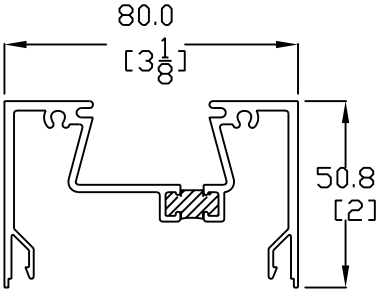
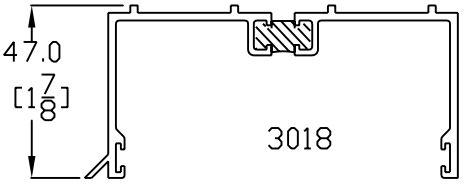
Aluminex™

3020 SERIES FLUSH GLAZE THERMALLY BROKEN FRAMING SYSTEM

3020





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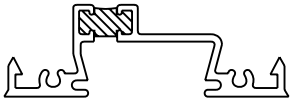

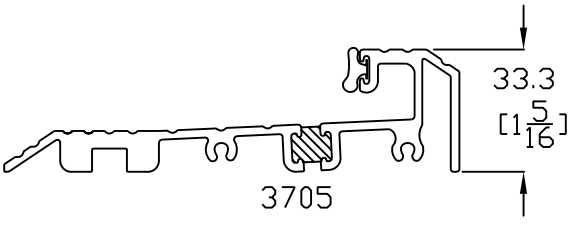

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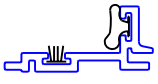

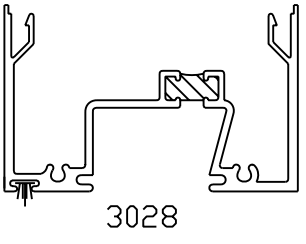

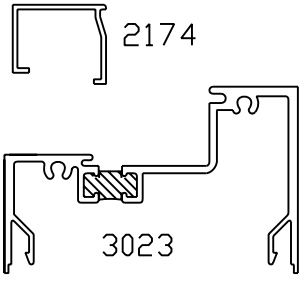

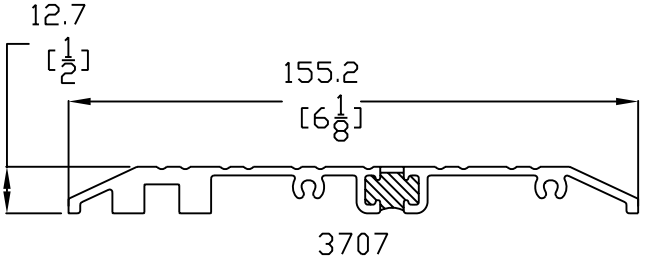

SCALE 1:2

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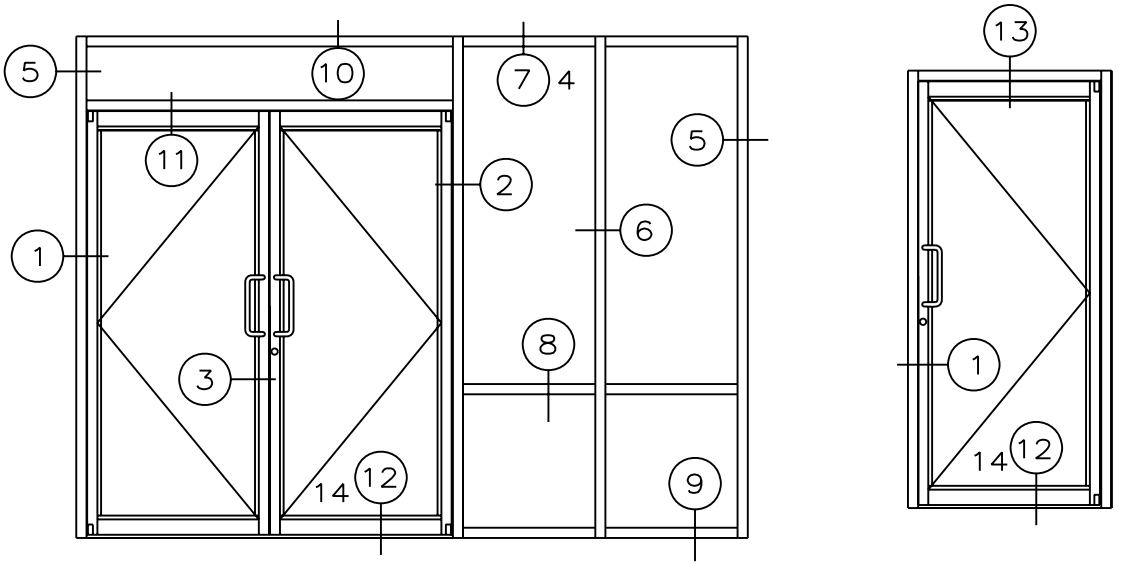

