

PART 1 GENERAL

1.1 REFERENCE

- .1 Comply with the General Conditions of the Contract, Supplementary General Conditions and the requirements of Division 1.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- .1 Cast in Place Concrete Section 03300
- .2 Rough Carpentry [blocking] Section 06100
- .3 Sealants Section 07900
- .4 Finish Hardware [Supply Only] Section 08710
- .5 Miscellaneous Glass and Glazing Section 08800
- .6 Curtainwall [install doors] Section 08900
- .7 Security System Conduit Section 16700

1.3 SCOPE OF WORK INCLUDED

- .1 Work consists of supply and installation of interior and exterior extruded aluminum hinged doors, interior extruded aluminum screens / framing, aluminium head rail, operable ventilator sash and frames, installing hardware required herein, and installing all associated glazing supplied by Section 08800.

1.4 SUBMITTALS

- .1 Submit shop drawings in accordance with Section 01340.
- .2 Shop drawings shall clearly indicate each type of door, entrance and screen, the material being supplied, the wall thickness of the metal parts or the weight of the materials per lineal foot and shall show all connections, attachments, reinforcing, anchorage and location of exposed fastenings, sealing and glazing.

1.5 WARRANTY

- .1 Provide a Warranty as stipulated in the General Conditions, but for an extended period of two [2] years from the date of final completion and acceptance of the Work. Warranty shall be signed by both manufacturer and installer.

.2 The warranty shall cover the repair of the aluminum systems of doors, entrances and screens as a result of faulty materials or workmanship due to :

1. loosening of units
2. leaking through and around units
3. fading or discolouration
4. seals of doors

3. Upon written notification from the owner that the doors, entrances and screens are defective, promptly repair or replace the defective work at no cost to the owner.

1.6 MAINTENANCE MANUAL

- .1 Provide triplicate set of printed maintenance instructions for inclusion in Data Manual as specified in Division 1.
- .2 Instruct owner's representative on proper care, operation and maintenance for all doors and entrances.

1.7 PERFORMANCE REQUIREMENTS

- _____ .1 Wind pressure distribution as directly relate to the exterior entrances and framing, whether positive or negative (pressure or suction) shall be 25 psi.

1.8 DEFLECTION ALLOWANCES

- .1 In the assembly of the various components, allowances shall be made for the deflection of the structure above. When making connections thereto, ensure that no structural load is transmitted to the aluminum entrances and screens.
- .2 Design Ground floor entrances and glass systems to carried specified wind loads (25 psi) with a maximum deflection of 1/240 the of the distance between fixing points of framing or 1/2" whichever is less.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- .1 It is intended that the manufacturer's products listed in this specifications represent basis upon which quality and performance of other qualified manufacturer's products will be compared and shall so meet, rather than to limit the supply of such products to that one manufacturer only.
- .2 Aluminum work shall be provided by one of the following approved manufacturers :

Ford Glass Limited
Kawneer Limited
Lorlea Limited
Commercial Aluminum
PPG Industries

2.2 MATERIALS

- ____.1 General : Materials shall be inorganic, resistant to rodents, vermin, mildew, fungus and algae.
- .2 Aluminum Sections : Accurately formed, extruded alloy type AA-6063-T5 or as recommended by the coating manufacturer, with clean sharp straight corners. Finish for Aluminum Framing Listed Below : An architectural Class II clear clear anodic coating conforming with Aluminum Association Standard AA-M12C22A31 (Kawneer # 17 clear).
- .3 Operable Aluminum Sash : specification based upon Kawneer Series 525 or equal. Top projected open out ventilator sash shall be tubular extrusions with two lines of extruded elastomeric weatherings retained in extruded splines in the window frames. Glass stops shall be lock in screwless type. Hardware for ventilator sash shall be equal to Kawneer Zinc plated anderberg friction arms, satin finish white bronze cam handles and all required standard operational hardware. Aluminum Screens and Entrance Frames : specification based upon Kawneer Series Trifab II 450. Vertical and horizontal framing members shall have a nominal face dimension of 1 3/4" x 4 1/2".

All single acting entrances frames at exterior locations shall include Sealair weathering.

3. Aluminum Flashing : .051" minimum material in clear anodized aluminum.
4. Shims : Alcan utility sheet shim not in contact with concrete, stainless steel when in contact with concrete.
5. Screw, nuts, washer, bolts, clips : Series 300 stainless steel, hardened aluminum or other non corrosive material. Slip washers - nylon.
6. Thermal Separator : Of a size to conform to the extruded aluminum members, EPDM, neoprene or polyvinylchloride and having a minimum tensile strength of 2000 psi and minimum 70 plus/minus 5 Durometer A hardness.
7. Miscellaneous Steel : CSA G40.21-M81, Grade 330W, hot dipped galvanized after fabrication to CSA G164-M1981.
8. Touch Primer for Galvanized Steel : Zinc Rich Primer.
9. Dielectric Separator : Best Grade, quick drying non staining alkali resistant bituminous paint to CGSB 1-GP-108C, or membrane type to acceptance of consultant.
10. Loose Insulation : Glass fibre.
11. Bedding Material : Loose insulation, Glass fibre.
12. Sealants and Backer Rods - Section 07900
13. Glass : Supplied by and in accordance with requirements of Section 08800 - Miscellaneous Glass and Glazing.

