

LEGEND

Door Materials HM Hollow Metal SC Solid Wood Core AL Aluminum		Frame Materials PS Pressed Steel		Schedule Remarks 1. Insulated door and frame. 2. Sealed unit glazing. 3. Provide Signage for washroom doors. General Notes: 1. Door sizes in HM frames are rebate dimension. 2. See Drawing --- for Door, Frame Screen and Jamb Types. 3. Provide signage for washroom doors.
Glazing TG Tempered Glass IN 25mm Insulated double glazing - Tempered WG Wired Glass		Finishes P Painted PF Prefinished C Clear Finish		
Door Types D1, D2, etc. Wood and Hollow Metal Doors A1 Aluminum Door		Frame Types F1, F2, etc. HM frames for doors S1, S2, etc. HM Frames for screens		
Fire Ratings of Closures U Unrated separation; a fire separation with no fire resistance rating. 20 20 minute rating. 45 45 minute rating.		Jamb Details J1, J2, etc. Jamb installation types		

No.	Size	DOOR			FRAME					Fire Rating	Glass	Hdware #	Remarks
		Type	Mat'l	Finish	Type	Mat'l	Finish	Throat	Jamb Detail				
LEVEL 1													
CC108.1	915 X 2135	D1	HM	P	F1	PS	P	-	J1			H-1	
CC114.1	915 X 2135	D1	HM	P	F1	PS	P	-	J1			H-2	
C117.1	915 X 2135	A1	AL	-	CW1	AL		-	J1		IN	H-3	
LEVEL 2													
CC214B.1	915 X 2135	D1	SC	P	F1	PS	P	-	J1			H-6	
LEVEL 3													
CC300.1	915 X 2135	D3	SC	P	F1	PS	P	-	J1		TG	H-4	
CC301.1	915 X 2135	D2	SC	P	F1	PS	P	-	J1		TG	H-5	
CC301.2	915 X 2135	D2	SC	P	F1	PS	P	-	J1		TG	H-6	
CC304.1	EXISTING DOOR	-	-	P	F1	PS	P	-	J1			-	Reuse door, provide a new frame.
CC309.1	EXISTING DOOR	-	-	P	-	-	P	-	J1			-	
CC314.1	915 X 2135	D1	SC	P	EXT	-	P	-	J1		-	H-7	EXISTING FRAME
CC315.1	915 X 2135	D2	HM	P	F1	PS	P	-	J1	45	WG	H-8	
CC316.1	915 X 2135	D1	SC	P	F1	PS	P	-	J1			H-7	DOOR GRILLE
CC340.1	915 X 2135	D1	SC	P	F1	PS	P	-	J1			H-7	DOOR GRILLE

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PART 1 - GENERAL

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| 1.1 RELATED
SECTIONS | .1 | Section 08 21 00 - Wood Doors. |
| | .2 | Section 08 71 00 - Door Hardware. |
| | .3 | Section 08 80 50 - Glazing. |
| | .4 | Section 09 21 16 - Gypsum Board Assemblies. |
| | .5 | Divisions 26 and 28 - Electrical for wiring. |
| 1.2 REFERENCES | .1 | American Society for Testing and Materials International (ASTM) |
| | .1 | ASTM A 653/A 653M-11, Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanealed) by the Hot-Dip Process. |
| | .2 | ASTM B 29-03(R2009), Standard Specification for Refined Lead. |
| | .3 | ASTM B 749-03(R2009), Standard Specification for Lead and Lead Alloy Strip, Sheet and Plate Products. |
| | .2 | Canadian General Standards Board (CGSB) |
| | .1 | CAN/CGSB-1.181-99, Ready-Mixed Organic Zinc-Rich Coating. |
| | .3 | Canadian Standards Association (CSA International) |
| | .1 | CSA-G40.20-13/G40.21-13, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel. |
| | .2 | CSA W59-03(R2008), Welded Steel Construction (Metal Arc Welding). |
| | .4 | Canadian Steel Door Manufacturers' Association (CSDMA) |
| | .1 | CSDMA, Recommended Specifications for Commercial Steel Doors and Frames, 2000. |
| | .2 | CSDMA, Selection and Usage Guide for Commercial Steel Doors, 1990. |
| | .5 | National Fire Protection Association (NFPA) |
| | .1 | NFPA 80-2013, Standard for Fire Doors and Other Protective Openings. |
| | .2 | NFPA 252-12, Standard Methods of Fire Tests of Door Assemblies. |

1.2 REFERENCES (Cont'd)	.6	South Coast Air Quality Management District (SCAQMD), California State
	.1	SCAQMD Rule 1113-04, Architectural Coatings.
	.2	SCAQMD Rule 1168-05, Adhesives and Sealants Applications.
	.7	Underwriters' Laboratories of Canada (ULC)
	.1	CAN/ULC-S701-11, Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.
	.2	CAN/ULC-S702-09-AM1, Standard for Thermal Insulation, Mineral Fibre, for Buildings.
	.3	CAN/ULC-S704-11, Standard for Thermal Insulation, Polyurethane and Polyisocyanurate Boards, Faced.
	.4	CAN4-S104-M80, Standard Method for Fire Tests of Door Assemblies.
	.5	CAN4-S105-09, Standard Specification for Fire Door Frames Meeting the Performance Required by CAN4-S104.
1.3 SYSTEM DESCRIPTION	.1	Design Requirements:
	.1	Steel fire rated doors and frames: labelled and listed by an organization accredited by Standards Council of Canada in conformance with CAN4-S104 NFPA 252 for ratings specified or indicated.
	.2	Provide fire labelled frames for openings requiring fire protection ratings. Test products in conformance with CAN4-S104, ASTM E 152 or NFPA 252 and listed by nationally recognized agency having factory inspection services.
1.4 ACTION AND INFORMATIONAL SUBMITTALS	.1	Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
	.2	Provide product data: in accordance with Section 01 33 00 - Submittal Procedures.
	.3	Indicate each type of door, material, steel core thicknesses, mortises, reinforcements, location of exposed fasteners, openings, glazed, louvred, arrangement of hardware and fire rating and finishes.
	.1	Indicate each type frame material, core thickness, reinforcements, glazing stops,

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| 1.4 ACTION AND INFORMATIONAL SUBMITTALS (Cont'd) | .3 (Cont'd) | |
| | .1 (Cont'd) | location of anchors and exposed fastenings and reinforcing fire rating finishes. |
| | .2 | Include schedule identifying each unit, with door marks and numbers relating to numbering on drawings and door schedule. |
| | .3 | Submit test and engineering data, and installation instructions. |
| | .4 | Provide samples in accordance with Section 01 33 00 - Submittal Procedures. |
| | .5 | Submit one 300 x 300 mm corner sample of each type of frame. |

