproof course and flashing: Reinforced SBS rubberized asphalt compound laminated to cross-laminated polyethylene film, 40 mils thick; 'Blueskin TWF' by Henry or 'Airshield Thru Wall Flashing' by W.R. Meadows or approved alternative, complete with primer and adhesive recommended by flashing manufacturer.
- .7 Compressible filler: 75 x 6 mm thick preformed, polyurethane foam; 25V by Emseal Joint Systems Ltd.
- .8 Control joint filler: Prefabricated extruded rubber joint to suit wall thickness; RS Series Rubber Control Joint by Blok-Lok or approved alternative.
- .9 Mortar mesh: 250 mm high x thickness to suit cavity, 90% open HDPE mesh; 'Mortar Trap' by Blok-Lok Limited or 'Mortar Net' by Hohmann & Barnard, Inc.

- .10 Weep hole vents:
 - .1 Flexible ultra-violet resistant polypropylene-copolymer plastic, 'Cell-Vent' by Blok-Lok, 'Mortar Maze Cell Vents' by Advanced Building Products Inc. or approved alternative.
 - .2 Provide manufacturer recommended clear silicone adhesive for suspended applications.
 - .3 Colour: To match brick colour, as selected by Consultant.
 - .4 Size to match height of brick units.
- .11 Parging: Cement based coating for concrete or masonry, above or below grade 'MasterSeal 581' by BASF or approved alternative. Colour: Grey.
- .12 Anti-graffiti coating: In accordance with Section 09 91 00.

2.3 MORTAR MATERIALS

- .1 Loadbearing masonry: CSA A179, Type S, proportion method.
- .2 Interior non-loadbearing masonry: CSA A179, Type N, proportion method.
- .3 Exterior non-loadbearing masonry: CSA A179, Premixed 1-1-6 Type N, portland cement/lime, proportion method.
- .4 Cement: CAN/CSA A3001, normal Portland, Type GU. Provide white cement where required for white or light coloured mortars.
- .5 Masonry aggregate: CSA A179. Provide white aggregate where required for white or light coloured mortars.
- .6 Hydrated lime: ASTM C207, Type S.
- .7 Water: Clean potable, free from deleterious elements and free from salts that can cause efflorescence.
- .8 Mortar pigment: 'Bay Ferrox' by Bayer Inc. or approved alternative by Huntsman Pigments and Additives and Solomon Colors, Inc. Colour to later selection by Consultant.
- .9 Concrete fill and grout: 20 Mpa concrete in accordance with CSA A179.

3 Execution

3.1 EXAMINATION

- .1 Verify condition and dimensions of previously installed Work upon which this Section depends. Report defects to Consultant. Commencement of work of this Section means acceptance of existing conditions.

3.2 PROTECTION

- .1 Supply and install temporary waterproof, non-staining coverings, secured against displacement, to extend over walls and down sides to protect masonry Work from snow and wind driven rain, and from drying too quickly, until masonry work is completed and protected by flashings or other permanent construction.
- .2 Supply and install non-staining, protective coverings on horizontal and vertical surfaces to protect work of this Section from damage, staining, marking, and mortar droppings.

3.3 WORKMANSHIP

- .1 Perform masonry work in accordance with CSA A371 and as indicated .
- .2 Supply and install masonry work plumb, level and true to line, with vertical joints in alignment and horizontal courses level, uniform, and straight.

3.4 MASONRY - GENERAL INSTALLATION

- .1 Construct masonry work as required by jurisdictional authorities.
- .2 Before commencing masonry work, verify required limitations for wall heights, wall thicknesses, openings, bond, anchorage, and compressive strengths of masonry units and mortars.
- .3 Construct masonry fire protection and fire separations of the thickness indicated on Drawings for the fire resistant ratings as noted on Drawings, and conforming to the Fire-Performance Ratings, Appendix 'D' to the National Building Code of Canada.
- .4 Fire Separations and Fire Separations with Fire Resistance Ratings: Construct walls tightly to construction above and at perimeter, and without openings or voids. Do not reduce the thickness of walls to less than the thickness indicated on the Drawings or for the required fire resistance rating where required.
- .5 Do not butter corner units, throw mortar droppings into joints, or excessively furrow bed joints. Do not shift or tap units after mortar has taken initial set. If adjustment is necessary after mortar has started to set, remove and replace with fresh mortar.
- .6 Do not use admixtures without Consultant's written acceptance.
- .7 Tool mortar joints slightly concave with non-staining tools unless indicated otherwise. Strike joints flush in non exposed areas or where shown on Contract Drawings. Use sufficient force to press mortar tight against masonry units on both sides of joints. Remove excess, remaining mortar material and burrs.
- .8 Install masonry walls 25 mm clear of underside of steel building frames, roof or floor deck. Install masonry with a 19 mm space beneath shelf angles and install compressible filler.