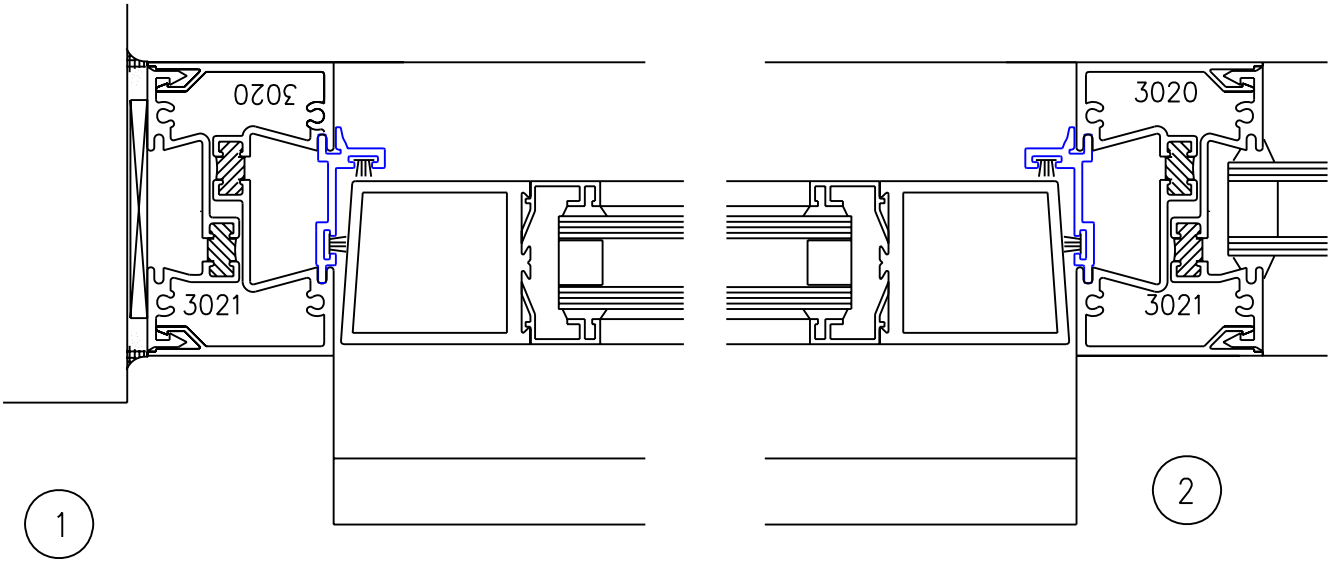

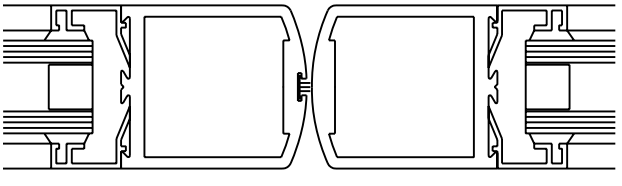

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3020 SERIES FLUSH GLAZE THERMALLY BROKEN FRAMING SYSTEM

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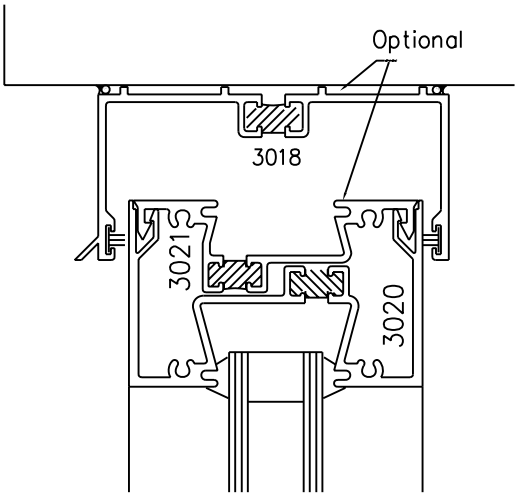