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| 1.5 DELIVERY, STORAGE AND HANDLING | .1 | Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements. |
| | .2 | Waste Management and Disposal: |
| | .1 | Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal. |

PART 2 - PRODUCTS

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| 2.1 MATERIALS | .1 | Hot dipped galvanized steel sheet: to ASTM A 653M, ZF75, minimum base steel thickness in accordance with CSDMA Table 1 - Thickness for Component Parts. |
| | .2 | Reinforcement channel: to CSA G40.20/G40.21, Type 44W, coating designation to ASTM A 653M, ZF75. |

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| 2.2 DOOR CORE MATERIALS | .1 | Honeycomb construction: |
| | .1 | Structural small cell, 24.5 mm maximum kraft paper 'honeycomb', weight: 36.3 kg per ream minimum, density: 16.5 kg/m ³ minimum sanded to required thickness. |

2.2 DOOR CORE MATERIALS (Cont'd)	.2	Stiffened: face sheets laminated and welded, honeycomb or insulated core. .1 Fibreglass: to CAN/ULC-S702, semi-rigid Type, density 24 kg/m ³ . .1 Expanded polystyrene: CAN/ULC-S701, density 16 to 32 kg/m ³ .
2.3 ADHESIVES	.1	Honeycomb cores and steel components: heat resistant, spray grade, resin reinforced neoprene/rubber (polychloroprene) based, low viscosity, contact cement.
	.2	Polystyrene and polyurethane cores: heat resistant, epoxy resin based, low viscosity, contact cement.
2.4 PRIMER	.1	Touch-up prime CAN/CGSB-1.181.
2.5 PAINT	.1	Field paint steel doors and frames in accordance with Sections 09 91 23 - Interior Painting. Protect weatherstrips from paint. Provide final finish free of scratches or other blemishes.
2.6 ACCESSORIES	.1	Door silencers: single stud rubber/neoprene type.
	.2	Exterior and interior top and bottom caps: steel.
	.3	Metallic paste filler: to manufacturer's standard.
	.4	Fire labels: metal rivited.
	.5	Sealant: as per Section 07 92 00.
	.6	Glazing: as per Section 08 80 50.
	.7	Make provisions for glazing as indicated and provide necessary glazing stops. .1 Provide removable stainless steel glazing beads for use with glazing tapes and compounds and secured with countersunk stainless steel screws.

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| <u>2.6 ACCESSORIES</u>
<u>(Cont'd)</u> | .7 (Cont'd)
.2 Design exterior glazing stops to be
tamperproof. |
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| <u>2.7 FRAMES</u>
<u>FABRICATION GENERAL</u> | .1 Fabricate frames in accordance with CSDMA
specifications.

.2 Fabricate frames to profiles and maximum face
sizes as indicated.

.3 Interior frames: 1.6 mm welded type
construction.

.4 Blank, reinforce, drill and tap frames for
mortised, templated hardware, and electronic
hardware using templates provided by finish
hardware supplier. Reinforce frames for
surface mounted hardware.

.5 Protect mortised cutouts with steel guard
boxes.

.6 Prepare frame for door silencers, 3 for
single door, 2 at head for double door.

.7 Manufacturer's nameplates on frames and
screens are not permitted.

.8 Conceal fastenings except where exposed
fastenings are indicated.

.9 Provide factory-applied touch up primer at
areas where zinc coating has been removed
during fabrication. |
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| <u>2.8 FRAME ANCHORAGE</u> | .1 Provide appropriate anchorage to floor and
wall construction.

.2 Locate each wall anchor immediately above or
below each hinge reinforcement on hinge jamb
and directly opposite on strike jamb.

.3 Provide 2 anchors for rebate opening heights
up to 1520 mm (60") and 1 additional anchor
for each additional 760 mm (30") of height or
fraction thereof.

.4 Locate anchors for frames in existing
openings not more than 150 mm (6") from top |
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- 2.8 FRAME ANCHORAGE .4 (Cont'd)
(Cont'd) and bottom of each jambs and intermediate at
660 mm (26") on centre maximum.
- 2.9 FRAMES: WELDED .1 Welding in accordance with CSA W59.
TYPE
- .2 Accurately mitre or mechanically joint frame
product and securely weld on inside of
profile.
- .3 Cope accurately and securely weld butt joints
of mullions, transom bars, centre rails and
sills.
- .4 Grind welded joints and corners to a flat
plane, fill with metallic paste and sand to
uniform smooth finish.
- .5 Securely attach floor anchors to inside of
each jamb profile.
- .6 Weld in 2 temporary jamb spreaders per frame
to maintain proper alignment during shipment.
- .7 Fabricate frame products for openings in
sections, splice joints for field assembly.
- 2.10 DOOR .1 Doors: swing type, flush, with provision for
FABRICATION GENERAL glass and/or louvre openings as indicated.
- .2 Fabricate doors with longitudinal edges
welded. Seams: grind welded joints to a flat
plane, fill with metallic paste filler and
sand to a uniform smooth finish.
- .3 Blank, reinforce, drill doors and tap for
mortised, templated hardware.
- .4 Factory prepare holes 12.7 mm diameter and
larger except mounting and through-bolt holes,
on site, at time of hardware installation.
- .5 Reinforce doors where required, for surface
mounted hardware. Provide inverted, recessed,
spot welded channels to top and bottom of
interior doors.
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<u>2.10 DOOR FABRICATION GENERAL (Cont'd)</u>	.6	Provide factory-applied touch-up primer at areas where zinc coating has been removed during fabrication.
	.7	Provide fire labelled doors for those openings requiring fire protection ratings, as scheduled. Test such products in conformance with CAN4-S104 or NFPA 252 and list by nationally recognized agency having factory inspection service and construct as detailed in Follow-Up Service Procedures/Factory Inspection Manuals issued by listing agency to individual manufacturers.
	.8	Manufacturer's nameplates on doors are not permitted.
<u>2.11 DOORS: HONEYCOMB CORE CONSTRUCTION</u>	.1	Form face sheets for interior doors from 1.6 mm sheet steel with honeycomb core laminated under pressure to face sheets.
<u>2.12 HOLLOW STEEL CONSTRUCTION</u>	.1	Form face sheets for interior doors from 1.6 mm sheet steel.
<u>PART 3 - EXECUTION</u>		
<u>3.1 MANUFACTURER'S INSTRUCTIONS</u>	.1	Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.
<u>3.2 INSTALLATION GENERAL</u>	.1	Install labelled steel fire rated doors and frames to NFPA 80 except where specified otherwise and to the requirements of all authorities having jurisdiction.
	.2	Install doors and frames to CSDMA Installation Guide.

