PART 1 GENERAL INFORMATION

1.1 SCOPE OF WORK

.1 The work of this section covers the supply of the materials and the installation of the exterior siding in aluminum sheet and the finishing trims and hardware.

.2 All the other work not described or not given in the drawings but required to complete the work.

1.2 RELATED SECTIONS

.1 Section 06 10 11 – Carpentry and joinery

.2 Section 07 62 00 – Flashing and metal accessories

.3 Section 07 92 10 – Sealing products for joints

1.3 REFERENCES

.1 Aluminum Association (AA).

.1 AA-DAF-45-R03, Designation System for Aluminum Finishes.

.2 American Society for Testing and Materials International (ASTM).

.1 ASTM A653/A653M-02a, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

.2 ASTM E96-00e1, Standard Test Methods for Water Vapor Transmission of Materials.

.3 Canadian General Standards Board (CGSB).

.1 CAN/CGSB-1.40-97, Anticorrosive Structural Steel Alkyd Primer.

.2 CAN/CGSB 1-GP-71, Change 13-1995, Methods of Testing Paints and Pigments (Edition August 1974, reprinted, including changes 1 to 12 and amendment 1).

.4 The Master Painters Institute (MPI).

.1 Architectural Painting Specification Manual - March 1998 (R2002).

1.4 DESIGN CRITERIA

.1 Design composite panels taking into account the expansion and contraction of the constitutive materials, caused by variations of ambient temperature of 60 degrees Celsius, in order to avoid any distortion and prevent rupture of the seals, excessive loading exerted on the fasteners and other damaging effects.

.2 Provide expansion joints so that the siding can absorb movements of the wall panels and movements between the wall panels and the framework of the building, caused by movements of the framework itself, without this resulting in permanent distortion, damage to the filling materials and packing, cracks in the seals, or water ingress.

.3 Design the components so that they can bear the permanent loads and loading due to the wind, according to the National Building Code of Canada (NBC) and to relevant municipal/territorial regulations. The maximum permitted bending is around 1/180 of the span.

.4 Provide efficient run off, towards the outer face of the walls, of any condensation water that forms inside the walls and rainwater entering through the seals, according to the rainscreen principle defined by the National Research Council of Canada.

.5 Design the wall siding taking into account the tolerances specified for mounting the supporting framework.

.6 Comply with the following tolerances when installing the panels.

.1 The maximum permitted deviation for the flatness or location of the components, as shown in the approved workshop drawings, is 10mm/m of length, up to 20mm/100m.

.2 The maximum permitted offset for the alignment of two adjacent components, butted in the same plane, is 0.75mm.

1.5 WORKSHOP DRAWINGS

.1 Submit the required workshop drawings, according to section 01 00 05 – Documents and samples to be submitted.

.2 The drawings must give the dimensions of the components, details of the bays, lintels, stiles, thresholds and mullions, materials and finishes, details of anchorages, conformity with the calculation criteria and requirements regarding related structures.

1.6 SAMPLES

.1 Submit the required samples, according to section 01 00 05 – Documents and samples to be submitted.

.2 Submit two samples of 600mm x 600mm of a wall panel assembly demonstrating a representative part of the materials, finishes and colours.

1.7 WARRANTY

.1 Provide a letter of warranty from the manufacturer for the material used against any manufacturing fault for a lifetime period, on the product of the panels, counting from the provisional acceptance date of the work.

.2 Provide a warranty for what is digitally printed and applied in factory against any fault of discolouration, powdering, flaking, cracking, yellowing, loss of adhesion and tarnishing, for a period limited to fifteen (15) years (materials) counting from the provisional acceptance date of the work.

1.8 REQUESTS FOR SUBSTITUTION (EQUIVALENCE)

.1 See administrative clauses (according to the case).

PART 2 PRODUCTS

2.1 MATERIALS AND EQUIPMENT

.1 Exterior siding in extruded aluminum sheet 6063-T-5 with minimum thickness 0.062 inches. Resistant to abrasion according to ASTM D-4060:

.1 Exterior siding in aluminum sheet painted in the factory:

.1 Basic composition: aluminum extrusion pretreated with primer coat for full adhesion between the ink and the aluminum.

Extrusion with oblong holes every 8 inches for fixing to the wall. The same extrusion is comprised of a strip of perforated aluminum (behind the part) for air circulation.

Soffit type sheet with holes drilled in factory with same composition and coming from the same manufacturer.

.2 Finishing: inkjet colour printing of a high-definition digital ***[Texture and color name]*** texture followed by the application of a protective sealer against ultraviolet radiation (UV). All in accordance with standards ASTM B117 - Salt spray and ASTM D2247 - Relative humidity, and standard AAMA 2605.

.3 Colour: architect's choice of colour from the manufacturer's entire range;

.4 Acceptable products: "Dizal" digitally printed aluminum siding, or approved equivalent.

.5 Nominal panel dimensions: sheet of ***[Profile (F,V,C) and size (4'', 6'', 8'')]*** with oblong fixing holes every 8 inches.

.2 Outside/inside corners, starter strip, extruded recessed trims.

.1 The trims and fixing system must come from the same manufacturer as the aluminum sheet.

.2 Models of trim used in two "snap-in" parts type

.1 Prefabricated outside corner
.2 Starter strip
.3 J-Trim
.4 H-Trim

.3 Accessories: caulking, refer to section 07 92 10 – Sealing products for joints and according to the manufacturer's requirements.

.4 Attachment: the fasteners (screws) must be stainless steel, *concealed* type.

.5 Intermediate siding membrane: according to standard CAN/CGSB-51.32, of single thickness type.

PART 3 EXECUTION

3.1 INSTALLATION

.1 The installation of the aluminum sheet siding must be completed in accordance with the manufacturer's recommendations.

.2 Install the thresholds and metal supports according to the instructions.

.3 Install the flashing and packing of door and window bays, starter strips, inside corners, edging, recessed trims, sills, counterflashing and coping strips. The door/window opening jambs must be provided with outside corners prefabricated in aluminum. Cut and adjust the latter as required to complete the siding, and seal the joints with suitable sealer.

.4 Install the sheets continuously, from the starter strip upwards, in accordance with the manufacturer's written instructions.

.5 Install the projecting corners, fillers and closers that thoroughly fit with the shape of the supports and the structure's profile.

.6 Make sure that the joints of the siding components are well aligned and perfectly butted.

.7 Apply a sealer to the meeting points of dissimilar materials. Carry out the work according to the specifications of section 07 92 10 – Sealing products for joints and according to the manufacturer's instructions.

.8 Attach the components so as not to impede thermal expansion and contraction. Conceal the fasteners as far as possible. Follow the manufacturer's recommendations.

.9 Retouch the paint at the usual places and as required.

.10 Follow the manufacturer's recommendations on the methods of installation and sealing.

.11 The installation must comply with the manufacturer's requirements in all points.

3.2 TREATMENT OF CUT EDGES

.1 For sheets that have to be cut on the worksite, install expansion joint vertical trims and seal the joints with a sealer.

.2 Cuts to the edges of the aluminum sheets must be sawn with precision without flaking.

END OF SECTION