- .9 Cut masonry units with a wet saw to obtain straight, clean, even, unchipped edges. Cut units as required to fit adjoining work neatly or for flush mounted electrical outlets, grilles, pipes, conduit, leaving 3 mm maximum clearance. Use full-size units without cutting wherever possible.
- .10 Reinforce veneer walls with adjustable wall reinforcing at maximum 400 mm o.c. vertically and 600 mm o.c. horizontally. Install reinforcing in accordance with manufacturer's instructions. In veneer walls extend reinforcement from support wall, spanning cavity into exterior wythe. Place at maximum 75 mm o.c. each way around perimeter of openings, within 300 mm of openings.
- .11 Reinforce block walls with continuous wire reinforcement in every second block course. Supply and install prefabricated L and T sections. Cut, bend and lap reinforcing units as per manufacturer's printed directions for continuity at returns, offsets, pipe enclosures, and other special conditions. Bending of masonry reinforcement is not permitted.
- .12 Reinforce masonry walls with reinforcing steel as indicated on Drawings. Vertical reinforcing shall be fully grouted in masonry cores with grout.
- .13 At openings in block walls install extra reinforcement, so that first and second courses above and below openings are reinforced. Extend extra reinforcement 600 mm beyond opening in each direction.
- .14 Reinforce joint corners and intersections with strap anchors 400 mm o.c.
- .15 Do not place reinforcement across masonry wythes at control joints.
- .16 Install masonry with 10 mm thick joints unless indicated otherwise. Make vertical and horizontal joints equal and of uniform thickness.
- .17 Build control joints in masonry walls at intervals and in locations shown. Form joints for block walls using sash block units in accordance with details shown. Form joints for veneer walls by leaving head joints between stacked units void of mortar. Fill chase and joint with joint filler full height of control joints. Leave a depth of 13 mm for sealing unless otherwise shown.
- .18 Install control joints in masonry walls where indicated on drawings and at projections and changes in direction. Where control joints have not been indicated provide joints at 6100 mm o.c. for exterior walls and 9150 mm o.c. for interior walls.
- .19 If required, provide movement joints, similar to building control joints, installed between areas with different support conditions.
- .20 Supply and install solid block or metal lath under block, and fill block cells solid for lintel bearing and as required to secure built-in anchor bolts and/or anchors shown.
- .21 Do not tooth intersections of walls except as otherwise indicated.
- .22 Install weep hole vents in accordance with manufacturer's directions, in exterior wythe of masonry above dampproof courses and flashings and at tops of walls using

adhesive. Space weep hole vents maximum 600 mm o.c. horizontally. Prevent weep hole vents from becoming plugged with mortar or debris.

- .23 Coordinate installation of masonry with installation of air barrier and vapour retarder to ensure continuity of these systems.
- .24 Install seismic anchors, supports and accessories in accordance with reviewed shop drawings.

3.5 DAMPPROOF COURSES AND FLASHING

- .1 Install dampproof courses beneath first masonry bearing course on slabs-on-grade. Trim dampproofing to conceal it.
- .2 Install flashings in masonry in accordance with CSA A371.
- .3 Install flashings under exterior masonry bearing on foundation walls, slabs, shelf angles, and steel angles over openings and elsewhere as indicated. Where flashings occur over openings in walls extend them past openings a minimum of 200 mm and turn up minimum 150 mm at each end to create a waterproof dam to prevent water draining into cavity.
- .4 In veneer walls install flashings continuously from front edge of masonry, under outer wythe, turn up backing minimum 200 mm and provide watertight seal against support wall.
- .5 Lap dampproofing and flashing 150 mm and seal in accordance with manufacturer's instructions.
- .6 At bottom of cavity install mortar mesh to manufacturer's instructions. Apply additional mortar mesh layer as required to fill cavity thickness. Place mesh in continuous layer.
- .7 Before masonry work begins, place specified dampproofing under first course of masonry. Install continuous dampproofing with ends lapped and cut flush with exterior face of wall. Place similar dampproofing over top course.

3.6 MORTAR MIXING.

- .1 Thoroughly mix mortar ingredients in proper quantities needed for immediate use to requirements of CSA A179.
- .2 Measure and batch mortar materials either by volume or weight, to accurately control and maintain proportions. Do not measure materials by shovel.
- .3 Mix mortar with maximum amount of water consistent with workability for maximum tensile bond strength within capacity of mortar.

- .4 Do not use mortar which has begun to set. Use mortar within 2 hours after initial mixing. Re-temper mortar during 2 hour period only as required to restore workability.
- .5 For colours use only factory included pigment as supplied by Bulk Mortar Supplier.
- .6 Add mortar colour and admixtures to requirements of manufacturer's instructions.
- .7 Provide uniformity of mix and colouration.