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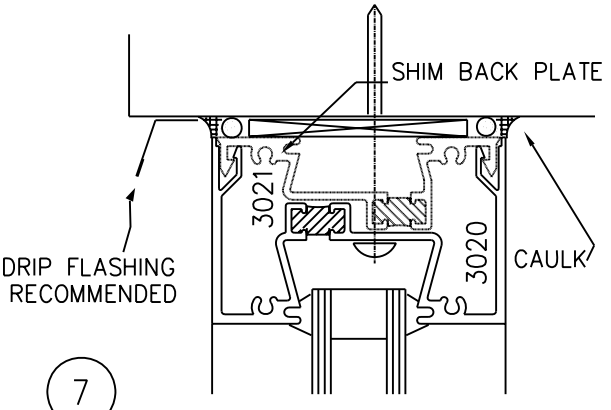

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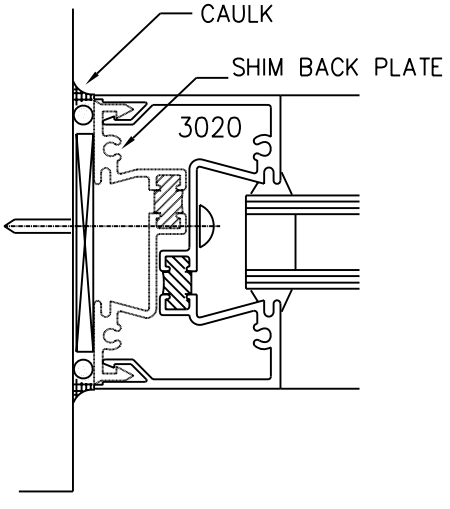

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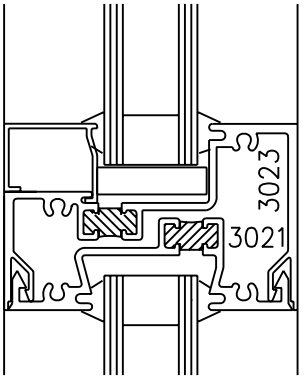

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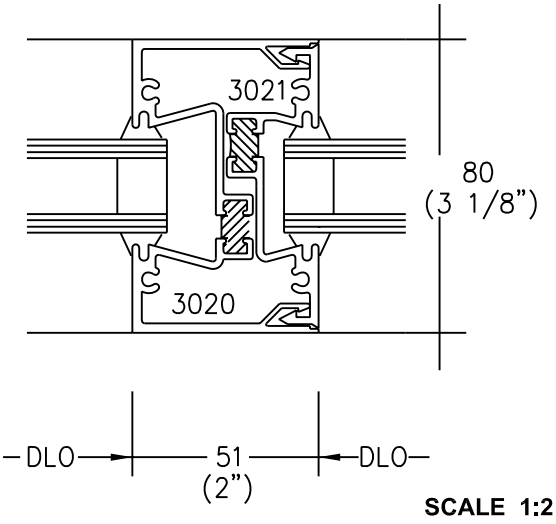