2.3 HARDWARE

1. Exterior doors shall be complete with heavy duty mohair weatherstripping retained by extruded aluminum strips designed for mating with door edge and locked in place. Set on three sides of doors. Sill weatherstripping; surface mounted, colour matching adjustable neoprene or EPDM sweep.
- .2 Handicapped Door Operator hardware supplied and installed under Section 08710.

- .3 Balance of Hardware supplied under Section 08710 - Finish Hardware - for factory mounting under this Section.

2.4 FABRICATION

- 1. Interior Doors and Glazed Aluminum Screens : Equivalent to 350 doors with 450 framing by Kawneer set for single glazing and square stops c/w butts.
- 2. Exterior Door Type I: Equivalent to 350 series 1 3/4" thick of the type shown non insulated with Tri Fab 450 frame, set for single glazing with square stops - install all hardware. Refer to door and door frame schedule for bottom / top / mid rail and side rail dimensions. Note exterior doors are located into curtainwall window framing

2.5 FINISHING

- ____.1 Clear anodized finish - Standard No. 17.
- .2 Exposed screw heads of fastenings shall be countersunk oval head phillips drive finished to match the surrounding aluminium in acrylic baked enamel. Identify these locations to Architect prior to execution.

PART 3 EXECUTION

3.1 EXAMINATION

- .1 Take field dimensions of Work upon which Work of this Section depends before fabrication. Field adaptation of Work fabricated in error or without field check will not be allowed without Consultant's approval.

3.2 DOOR SCHEDULES AND DRAWINGS

- .1 Refer to door schedule and drawings for location and details for doors, entrances and screens.

3.3 INSTALLATION

- .1 Erect doors, frames, screens, operable sash and frame, and glass system, plumb, true and square, in strict accordance with the manufacturer's written instructions.

- .2 Prepare doors and frames for door hardware to template including, but not limited to, hinges, current transfers and concealed overhead stops.
- .3 Coordinate the installation of all door hardware and security system low voltage wiring thru frame members. Provide raceways and pull strings to ensure all wiring remains concealed.
- .4 Erect frames in prepared openings, install necessary reinforcing in frames.
- .5 Finish hardware for doors unless specified in Part 2 above, shall be supplied under Section 08710 - Finish Hardware but installed under this Section.

Refer to Hardware Group Schedule for Typical Door Finish Hardware.

- .6 Doors shall be installed to operate freely and close tightly.
- .7 Accurately fit frames to provide weathertight installation and provide clearances required due to expansion, contraction and deflection of building structure.
- .8 After adjustment the anchorage devices shall be positively locked to prevent movement once alignment is achieved. Door frames containing power operator mounting shall extend down to or up to firm concrete slabs.
- .9 Install thresholds in bed of sealant, and provide cover plates, weatherstripping and all other items, shown, specified or necessary for a complete installation.
- .10 Install all related flashing and drips.
- .11 Shims shall be aluminum or stainless steel.
- .12 Metal members shall be isolated where necessary to prevent corrosion due to metal to metal contact.
- .13 Assume all responsibility for the design of the assembly, reinforcing, furring and anchoring to suit each specific condition complying with the requirements specified herein and as shown on reviewed shop drawings.

3.4 INSTALLATION - GLAZING

- .1 Receive all glass units form work of Section 08800 - Glass.
- .2 Exterior door glazing system shall be in accordance with IGMAC system recommendations using glazing gasket to exterior, and either preshim tape to interior or combination of gasket with wet air/vapour seal.
- .3 Interior door and screen glazing systems shall be in accordance with Part VI, Glazing Sealing Systems Manual Setting No. 40 consisting of setting blocks and pre-threaded gaskets both sides.
- .4 Install in accordance with requirements of Miscellaneous Glass and Glazing - Section 08800.

3.5 SEALANT

- .1 Seal all joints between frame and adjacent surfaces with sealant to provide completely weathertight enclosures unless specifically detailed otherwise. Fill spaces deeper than 1/2" with bedding material packed tightly in place and joint backing to within 3/8" of finished surface. Fill remaining space with sealant.
- .2 Perform work according to the requirements of Section 07900.

3.6 CLEANING

- .1 Final cleaning in accordance with Division 1
- .2 The aluminum entrance subcontractor shall be fully responsible for the removal of protective coatings and the cleaning of the aluminum, steel and glass.
- .3 The decision as to when this work shall be done shall be mutually agreed between the Consultant, the Contractor and Work of this Section.
- .4 Clean all glass, removing excess sealant, at completion of the installation.
- .5 Advise General Contractor of proper cleaning procedure at time of Contract close out.

END OF SECTION