3.3 FRAME
INSTALLATION

- .1 Set frames plumb, square, level and at correct elevation.
- .2 Secure anchorages and connections to adjacent construction.
- .3 Brace frames rigidly in position while building-in. Install temporary horizontal wood spreader at third points of door opening to maintain frame width. Provide vertical support at centre of head for openings over 1200 mm (47") wide. Remove temporary spreaders after frames are built-in.
- .4 Make allowances for deflection of structure to ensure structural loads are not transmitted to frames.
- .5 Caulk perimeter of frames between frame and adjacent material.

3.4 DOOR
INSTALLATION

- .1 Install doors and hardware in accordance with hardware templates and manufacturer's instructions and Section 08 71 00 - Door Hardware.
- .2 Provide even margins between doors and jambs and doors and finished floor and thresholds as follows.
 - .1 Hinge side: 1.0 mm.
 - .2 Latchside and head: 1.5 mm.
 - .3 Finished floor, provide noncombustible sill and thresholds: 13 mm (1/2").
- .3 Adjust operable parts for correct function.

3.5 FINISH REPAIRS

- .1 Touch up with primer finishes damaged during installation.
- .2 Fill exposed frame anchors and surfaces with imperfections with metallic paste filler and sand to a uniform smooth finish.

PART 1 - GENERAL

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| <u>1.1 RELATED SECTIONS</u> | .1 | Section 07 26 00 - Air Barriers/ Vapour Retarders. |
| | .2 | Section 07 92 00 - Joint Sealing. |
| | .3 | Section 08 71 00 Door Hardware - Supply of finish hardware. |
| | .4 | Section 08 80 50 - Glazing. |
| | .5 | Division 26 - Wiring and conduit for electronic hardware |
| <u>1.2 REFERENCES</u> | .1 | Aluminum Association Designation System for Aluminum Finishes-1980. |
| | .2 | ASTM E330-02(R2010)Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference. |
| | .3 | CAN/CSA-G40.21-13 Structural Quality Steels. |
| | .4 | CSA G164-M92(R2003) Hot Dip Galvanizing of Irregularly Shaped Articles. |
| | .5 | CGSB 1-GP-40M-79 Primer, Structural Steel, Oil Alkyd Type. |
| | .6 | CAN/CGSB-12.1-M90 Tempered or Laminated Safety Glass. |
| <u>1.3 DESIGN CRITERIA</u> | .1 | Design doors in exterior walls to: |
| | .1 | Accommodate expansion and contraction within service temperature range of -35 to 35°C. |
| | .2 | Limit deflection of mullions to maximum 1/175th of clear span when tested to ASTM E330 under wind load of 1.2 kpa. Submit certificate of tests performed. |

- 1.4 SHOP DRAWINGS .1 Submit shop drawings in accordance with Section 01 33 00, Submittal Procedures.
- .2 Indicate type of door extrusion profiles, method of assembly, section and hardware reinforcement, locations of exposed fasteners, finishes and location of manufacturer's nameplates.
- .3 Submit catalogue details for type of door illustrating profiles, dimensions and methods of assembly.
- 1.5 MAINTENANCE DATA .1 Provide maintenance data for cleaning and maintenance of aluminum finishes for incorporation into manual specified in Section 01 33 00 Submittal Procedures.
- 1.6 PROTECTION .1 Apply temporary protective coating to finished surfaces. Remove coating after erection. Do not use coatings that will become hard to remove or leave residue.
- .2 Leave protective covering in place until final cleaning of building.

PART 2 - PRODUCTS

- 2.1 MATERIALS .1 Aluminum extrusions: Aluminum Association alloy AA6063-T5 or T6 anodizing quality.
- .2 Sheet aluminum: Aluminum Association alloy, anodizing quality.
- .3 Steel reinforcement: to CAN/CSA-G40.21, grade 300W.
- .4 Fasteners: stainless steel, .
- .5 Weatherstrip: replaceable mohair.
- .6 Door bumpers: black neoprene.
- .7 Isolation coating: bituminous paint.

- 2.1 MATERIALS
(Cont'd)
- .8 Glass: tempered 6mm single glass to CAN/CGSB-12.1, in interior doors, exterior doors shall have sealed units of clear float glass, tempered.
- .9 Sealants: Dymonic, colour to match frames.
- 2.2 ALUMINUM DOORS
- .1 Acceptable material:
.1 Kawneer narrow stile 190 Series.
.2 Alumicor 1A series, narrow stile.
- .2 Construct doors of porthole extrusions with minimum wall thickness of 2.4 mm.
- .3 Door stiles nominal 95mm wide plus or minus 12mm.
- .4 Top rail nominal 95mm wide plus or minus 12mm.
- .5 Bottom rail nominal 150mm wide plus or minus 12mm.
- .6 Reinforce mechanically-joined corners of doors to produce sturdy door unit.
- .7 Glazing stops: interlocking snap-in type for dry glazing. Exterior stops: tamperproof type.
- .8 Hardware: Supplied by Section 08 71 00, installed by Section 08 12 00.
- 2.3 ALUMINUM FRAMES
- .1 Construct frames of aluminum extrusions with minimum wall thickness of 2mm.
- .2 Frame members 44mm x 114mm nominal size for flush glazing.
- .3 Acceptable materials:
.1 Kawneer Trifab 450.
.2 Alumicor 800 Series.
- 2.4 ALUMINUM FINISHES
- .1 Finish exposed surfaces of aluminum components in accordance with Aluminum Association Designation System for Aluminum Finishes.
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2.4 ALUMINUM FINISHES (Cont'd)	.1	(Cont'd) .1 Clear anodic finish: designation AA- 31, for doors.
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2.5 STEEL FINISHES	.1	Finish steel clips and reinforcing steel with zinc coating to CSA G164.
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2.6 FABRICATION	.1	Doors and framing to be by same manufacturer.
	.2	Fabricate doors to profiles and maximum face sizes as shown.
	.3	Provide structural steel reinforcement as required.
	.4	Fit joints tightly and secure mechanically.
	.5	Conceal fastenings.
	.6	Mortise, reinforce, drill and tap doors, frames and reinforcements to receive hardware using templates provided by 08 71 00.
	.7	Isolate aluminum from direct contact with dissimilar metals, concrete and masonry.