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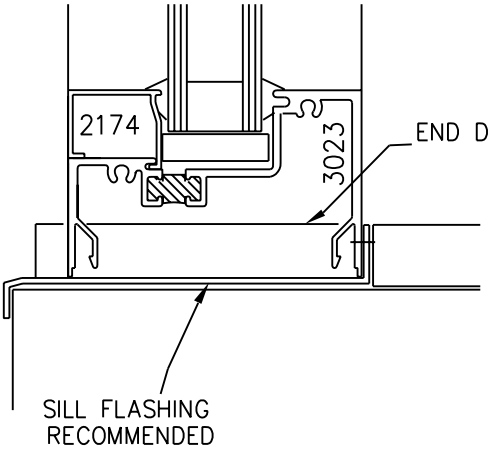

SCALE 1:2

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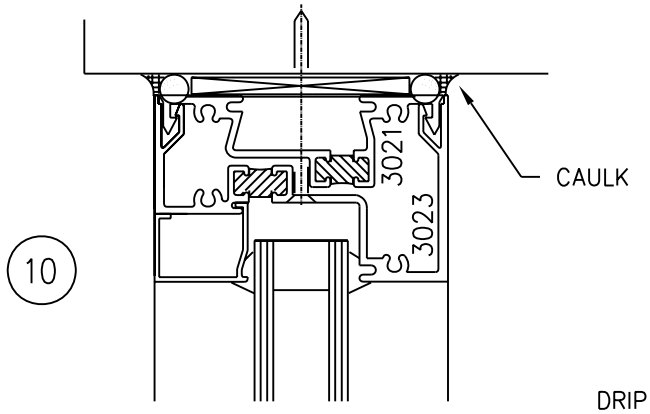

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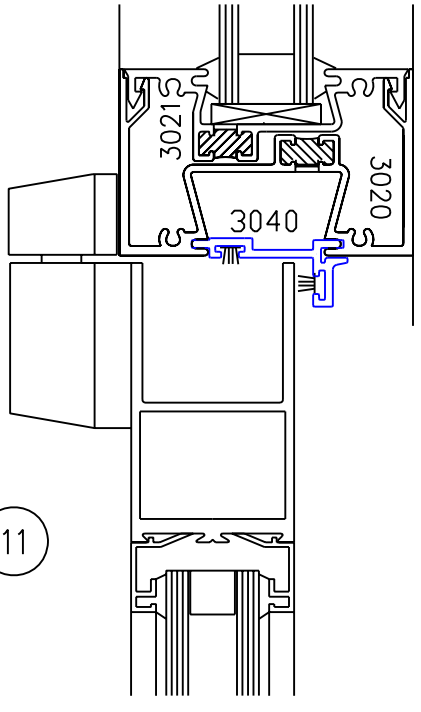

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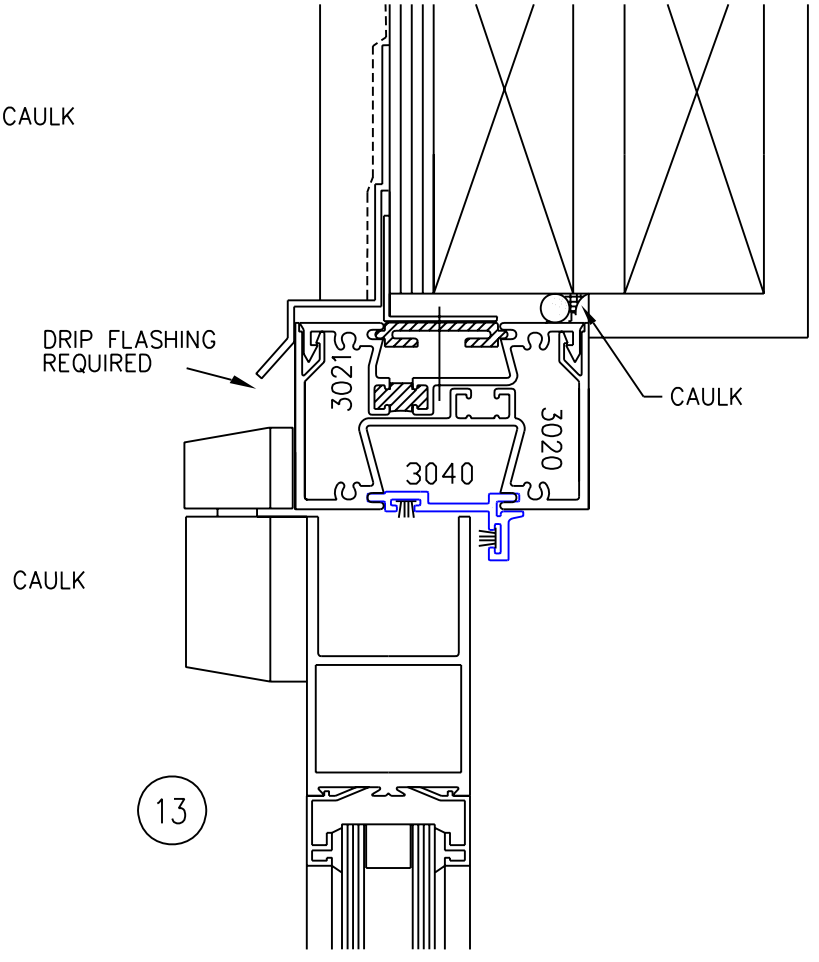