3.7 **BLOCK**

- .1 Lay blocks in running bond except as indicated otherwise. Align block webs vertically and install thicker ends of face shells up.
- .2 Install a full bed of mortar for first courses of masonry, for masonry units 100 mm thick and less, and between solid units. For remaining courses bed face shells, including vertical end joints, fully in mortar.
- .3 Install special shaped and sized concrete block units as indicated and as required for a complete and coordinated assembly and to minimize cut units.
- .4 After tooling but before mortar hardens, remove surplus mortar from glass block faces, clean glass block using soft, clean cloths, sponges and bristle brushes, and wipe glass blocks dry.
- .5 Supply and install two courses of solid block beneath lintel bearing.
- .6 Stagger end joints in every course. Align joints plumb over each other in every other course.
- .7 Bond intersecting block walls in alternate courses. Where block work abuts concrete, anchor each block course to concrete

3.8 **MASONRY VENEER**

- .1 Prior to installation of masonry veneer, coordinate installation of air and vapour retarder with Section 07 27 00.
- .2 Prior to installation of cavity insulation, examine air and vapour retarder and make good damage. Install cavity wall insulation in accordance with Section 07 21 00.
- .3 Lay masonry veneer in bond pattern as indicated on Drawings, and in a full bed of mortar.
- .4 Form angle corners with special shaped units; cutting of units is not permitted.
- .5 Erect exterior cavity wall construction as shown on Contract Drawings.
- .6 Install masonry veneer to prevent mortar droppings and protrusions from impeding drainage and pressure equalization of rainscreen cavities and drained walls.

- .7 Apply sufficient mortar on end of stretchers to ensure end joints are compressed full when masonry unit is pressed into place.

3.9 **PRECAST SHAPES**

- .1 Install dampproofing or flashings continuous under full length of precast shapes.
- .2 Install precast shapes in full mortar bed and secure units to each other with stainless steel dowels and to masonry units with stainless steel hook anchors, fully grouted.

3.10 **LINTELS**

- .1 Install concrete block lintels over openings in masonry except where steel lintels are indicated.
- .2 Set lintels with minimum of 200 mm uniformly distributed bearing at each end. Provide bond breaker under bearing ends.
- .3 Install reinforcing steel and concrete fill in block lintels.
- .4 Install loose steel lintels, as indicated in Contract Drawings. Centre over opening width.

3.11 **BUILT-IN ITEMS**

- .1 Coordinate and locate build-in items required to be built into masonry or supplied under work of other Sections including hollow metal doors, windows, lintels, sleeves, inserts, etc. Build-in items to present a neat, rigid, true and plumb installation.
- .2 Build wall openings, slots, and recesses required for ducts, grilles, pipes and other items.
- .3 Coordinate installation of conduit, outlet boxes and other mechanical and electrical built-ins with work of Divisions 21, 22, 23 and 26.
- .4 Prevent displacement of built-in items during construction. Check plumb, location and alignment frequently, as Work progresses.
- .5 Brace door jambs to maintain plumbness. Set anchors between metal frames and masonry and fill voids between hollow metal frames and masonry walls with mortar.

3.12 **INSTALLATION TOLERANCES**

- .1 Install masonry work to a plane flatness and exposed end tolerance of 3 mm in 3000
- .2 Variation in Alignment from Unit to Adjacent Unit: 1.5 mm maximum.
- .3 Plumb within 6 mm in 3 m, or in 6 mm in 6 m at external corners, expansion joints, or other conspicuous lines.

- .4 Level within 6 mm in any bay or 6 m maximum distance, and 12 mm in 12 m or more.
- .5 Located from position shown, and from related position of columns, walls, and partitions within 12 mm in any bay or 6 m maximum distance, and 19 mm in 12 m or more.
- .6 Opening sizes within 6 mm of designated dimension.
- .7 Column and wall cross-section dimensions within minus 6 mm and plus 12 mm.
- .8 Joint widths to dimensions indicated or specified herein, but in no case greater than 12 mm. Variation of Mortar Joint Thickness: 1 mm every metre.

3.13 **PARGING**

- .1 Provide parging over substrates and in locations indicated on drawing in accordance with manufacturer's written instructions.
- .2 Apply parging in two coats to minimum dry film thickness of 2.5 mm unless otherwise recommended by manufacturer for specific conditions.

3.14 **ANTI-GRAFFITI COATING**

- .1 Apply anti-graffiti coating in accordance with Section 09 91 00.

3.15 **REPAIR AND POINTING**

- .1 Remove and replace masonry units which are loose, chipped, broken, cracked, marked, stained, discoloured, or otherwise damaged. Supply and install new units to match adjoining units and install in fresh mortar, and point to eliminate evidence of replacement.
- .2 During tooling of joints, enlarge any cracks, holes, or other defects, point and completely fill with mortar.
- .3 Point-up joints including corners, openings and adjacent Work for a neat, uniform appearance, properly prepared for application of sealant compounds.

3.16 **CLEANING**

- .1 Obtain and follow unit masonry manufacturer's written instructions for cleaning of masonry.
- .2 Clean exposed, masonry surfaces, removing excess mortar as work progresses. Allow mortar droppings to partially dry then dry brush with a stiff fibre brush.

END OF SECTION