PART 3 - EXECUTION

3.1 INSTALLATION	.1	Set frames plumb, square, level at correct elevation in alignment with adjacent work.
	.2	Anchor securely.
	.3	Install doors and hardware in accordance with hardware templates and manufacturer's instructions.
	.4	Adjust operable parts for correct function.
	.5	Make allowances for deflection of structure to ensure that structural loads are not transmitted to frames.

- 3.2 GLAZING .1 For interior aluminum doors use 6 mm clear single tempered glass.
- .2 Glaze exterior aluminum doors with sealed units as described in Article 2.1.8.

- 3.3 CAULKING .1 Seal joints to provide weather tight seal at outside and air, vapour seal at inside.
- .2 Apply sealant in accordance with Section 07 92 00 - Joint Sealing.

PART 1 - GENERAL

1.1 RELATED
SECTIONS

- .1 Section 08 11 00 - Metal Doors and Frames.
- .2 Section 08 71 00 - Door Hardware.
- .3 Section 08 80 50 - Glazing.
- .4 Section 09 91 23 - Interior Painting.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA).
 - .1 CAN/CSA O132.2 Series-90(R1998), Wood Flush Doors.
 - .2 CAN/CSA-O132.5-M1992(R1998), Stile and Rail Wood Doors.
- .2 Architectural Woodwork Manufacturers Association of Canada (AWMAC).
 - .1 Quality Standards for Architectural Woodwork 1991.

1.3 SHOP DRAWINGS

- .1 Submit shop drawings in accordance with Supplementary General Conditions.
- .2 Indicate door types and cutouts for lights and louvres, sizes, core construction, transom panel construction and cutouts.

1.4 STORAGE AND
PROTECTION

- .1 Protect doors from dampness. Arrange for delivery after work causing abnormal humidity has been completed.
- .2 Store doors in well ventilated room, off floor, in accordance with manufacturer's recommendations.
- .3 Protect doors from scratches, handling marks and other damage.

PART 2 - PRODUCTS

- 2.1 WOOD
FLUSH DOOR
- .1 Solid core: to CAN/CSA-0132.2.1.
 - .1 Construction: Solid particleboard core: stile and rail frame bonded to particleboard core with wood lock blocks 7-ply construction, 1-3/4" overall thickness.
 - .2 Face Panels: Hardboard, for paint finish.
 - .3 Adhesive: Type II (water resistant) for interior doors.
 - .4 Acceptable materials:
 - .1 Baillageon 8500.
 - .2 Lambton 7-8300-ME.
 - .3 Boccam B-8300.

- 2.2 GLAZING
- .1 Glass: Refer to Section 08 00 00 - Door Schedule.

- 2.3 FABRICATION
- .1 Vertical edge strips.
 - .2 Prepare doors for louvres and glazing. Provide hardwood glazing stops with mitred corners.
 - .3 Bevel vertical edges of single acting doors 1/8" to 2" on lock side and 1/16" to 2" on hinge side.
 - .4 Radius vertical edges of double acting doors to 65mm radius.

PART 3 - EXECUTION

- 3.1 INSTALLATION
- .1 Unwrap and protect doors in accordance with CAN/CSA-0132.2 Series, Appendix A.
 - .2 Install doors and hardware in accordance with manufacturer's printed instructions and CAN/CSA-0132.2 Series, Appendix A.
 - .3 Adjust hardware for correct function.

3.1	INSTALLATION	.4	Install glazing in accordance with Section 08
	(Cont'd)		80 50 - Glazing.

3.2	ADJUSTMENT	.1	Re-adjust doors and hardware just prior to
			completion of building to function freely and
			properly.

PART 1 - GENERAL

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| <u>1.1 RELATED SECTIONS</u> | .1 | Section 07 27 00 - Air Barrier Foam Sealant. |
| | .2 | Section 07 92 00 - Joint Sealing: caulking of joints between frames and other building components. |
| <u>1.2 REFERENCES</u> | .1 | Canadian General Standards Board (CGSB)
.1 CAN/CGSB-79.1-M91, Insect Screens. |
| | .2 | Canadian Standards Association (CSA) International
.1 User Selection Guide to CSA Standard A440-00, Windows. |
| <u>1.3 SHOP DRAWINGS</u> | .1 | Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures. |
| | .2 | Indicate materials and details in full size scale for head, jamb and sill, profiles of components, interior and exterior trim junction between combination units elevations of unit, anchorage details, description of related components and exposed finishes fasteners, and caulking. Indicate location of manufacturer's nameplates. |
| <u>1.4 TEST REPORTS</u> | .1 | Submit on report test reports from approved independent testing laboratories, certifying compliance with specifications, for Classification rating: to CAN/CSA-A440:
.1 Air tightness: A3/fixed.
.2 Water tightness: B7.
.3 Wind load resistance: C5.
.4 Forced Entry: F2.
.5 Insect screens: S1. |
| <u>1.5 CLOSEOUT SUBMITTALS</u> | .1 | Provide operation and maintenance data for windows for incorporation into manual specified in Section 01 78 00 - Closeout Submittals. |
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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 paper, plastic, polystyrene, corrugated cardboard, metals, packaging material in appropriate on-site containers for recycling.

1.7 EXTENDED
WARRANTY

- .1 Provide a written warranty, signed and issued in the name of owner, stating that the total window system is warranted against leakage, defects and malfunction under normal usage for a period of five (5) years from date of Certificate of Substantial Performance. Total system includes related caulking. Defective materials and workmanship include, but are not limited to, abnormal deterioration, aging and weathering of work; leakage of water and air exceeding specified limits; structural failure of components resulting from forces and movements up to specified limits; deterioration, peeling and discoloration of finished in excess if normal usage.

1.8 MANUFACTURER'S
WARRANTY

- .1 Provide the following manufacturers' warranties:
 - .1 PVC: Lifetime.
 - .2 Hardware: Lifetime.
 - .3 Glazed sealed units: 10 years.
 - .4 Exterior coating: 10 years.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Materials: to CSA-A440/A440.1, supplemented as follows:
 - .2 All PVC windows by same manufacturer.
 - .3 Sash: vinyl.
 - .4 Main frame: vinyl, complete with brickmold/nailing flange..
 - .5 Glass: 19mm sealed unit, with 4mm inner and outer lite.
 - .6 Screens: to CAN/CGSB-79.1, Type 1, Class C, Style 1.
 - .1 Insect screening mesh: count 18 x 14 fibreglass.
 - .2 Fasteners: tamper proof.
 - .3 Screen frames: aluminum colour to match window frames.
 - .4 Mount screen frames for interior replacement.
 - .7 Isolation coating: alkali resistant bituminous paint.