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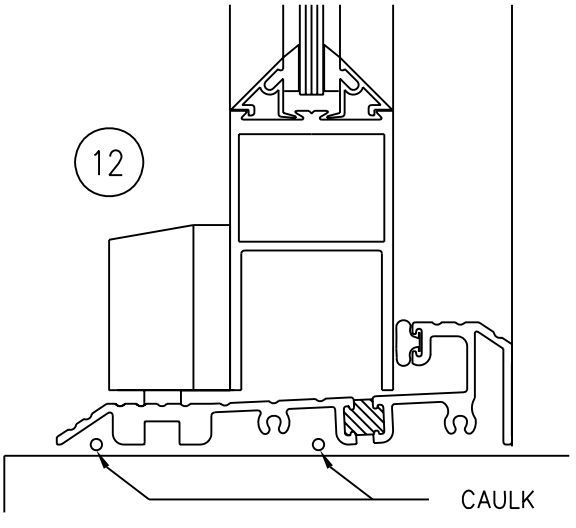

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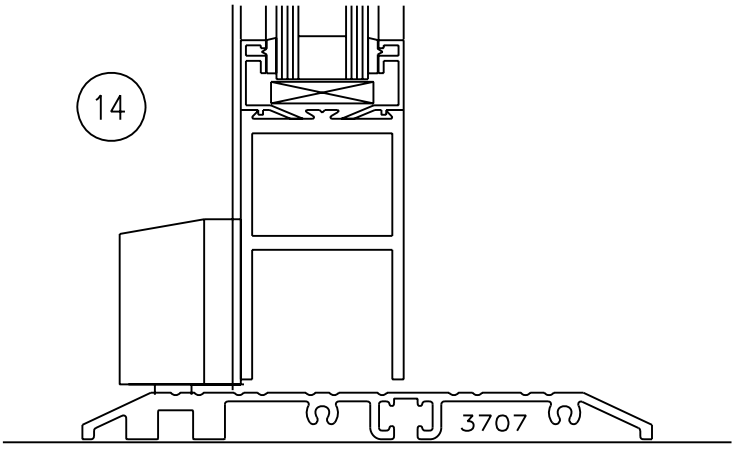

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SCALE 1:2

A.T.MARCK & ASSOCIATES
BUILDING SYSTEMS ENGINEERING LTD.
TEL/FAX (604) 469-6566

PROFILE: 3020 + 3021	MATERIAL: AA 6063 T5
A= 1061 mm^2 (1.645 IN^2)	I= 850427 mm^4 (2.043 IN^4)
C/L$_{max}$ = 40.01 mm (1.575 IN)	S= 21254 mm^3 (1.297 IN^3)

