

PART 1 - GENERAL

1.1 Related Sections

- .1 Air Barrier: Section 07 27 00
- .2 Caulking between frames and other building components Section 07 90 00
- .3 Glazing: refer to drawings.

1.2 Samples

- .1 Submit sample of finish for Consultant's approval before fabrication.

1.3 Design

- .1 Design and size components to withstand dead and live loads caused by pressure and suction of wind acting normal to plane of system in accordance with OBC requirements.
- .2 Design and size components to withstand seismic loads and sway displacement in accordance with OBC requirements.
- .3 Provide system to accommodate, without damage to components or deterioration of seals:
  - .1 Movement within system.
  - .2 Movement between system and perimeter framing components.
  - .3 Dynamic loading and release of loads.
  - .4 Deflection of structural support framing.
  - .5 Shortening of building concrete structure.
  - .6 Creep of concrete structural members.
- .4 Design system to comply with OBC SB-10 for equivalent RSI values, and air infiltration and maintain a continuous air barrier and vapour retarder throughout the assembly primarily in line with the inside pane of glass.

1.4 Shop Drawings

- .1 Submit shop drawings in accordance with the contract.
- .2 Indicate each type of door, frame, extrusion profiles method of assembly, section and hardware reinforcement, locations of exposed fasteners, finishes, etc.
- .3 Submit canopy fascia and soffit panel layout drawings including panel profile, dimensions, fastening and methods of assembly.

1.5 Maintenance Data

- .1 Provide maintenance data for cleaning and maintenance of aluminum finishes for incorporation into maintenance manual.
- 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.
- 1.7 Quality Assurance
  - .1 Welder qualifications: Fabricators shall be certified by Canadian Welding Bureau to CSA Welding qualification codes. CSA W47.2 for welding of aluminum.
- 1.8 Warranty
  - .1 Submit a 2 year parts and labour warranty for aluminum frames in accordance with the Contract from the date of Substantial Performance of the Contract.
  - .2 Defective work includes but is not limited to faulty operation of hardware and door operators, fading and discolouration of finishes, breakage or deformation of the metal work and glass breakage due to excessive stresses developed due to distortion of the units.

## PART 2 - PRODUCTS

- 2.1 Materials
  - .1 Aluminum extrusions: Aluminum Association alloy AA6063-T5.
  - .2 Sheet aluminum: 3mm thick, Aluminum Association alloy AA1100.
  - .3 Aluminum finishes - door and mullions: Aluminum Association AADAF45, clear anodized.
    - .1 Canopy soffit and fascia panels: prefinished Duranar XL paint finish, colour as indicated on drawings.
  - .4 Steel reinforcement: to CSA G40.20, grade 300W.
  - .5 Fasteners: stainless steel.
    - .1 For canopy aluminum panels: screws with colour coated heads to match panel colour.
  - .6 Isolation coating: bituminous paint.
  - .7 Glazing sealed units: as indicated on drawings.
  - .8 Sealants: Tremco, Sternson, GE Silicones, Dow Corning - colour to match adjacent finish.

- .9 Products: to meet thermal requirements listed on drawings.
  - .1 Doors: Windspec Series 350 medium stile door.
  - .2 Curtain Wall: Windspec Series 5500 HTP curtain wall framing.
  - .3 Acceptable Manufacturers: Windspec Inc. profiles used as standard or approved equal by Kawneer or Alumicor.
  - .4 Interior Vestibule: Windspec Series 630 entrance framing.
- .10 Back pans: galvanized sheet metal.
- .11 Insulated sandwich trim panel: 25 thick, aluminum/poliso insulation/aluminum sandwich panel, aluminum finish to match mullion.
- .12 Insulation: glass fibre
- .13 Thermal break: rigid PVC.
- .14 Door Hardware:
  - .1 Threshold: aluminum
  - .2 Door closers: LCN, adjustable closing speed, mounted at head and sized to suit exposure and door size, arm to be painted to match aluminum.
  - .3 Dead Bolt with thumb turn( 1/4 turn): Adams Rite, Falcon.
    - .1 Cylinder supplied by hardware Section 08710.
  - .4 Push-Pull: polished stainless steel.
  - .5 Hinges: butt, stainless steel.
  - .6 Weatherstrip: replaceable metal backed mohair pile continuous on three sides and complete with bottom sweep.
- 2.2 Finishes
  - .1 Finish exposed surfaces of aluminum components in accordance with Aluminum Association Designation System for Aluminum Finishes.
    - .1 Frames and doors – anodized, ~~champagne, to match existing phase one building aluminum finish.~~ clear anodized
  - .2 Finish steel clips and reinforcing steel with hot dipped galvanized coating, backpainted.
- 2.3 Fabrication
  - .1 Construct doors and frames screens sizes as shown.
  - .2 Make allowances for deflection. Ensure that structural loads are not transmitted to aluminum work.
  - .3 Extend vertical members above ceiling and secure to structure.
  - .4 Provide reinforcement for strength, stiffness at connections.

- .5 Fit intersecting members to flush hairline weathertight joints and mechanically fasten together, except where indicated otherwise.
- .6 Conceal fastenings from view. Exposed fastenings where indicated.
- .7 Form cut-outs, recesses, mortising or milling for switch boxes, wiring, finishing hardware to templates supplied. Reinforce with aluminum or galvanized steel plates.
- .8 Field apply isolation coating to aluminum in contact with dissimilar metals and cementitious materials.
- .9 Exposed manufacturer's nameplates on doors and frames are not permitted. Place name plates in semi-concealed locations.
- .10 Provide aluminum filler panels to extend between wall and mullion on both inside and outside of frame as indicated.

#### 2.4 Aluminum Frames

- .1 Frames for doors and sidelights to be aluminum extrusions with minimum wall thickness of 3mm.
- .2 Frames for doors to be by same manufacturer as aluminum doors.
- .3 Accommodate expansion and contraction within service temperature range of -35 degrees C to 75 degrees C.
- .4 Limit deflection to 1/175th of clear span tested to ASTM E 330-90 under wind loads for building locality as ascertained by NBC Supplement No. 1 Climatic Information for Building Design in Canada. Submit certificate of tests performed.

### PART 3 - EXECUTION

#### 3.1 Installation

- .1 Install work plumb, square, level, free from warp, twist and superimposed loads.
- .2 Secure work in required position. Do not restrict thermal movement.
- .3 Install hardware in accordance with templates.
- .4 Install locks on exterior doors.
- .5 Adjust operable parts for correct function.
- .6 Isolate from cementitious materials.

3.3 Glazing

- .1 Glaze aluminum doors and windows as specified on drawings and in accordance with the OBC.

3.4 Caulking for Aluminum

- .1 Where required seal between members of aluminum work and adjacent work.
- .2 Apply sealant in accordance with Section 07 90 00. Conceal sealant within the aluminum work except where exposed use is permitted by Architect.

END OF SECTION 08 44 13