2.2 WINDOW
TYPE AND
CLASSIFICATION

- .1 Types:
 - .1 Fixed, with awning operating sash, with removable insulating glass.
 - .1 Acceptable material:
 - .1 Kohler Supreme, awning.
 - .2 Allsco Awning Series 2800.
 - .3 Nova Distinction Series Awning as designed by PH tech.
 - .4 Approved equal.
 - .2 Screens: on ventilating portion of windows.
- .2 Classification rating: to CSA-A440/A440.1.
 - .1 Air tightness: A3/ fixed.
 - .2 Water tightness: B7.
 - .3 Wind load resistance: C5.
 - .4 Forced Entry: F2.
 - .5 Insect Screens: S1.
- .3 Sealed units of 5mm clear float exterior, 12mm space argon filled, and 5mm clear float

2.2 WINDOW TYPE AND CLASSIFICATION (Cont'd)	.3	(Cont'd) interior. Sealed unit glazing shall have low "E" coating on the #2 surface. Acceptable product is: .1 PPG Solarban 60 .2 AFG Ti-AC40 .3 Cardinal LoE2-172
2.3 FABRICATION	.1	Fabricate in accordance with CSA-A440/A440.1 supplemented as follows: .2 Fabricate units square and true with maximum tolerance of plus or minus 1.5 mm for units with a diagonal measurement of 1800 mm or less and plus or minus 3 mm for units with a diagonal measurement over 1800 mm. .3 Face dimensions detailed are maximum permissible sizes. .4 Brace frames to maintain squareness and rigidity during shipment and installation. .5 Finish steel clips and reinforcement with shop coat primer to CAN/CGSB-1.40 380 g/m2 zinc coating to CAN/CSA-G164. .6 Provide steel reinforcement as required for load conditions, in sash and meeting rails.
2.4 VINYL FINISHES	.1	Vinyl finishes: in accordance with CSA-A440/A440.1, including appendices, supplemented as follows: .1 Exterior surfaces to be painted black finish with waterborne plastic coating system with heat reflective pigment. Interior surfaces white. Acceptable product for exterior coating: .1 AquaSur Tech PVC-100. .2 Royal Spectra-Coat.
2.5 ISOLATION COATING	.1	Isolate aluminum from following components, by means of isolation coating: .1 Dissimilar metals except stainless steel, zinc, or white bronze of small area. .2 Concrete, mortar and masonry. .3 Wood.

- 2.6 GLAZING .1 Glaze windows in accordance with CSA-A440/A440.1.
- 2.7 HARDWARE .1 Hardware: stainless steel four-bar hinges, pivot shoe roto operators.
- .2 Locks: two (2) cast bronze cam locks per sash.
- 2.8 AIR BARRIER AND VAPOUR RETARDER .1 Equip window frames with factory installed brick mould material for sealing to building air barrier as follows:
- .1 Material: identical to, PVC frame materials to provide required air tightness and vapour diffusion control throughout exterior envelope assembly.
- .2 Material width: adequate to provide required air tightness and vapour diffusion control to building air barrier.

PART 3 - EXECUTION

- 3.1 WINDOW INSTALLATION .1 Install in accordance with CSA-A440/A440.1.
- .2 Arrange components to prevent abrupt variation in colour.
- 3.2 CAULKING .1 Apply sealant in accordance with Section 07 92 00 - Joint Sealers. Conceal sealant within window units except where exposed use is permitted by Consultant.

PART 1 - GENERAL

<u>1.1 RELATED SECTIONS</u>	.1	Section 08 11 00 - Metal Doors and Frames.
	.2	Section 08 12 00 - Aluminum Doors.
	.2	Section 08 21 00 - Wood Doors.
<u>1.2 REFERENCE STANDARDS</u>	.1	Standard hardware location dimensions in accordance with the Canadian Metric Guide for Steel Doors and Frames (Modular Construction) prepared by Canadian Steel Door and Frame Manufacturers Association.
	.2	ANSI/BHMA A156.2-2011, Bored and Preassembled Locks and Latches.
	.3	ANSI/BHMA A156.1-2013, Butts and Hinges.
	.4	ANSI/BHMA A156.3-2008, Exit Devices
	.5	ANSI/BHMA A156.4-2013, Door Controls (Closers).
	.6	ANSI/BHMA A156.5-2010, Auxiliary Locks and Associated Products
	.7	ANSI/BHMA A156.6-2010, Architectural Door Trim.
	.8	ANSI/BHMA A156.7-2009, Template Hinge Dimensions
	.9	ANSI/BHMA A156.8-2010, Door Controls - Overhead Stops & Holders
	.10	ANSI/BHMA A156.13-2012, Mortise Locks and Latches
	.11	ANSI/BHMA A156.16-2008, Auxiliary Hardware.
	.12	ANSI/BHMA A156.18-2012, Materials and Finishes
	.13	ANSI/BHMA A156.19-2013, Power Assist and Low Energy Power Operated Drs
	.14	ANSI/BHMA A156.21-2009, American Standards for Thresholds

1.2 REFERENCE STANDARDS (Cont'd)	.15	ANSI/BHMA A156.22-2012, Door Gasketing and Edge Seal Systems
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	.16	ANSI/BHMA A156.26-2012, Continuous Hinges
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1.3 REQUIREMENTS REGULATORY AGENCIES	.1	Hardware for doors in fire separations and exit doors to be certified by ULI / ULC, a Canadian Certification Organization accredited by Standards Council of Canada.
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1.4 SAMPLES	.1	When requested, submit samples of hardware items in accordance with Section 01 33 00 - Submittal Procedures.
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	.2	Identify each sample by label indicating applicable specification paragraph number, brand name and number, finish and hardware package number.
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	.3	After approval, samples will be returned for incorporation in the Work.
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1.5 HARDWARE SCHEDULE	.1	Submit contract hardware schedule using the standard DHI format for finish hardware schedules in accordance with Section 01 33 00 - Submittal Procedures.
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	.2	Clearly indicate specified hardware, including make, model, material, function, size, finish and other pertinent information.
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1.6 MAINTENANCE DATA	.1	Provide operation and maintenance data for door closers, locksets, door holders and fire exit devices for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.
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	.2	Brief maintenance staff regarding proper care, cleaning and general maintenance of door hardware items.
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|----------------------------------|----|--|
| <u>1.7 MAINTENANCE MATERIALS</u> | .1 | Provide maintenance materials in accordance with Section 01 78 00 - Closeout Submittals. |
| | .2 | Supply two sets of wrenches for door closers, locksets and fire exit hardware. |
| | | |
| <u>1.8 DELIVERY AND STORAGE</u> | .1 | Store finishing hardware in locked, clean and dry area. |
| | .2 | Package each item of hardware including fastenings, separately or in like groups of hardware, label each package as to item definition and location. |