SPACING	MAX. ALLOWABLE MULLION LENGTH (m/ft) FOR SPECIFIED WIND LOAD						
	0.72 kPa	0.96 kPa	1.20 kPa	1.44 kPa	1.68 kPa	1.91 kPa	
	15 PSF	20 PSF	25 PSF	30 PSF	35 PSF	40 PSF	
.45 m	4.30	3.90	3.65	3.45	3.25	3.10	m
1.5′	14.1	12.8	12.0	11.3	10.7	10.2	ft
.60 m	3.90	3.55	3.30	3.10	2.95	2.85	
2.0′	12.8	11.6	10.8	10.2	9.7	9.4	
.75 m	3.65	3.30	3.05	2.90	2.75	2.65	
2.5′	12.0	10.8	10.0	9.5	9.0	8.7	
.90 m	3.45	3.10	2.90	2.70	2.60	2.45	
3.0′	11.3	10.2	9.5	8.9	8.5	8.0	
1.05 m	3.25	2.95	2.75	2.60	2.45	2.35	
3.5′	10.7	9.7	9.0	8.5	8.0	7.7	
1.20 m	3.10	2.85	2.60	2.45	2.35	2.20	
4.0′	10.2	9.4	8.5	8.0	7.7	7.2	
1.35 m	3.00	2.70	2.50	2.35	2.20	2.10	
4.5′	9.8	8.9	8.2	7.7	7.2	6.9	
1.50 m	2.90	2.60	2.45	2.25	2.10	1.95	
5.0′	9.5	8.5	8.0	7.4	6.9	6.4	
1.65 m	2.80	2.55	2.35	2.15	2.00	1.90	
5.5′	9.2	8.4	7.7	7.1	6.6	6.2	
1.80 m	2.70	2.45	2.25	2.10	1.90	1.80	
6.0′	8.9	8.0	7.4	6.9	6.2	5.9	
1.95 m	2.65	2.40	2.20	2.00	1.85	1.75	
6.5′	8.7	7.9	7.2	6.6	6.1	5.7	
2.10 m	2.60	2.35	2.10	1.90	1.80	1.65	
7.0′	8.5	7.7	6.9	6.2	5.9	5.4	
2.25 m	2.50	2.25	2.05	1.85	1.70	1.60	
7.5′	8.2	7.4	6.7	6.1	5.6	5.2	
2.40 m	2.45	2.20	1.95	1.80	1.65	1.55	
8.0′	8.0	7.2	6.4	5.9	5.4	5.1	

1/ UNIFORM (RECTANGULAR) LOAD DISTRIBUTION

2/ BASED ON L/175 MAX ALLOWABLE DEFLECTION OR Fy = 110 MPa FOR AA 6063 T5 – WHICHEVER IS LESS – CONFORMING TO CAN3-S157-M83

3/ FOR ESTIMATING PURPOSES ONLY

Aluminex™

3020

SERIES FLUSH GLAZE
THERMALLY BROKEN FRAMING SYSTEM
51mm (2") X 80mm (3-1/8")

I. GENERAL

Scope of Work
Furnish materials, labour, plant, equipment, related items and services necessary for the supply, complete fabrication and installation of glazed wall aluminum framing as shown on the drawings, required by job conditions and specified herein.

Work Not Included
Structural support for the system, steel and other embeds in concrete or masonry, interior moulding, closure or trim as well as flashing unless specifically detailed and called out as such.
(Specifier List of Other Exclusions)

Related Work Specified Elsewhere ISpecifier List)

Submittals

Shop Drawings
Prior to fabrication submit shop drawings showing frame elevations, full size details as far as practical, all dimensions, coordination with related work, provision for thermal expansion and main structure deformations and tolerances, sealing and caulking joints and their sizes, material and installation notes as well as all necessary references to local Building Code requirements.

Samples
Before any work is fabricated, all requested representative and properly labelled samples, including specified products with their finishes, shall be submitted to the Architect for his approval.