PART 2 - PRODUCTS

- | | | |
|---------------------------|----|---|
| <u>2.1 HARDWARE ITEMS</u> | .1 | Use one manufacturer's products only for all similar product groups. |
| | .2 | The product numbers listed in the finish hardware schedule are to be used as the standard of acceptance for all items and are from the following group of manufacturers: <ul style="list-style-type: none">.1 Full Mortise Hinges - Ives.2 Continuous Hinges - Ives.3 Locksets, Latchsets, Deadlocks - Schlage.4 Exit Devices, Power Transfers, Strikes - Von Duprin.5 Door Closers, Auto Operators - LCN.6 Floor/Wall Stops, Flush Bolts - Ives.7 Push Plates, Pulls & Kickplates - Ives.8 Thresholds, Sound Seal, Door Bottoms & Sweeps, Astragals & Weatherstripping - Draft Seal |
| | .3 | Other manufacturer's products will be considered provided they meet or exceed the performance, grade, quality, function, weight, design and finish of the specified product, and requests for approval are approved by the consultant in writing through issued addendums ten (10) days prior to tender closing. |

2.2 DOOR HARDWARE

- .1 Butts and hinges:
 - .1 Butts and continuous hinges: designated by letter and numeral identifiers, followed by size and finish, as listed in Hardware Schedule.
 - .2 Self-closing hinges and pivots: designated by letter and numeral identifiers as listed in Hardware Schedule.
 - .3 Butt hinges on exterior doors and locked doors opening out shall have non removable pins (NRP) and doors equipped with door closers or in high traffic areas shall have ball bearing (BB) hinges.
 - .4 Continuous hinges shall be Heavy Duty (HD) aluminum geared-type, providing full height cover channels and nylon bearings at each separation for quiet, smooth and self-lubricating operation. Hinge material to be 6063-T6 aluminum with symmetrical hole patterns and a minimum of 32 bearings on each leaf, and be non-handed. Finish to be Clear Anodized Aluminum - 628.
 - .5 Specified product - butt hinges: Ives
 - .6 Specified product - continuous hinges: Ives
- .2 Locks and latches:
 - .1 Mortise locks and latches: to ANSI/BHMA A156.13-2005, Series 1000 mortise lock, Grade 1 operational and Grade 1 security, ULC Listed for A label doors, with all functions available in one size case;
 - .2 Mortise locks shall have a full $\frac{3}{4}$ " throw two-piece mechanical anti-friction latchbolt, a one-piece stainless steel 1" throw deadbolt, and handing of locks shall be reversible without disassembly of the lockcase.
 - .3 Lever Handles: Schlage # 06 Design, Flat design, forged, with full return to door.
 - .4 Escutcheons: Round design "A" as listed in schedule.
- .3 Normal strikes: box type, lip projection not to exceed $\frac{1}{4}$ " beyond jam.
 - .1 Cylinders: key to FSIC keyway and keying system.
 - .2 Finish to be Satin Chromium Plated 626.
 - .3 Specified products: Locksets - Schlage Lock
- .4 Exit Devices:
 - .1 To be heavy duty, grade 1, modern design push bar style, narrow stile, to meet ANSI,

2.2 DOOR HARDWARE .4
(Cont'd)

Exit Devices:(Cont'd)

.1 (Cont'd)

ULC, NFPA and ADA certification, to have thru-bolted trim, heavy-duty steel I-beam bar, and heavy gauge latch head with reinforced bracket. All lever trims to be free-wheeling, vandal-resistant, and all devices to have deadlocking latchbolts.

.2 Finish to be Satin Chrome 626, for complete devices and trim. Functions and trims to be as listed in Hardware Schedule.

.3 Specified product: Von Duprin

.5 Door Closers and Accessories:

.1 Door controls (closers): to meet or exceed ANSI A156.4-2008 Grade 1 requirements; to be heavy duty cast iron bodies with adjustable spring power and have separate valves for latching, closing and backcheck control. All closer arms to be forged steel with power adjustment arm bracket.

.2 All closers are to be non-sized to suit door and opening, and to have full covers with finish 689 or 696. Brackets, shoes, and plates are to be included for proper mounting of closers. All closers shall have minimum 10 - year warranty.

.3 Specified product: LCN

.6 Door Operators:

.1 Power-operated pedestrian doors: to meet ANSI A156.19 Grade 1, ADA , and UL10C requirements; to be heavy duty with power boost, adjustable spring size, multi-function, with valve adjustable sweep and latch closing speeds, and backcheck cushioning.

.2 Operator to include digital control suite, and programming mode with adjustable delay time, opening time/opening force, safety slow/stop, auto reverse/closing, and electric lock delay, and be finished in 689.

.3 All actuator buttons to be Wikk Ingress'r type, surface mounting box, finish to be 630.

.4 Specified product: LCN

.7 Overhead stops/holders:

.1 Door controls (overhead stops/holders): to meet or exceed ANSI A156.8-2010 Grade 1 or Grade 2 requirements; to be heavy duty or medium duty slide track type with shock absorber spring and non-metal slide block and shock block, non-handed.

2.2 DOOR HARDWARE
(Cont'd)

- .7 Overhead stops/holders:(Cont'd)
 - .2 To be Type 304 stainless steel material in stainless steel 630 finish.
 - .3 Specified product: Glynn-Johnson
- .8 Auxiliary locks:
 - .1 to meet ANSI A156.5 -2001 requirements, to be heavy-duty and finished in 626.
 - .2 Cylinders: rim or mortise type, SFIC, finished to 626, for installation in deadlocks provided with special doors as listed in Hardware Schedule.
 - .3 Specified product: Schlage
- .9 Architectural door trim:
 - .1 to meet ANSI A156.6-2005 requirements, type 304 stainless steel, finished 630.
 - .2 Door protection plates: kick plate type 304 stainless steel, 1.27 mm thick stainless steel, finished to 630.
 - .3 Specified product: Ives
- .10 Auxiliary hardware;
 - .1 to meet ANSI A156.16-2002 Grade 1 requirements;
 - .2 Door stops, floor type or wall type, as listed in Hardware Schedule, Finish to be Satin Chrome 626.
 - .1 Specified product: Ives
 - .3 Electric Strikes to meet ANSI A156.5-1992 Grade 1 requirements, to meet ULC, Burglary-Resistant and Fire Door and Frame certifications. Finish to be 630.
 - .4 Electric Strikes shall be all stainless steel construction, non-handed, and be fail secure or fail-safe, as listed, with adjustable strike box and two-piece plug connectors.
 - .5 Specified product: Von Duprin
- .11 Door bottom seal:
 - .1 Heavy duty, door seal of extruded aluminum frame and solid closed cell neoprene or nylon seal, surface mounted, adjustable, clear anodized finish.
- .12 Specified product: Draft Seal
- .13 Thresholds:
 - .1 100/127mm wide x full width of door opening, extruded aluminum, serrated surface, with thermal break of rigid PVC, clear anodized finish.