II. PRODUCTS

Glazing System
° The system must allow for full integration with the building envelope.
° Aluminum framing shall be **3020 Series**, thermally broken - with high strength casting resin and mechanical de-bridging, as manufactured by **Aluminex.**
° The system shall be dry-dry, outside-glazed, able to accommodate up to 25 mm (1") sealed glass unit as required, specified and shown on architectural drawings.
° The nominal profile dimensions shall be:
- 50.8 mm (2") face width for double glazing, and
- 80mm (3.125") depth,
appropriate for load and span conditions.
° Glass retention shall be achieved by flush glazing with extruded aluminum exterior glazing stop as for dry-dry gasketing method.
° Continuous sill aluminum flashing, with its properly designed and sealed end dams, must ensure that all water intrusions are directed to the outside.
° Compatibility with **WestCoast Series Insulated Doors**, c/w offset pivots and/or butt hinges, by **Aluminex** is required.
° Whenever substitute systems and/or products are considered, supporting data must be submitted ten (10) days prior to bid date to allow for valid comparison.

Performance
° Required CSA/CAN CGSB and AAMA rating should be referenced to the test standards listed below.
° The applicable test standards are as follows: ASTM E-283 Air Infiltration, E-331 Water Penetration, and E-330 Structural Performance with L/ 175 or 19 mm (0.75"), whichever is less, deflection limitations.
° Defining of the overall Temperature Index and/ or U-Value shall be based on CSA/CAN CGSB, NFRC and AAMA standards.
° Seismic movement minimum allowances shall be referred to and follow structural design and requirements of the main structure

Materials
° Extruded aluminum shall be AA 6063 T6, Fy = 170 MPa (25 KSI), alloy and temper minimum, or other as required by the Standards, able to meet or exceed structural and finishing criteria as specified.
° Any defects impairing strength, durability or appearance are not acceptable.
° Sufficient strength and size fasteners shall be made of corrosion-resistant and compatible material such as cadmium or zinc plated carbon steel type 400, stainless steel type 300, or aluminum.
° Anchoring fastener minimum penetration and location in the main structure materials shall be as per manufacturer's specifications. A proper material and size shim at each anchoring fastener is required.
° Dis-similar materials shall be separated with approved bituminous paint or spacers to prevent any galvanic action (corrosion).
° Glazing shall utilize wedge or spline extruded Neoprene, EPDM, or other compatible material, gaskets.
Gasket profiles shall be designed and sized to work with the system and properly serve glazing rabbet assembly.
° Setting blocks must be properly sized - L mm = 25 mm (1") per each square meter (10 sq/ft) of glass, but not less than 100 mm (4") - placed at 1/4 points, and compatible with the insulating glass sealant.

Finish
All exposed surfaces shall be free from defects, scratches and serious blemishes.
Aluminum shall receive one of the following available finishes specified by the Architect:
i) Standard commercial Clear anodic coating integral colour (02),
ii) Standard commercial Dark Bronze and Black hardcolour anodic coating (04,05),
iii) Optional anodic coating finishes are Champagne (03)
iv) Standard baked enamel paint in White or Rideau Brown.
v) Other paint qualities and colours in baked enamel, as selected are available upon request.

III. EXECUTION

Fabrication
° Fabricate and assemble in strict accordance with the approved shop drawings and manufacturer's published recommendations.
° The System shall allow for outside conventional flush glazing, with glass hard bite not less than 10 mm (0.375").
° Aluminum profiles shall be connected accurately to each other by anti-corrosive fasteners and sealed properly, presenting air and water tight joints, and providing for resilient glass setting and thermal expansion.
° Entrance and other glazed curtain wall members, wherever applicable, shall be compatible in appearance with the System.
° All frames for single acting doors shall include positive weathering barrier.

Installation
° Framing shall be installed, secured and glazed by an experienced crew.
° Set framing level, plumb, square and aligned with other work, in accordance with approved shop drawings and manufacturer's installation instructions and published glazing standards.
° All perimeter joints shall be sealed and caulked with approved sealant materials to ensure a weather-tight installation.

Protection and Cleaning
° All work shall be protected against damage during and after installation.
° After installation all exposed surfaces shall be cleaned of all contaminants.
° The General Contractor is responsible for protection and final cleaning.