2.2 DOOR HARDWARE
(Cont'd)

- .13 Thresholds:(Cont'd)
 - .2 Specified product: Draft Seal
- .14 Weatherstripping:
 - .1 Head and jamb seal:
 - .1 Extruded aluminum frame and solid closed cell neoprene insert, clear anodized finish.
 - .2 Adhesive backed santoprene material.
 - .3 Specified product: Draft Seal
- .15 Astragal:
 - .1 adjustable, compensating, extruded aluminum frame with pile insert, clear anodized finish.
 - .2 Specified product: Draft Seal

2.3 FASTENINGS

- .1 Supply screws, bolts, expansion shields and other fastening devices required for satisfactory installation and operation of hardware.
- .2 Exposed fastening devices to match finish of hardware.
- .3 Use fasteners compatible with material through which they pass.

2.4 KEYING

- .1 All mortise locksets, deadlocks, and rim or mortise cylinders are to have FSIC core cylinders to suit, and be keyed to keying system. Doors, padlocks and cabinet locks to be keyed differently, keyed alike, keyed alike in groups, master keyed as directed. Prepare detailed keying schedule in conjunction with owner's representative.
- .2 Provide three (3) change keys for every lock in this Contract.
- .3 Provide six (6) master keys for each MK group.

PART 3 - EXECUTION

3.1 INSTALLATION
INSTRUCTIONS

- .1 Furnish metal door and frame manufacturer's with complete instructions and templates for preparation of their work to receive hardware.
- .2 Furnish manufacturer's instructions for proper installation of all hardware components.
- .3 Install hardware to standard hardware location dimensions in accordance with Canadian Imperial Guide for Steel Doors and Frames (Modular Construction) prepared by Canadian Steel Door and Frame Manufacturers' Association.
- .4 Where door stop contacts door pulls, mount stop to strike bottom of pull.

3.2 SCHEDULE

- .1 Hardware Set #H-1 - Single Door # CC108.1;
Each to have:
 - .1 3 Hinges Ives 5BB1 114 x 101 - 652
 - .2 1 Mortise Lockset Schlage L9480R - 06/A x keyed to suit - 626
 - .3 1 Door Closer LCN 4011 REG - 689
 - .4 1 Kickplate Ives 8400- 254 x 865 - 630
 - .5 1 Door Stop Ives FS439 - 626
 - .6 1 Set Door Seal Draftseal DS132C x 5185 - AL
 - .7 1 Door Sweep Draftseal DS138C x 915 - AL
- .2 Hardware Set #H-2 - Single Door # CC114.1;
Each to have:
 - .1 3 Hinges Ives 5BB1 114 x 101 - 652
 - .2 1 Mortise Lockset Schlage L9480R - 06/A x keyed to suit - 626
 - .3 1 Door Closer LCN 4111 SCUSH - 689
 - .4 1 Set Door Seal Draftseal DS132C x 5185 - AL
 - .5 1 Door Sweep Draftseal DS138C x 915 - AL
- .3 Hardware Set #H-3 - Single Door # C117.1;
Each to have:
 - .1 1 Continuous Hinge Ives 112HD x 2110mm - 628
 - .2 1 Mortise Lockset Schlage LV9070R - 06/A x Keyed to suit - 626

3.2 SCHEDULE
(Cont'd)

- .3 (Cont'd)
- .3 1 Automatic Door Operator LCN 9542 x HL-36 x MP-36 - 689
 - .4 2 Actuator Switches Wikk Ingress'r - 630
 - .5 1 Switching Network/Door Sequencer Camden CX-12
 - .6 1 Key Switch Schlage 653-04 x Mort. Cyl. 26-091 - 630
 - .7 1 O/H Door Stop G-J 904S - 630
 - .8 1 Electric Strike Von Duprin 6211-FSE x 12/24V - 630
 - .9 1 Power Supply Schlage PS902 x 900-8F x 900-BBK
 - .10 1 Set Door Seal & Sweep - by door supplier
 - .11 1 Card Reader - supplied by Owner.
 - .12 1 Door Contact - supplied by Owner.
- .4 Hardware Set #H-4 - Single Door # CC300.1;
Each to have:
- .1 3 Hinges Ives 5BB1 114 x 101 NRP - 652
 - .2 1 Exit Device Von Duprin RX98L x 996L-06 - 626
 - .3 1 Rim Cylinder Schlage 20-057 x Keyed to suit - 626
 - .4 1 Door Closer LCN 4111 SCUSH - 689
 - .5 1 Kickplate Ives 8400- 152 x 865 - 630
 - .6 1 Electric Strike Von Duprin 6300-FSE x 12/24V - 630
 - .7 1 Power Supply Schlage PS902 x 900-8F x 900-BBK
 - .8 1 Electric Power Transfer EPT-10 - SP28
 - .9 1 Card Reader - supplied by owner
 - .10 1 Door Contact - supplied by Electrical
- .5 Hardware Set #H-5 - Single Door # CC301.1;
Each to have:
- .1 3 Hinges Ives 5BB1 114 x 101 - 652
 - .2 1 Mortise Lockset Schlage RX-L9080R - 06/A x Keyed to suit x L283-263 - 626
 - .3 1 Door Closer LCN 4031 EDA - 689
 - .4 1 Door Stop Ives FS439 - 626
 - .5 1 Electric Strike Von Duprin 6211-FSE x 12/24V - 630
 - .6 1 Power Supply Schlage PS902 x 900-8F x 900-BBK
 - .7 1 Electric Power Transfer EPT-10 - SP28
 - .8 1 Card Reader - supplied by owner
 - .9 1 Door Contact - supplied by Electrical

3.2 SCHEDULE
(Cont'd)

- .6 Hardware Set #H-6 - Single Door # CC301.2;
Each to have:
 - .1 3 Hinges Ives 5BB1 114 x 101 - 652
 - .2 1 Mortise Lockset Schlage L9080R - 06/A
x Keyed to suit - 630
 - .3 1 Door Stop Ives FS439 - 626
- .7 Hardware Set #H-7 - Single Doors # CC314.1,
CC316.1, CC340.1; Each to have:
 - .1 3 Hinges Ives 5BB1 114 x 101 - 652
 - .2 1 Mortise Privacy Lockset Schlage L9440S
- 06/A x E/K - 630
 - .3 1 Door Closer LCN 4031 EDA - 689
 - .4 1 Kickplate Ives 8400- 254 x 865 - 630
 - .5 1 Door Stop Ives FS439 - 626
- .8 Hardware Set #H-8 - Single Door # CC315.1;
Each to have:
 - .1 3 Hinges Ives 5BB1 114 x 101 - 652
 - .2 1 Exit Device Von Duprin 98L x 996L-06 -
626
 - .3 1 Rim Cylinder Schlage 20-057 x Keyed to
suit - 626
 - .4 1 Door Closer LCN 4111 EDA - 689
 - .5 1 Kickplate Ives 8400- 254 x 865 - 630
 - .6 1 Door Stop Ives FS439 - 626
 - .7 1 Set Door Seal Draftseal DS118C x 5185
- AL
 - .8 1 Door Sweep Draftseal DS138C x 915 - AL

PART 1 - GENERAL

- | | | |
|--|----|--|
| <u>1.1 RELATED SECTIONS</u> | .1 | Section 08 11 00 - Metal Doors and Frames: for double glazed units. |
| <u>1.2 REFERENCES</u> | .1 | ASTM F 1233-08, Test Method for Security Glazing Materials and Systems. |
| | .2 | Canadian General Standards Board (CGSB).
.1 CAN/CGSB-12.1-M90, Tempered or Laminated Safety Glass.
.2 CAN/CGSB-12.3-M91, Flat Clear Float Glass.
.3 CAN/CGSB-12.5-M86, Mirrors, Slivered.
.4 CAN/CGSB-12.11-M90, Wired Safety Glass. |
| | .3 | Flat Glass Manufacturers Association (FGMA).
.1 FGMA Glazing Manual - 1997. |
| <u>1.3 SUBMITTALS</u> | .1 | Closeout Submittals:
.1 Provide maintenance data including cleaning instructions for incorporation into manual specified in Section 01 78 00 - Closeout Submittals. |
| <u>1.4 WASTE MANAGEMENT AND DISPOSAL</u> | .1 | Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management System. |
| | .2 | Divert metal cut-offs from landfill by disposal at nearest metal recycling facility. |
| | .3 | Divert uninstalled materials for reuse at nearest used building materials facility or similar type facility. |
| | .4 | Divert unused caulking and sealant materials from landfill through disposal at special wastes depot. |
| | .5 | Unused or damaged glazing materials are not recyclable and must not be diverted to municipal recycling programs. |

1.4 WASTE
MANAGEMENT AND
DISPOSAL
(Cont'd)

- .6 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .7 Dispose of corrugated cardboard, polystyrene and plastic packaging materials in appropriate on-site bin for recycling in accordance with site waste management program.

PART 2 - PRODUCTS

2.1 MATERIALS:
FLAT GLASS

- .1 Float glass: to CAN/CGSB-12.3-M91, Glazing quality, 6 mm thick.
- .2 Safety glass: to CAN/CGSB-12.1-M90, transparent, 6 mm thick.
 - .1 Type 2-tempered.
 - .2 Class B-float.
- .3 Wired glass: to CAN/CGSB-12.11-M90, 6 mm thick, nominal.
 - .1 Type 1 polished wired glass, both sides.
 - .2 Wire mesh style 3-Square.

2.2 ACCESSORIES

- .1 Setting blocks: Neoprene or EPDM, 80-90 Shore A durometer hardness to ASTM D 2240-05, to suit glazing method, glass light weight and area.
- .2 Spacer shims: Neoprene, 50-60 Shore A durometer hardness to ASTM D 2240-05, 75 mm long x one half height of glazing stop x thickness to suit application. Self adhesive on one face.
- .3 Glazing tape:
 - .1 Preformed butyl compound with integral resilient tube spacing device, 10-15 Shore A durometer hardness to ASTM D 2240-05; coiled on release paper; 4.7 x 13 mm size; black colour.
- .4 Glazing splines: resilient polyvinyl chloride, extruded shape to suit glazing channel retaining slot, colour black.

PART 3 - EXECUTION

- | | | |
|---|----|---|
| <u>3.1 EXAMINATION</u> | .1 | Verify that openings for glazing are correctly sized and within tolerance. |
| | .2 | Verify that surfaces of glazing channels or recesses are clean, free of obstructions, and ready to receive glazing. |
| | | |
| <u>3.2 PREPARATION</u> | .1 | Clean contact surfaces with solvent and wipe dry. |
| | .2 | Seal porous glazing channels or recesses with substrate compatible primer or sealer. |
| | .3 | Prime surfaces scheduled to receive sealant. |
| | | |
| <u>3.3 INSTALLATION:
WET/DRY METHOD
(TAPE AND SEALANT</u> | .1 | Perform work in accordance with FGMA Glazing Manual for glazing installation methods. |
| | .2 | Cut glazing tape to length and install against permanent stops, projecting 1.6 mm above sight line. |
| | .3 | Place setting blocks at 1/3 points, with edge block maximum 150 mm from corners. |
| | .4 | Rest glazing on setting blocks and push against tape to ensure full contact at perimeter of light or unit. |
| | .5 | Install removable stops, with spacer shims inserted between glazing and applied stops at 600 mm intervals, 6 mm below sight line. |
| | .6 | Fill gaps between light and applied stop with sealant to depth equal to bite on glazing, to uniform and level line. |
| | .7 | Trim protruding tape edge. |
| | | |
| <u>3.5 CLEANING</u> | .1 | Perform cleaning after installation to remove construction and accumulated environmental dirt. |
-

3.5 CLEANING
(Cont'd)

- .2 Remove traces of primer, caulking.
- .3 Remove glazing materials from finish surfaces.
- .4 Remove labels after work is complete.
- .5 Clean glass using approved non-abrasive cleaner in accordance with manufacture's instructions.
- .6 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

3.6 PROTECTION OF
FINISHED WORK

- .1 After installation, mark light with an "X" by using removable plastic tape or paste.