Partie 1 General

1.1 RELATED REQUIREMENTS

.1 The list of Work in this division is indicative but non-limiting. It does not exclude Work described in other specification divisions shown on the drawings or required for full execution of the Work as intended on the drawings.

.2	Section 04 03 43	Historic – Dismantling Stone Masonry
.3	Section 06 20 00	Finish Carpentry.
.4	Section 08 50 00	New wood windows.
.5	Section 08 52 05	Historic works- existing wood windows.
.6	Section 08 80 50	Glazing
.7	Section 09 03 51	Historic works – Plaster.
.8	Section 09 21 16	Gypsum Board Assemblies.
.9	Section 09 91 23	Interior Painting.
.10	Division 26	Electricity.

1.2 REFERENCES

.1 Aluminum Association (AA)

.1 AA DAF 45-03(R2009), Designation System for Aluminum Finishes.

.2 ASTM International

.1 ASTM D1784-11, Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.

.3 Health Canada/Workplace Hazardous Materials Information System (WHMIS)

.1 Material Safety Data Sheets (MSDS).

.4 Sustainable Forestry Initiative (SFI)

.1 SFI-2010-2014 Standard.

.5 M1 and NFPA701 Standard Methods for Fire Tests – screen fabrics.

.6 NFPA701Standard Methods for Fire Tests for Flame Propagation of Textiles and Films – opaque fabrics.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

.2 Submit print or electronic technical drawings of final installed products including required dimensions for smooth operation of blind and installation options.

.3 Product Data:

.1 Submit manufacturer's printed product literature and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.

.4 Shop Drawings:

.1 Submit drawings stamped and signed by professional engineer registered or licensed in Quebec, Canada.

.2 Indicate dimensions in relation to window jambs, operator details, top and bottom rail, conditions between adjacent blinds, corner conditions, anchorage details, hardware and accessories details,[electrical operating mechanisms, connections and required clearances.

.5 Samples:

.1 Submit one representative working sample of each type louvre blind.

.2 Submit duplicate samples of manufacturer's standard colours, patterns and textures of specified vane and rail materials for selection by Departmental Representative.

.3 After approval samples will be returned to Contractor for incorporation in the Work.

.6 Quality control submittals: submit following in accordance with Section 01 45 00 - Quality Control.

.1 Manufacturer's Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence, cleaning procedures and maintenance.

.2 Manufacturer's Field Reports: submit manufacturer's written reports within 3 days of review, verifying compliance of Work, as described in PART 3, FIELD QUALITY CONTROL.

.3 Warranty: submit minimum 5 year warranty on blind components from installation date, subject to warranty conditions.

.4 Manufacturer must have minimum 15 years experience in the manufacture of blinds indicated in this Section.

.7 Closeout Submittals:

.1 Provide operation and maintenance data for louvre blinds for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

1.4 DELIVERY, STORAGE AND HANDLING

.1 Packing, shipping, handling and unloading:

.1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.

.2 Deliver, store and handle materials in accordance with manufacturer's written instructions.

.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.

.2 Remove packaging material from site and dispose of materials at appropriate facility.

.3 Recover and sort paper, plastic, polystyrene and cardboard packaging and dispose of in on-site recycling bins. move recycling containers and bins from site and dispose of materials at appropriate facility.

1.5 ACCEPTABLE PRODUCTS AND MATERIALS

.1 Where a particular brand name is stipulated, see Instructions to Bidders for procedure for requesting approval of substitute materials and products

Partie 2 Products

2.1 DESIGN REQUIREMENTS

.1 Design vertical louvre blinds to following requirements:

.1 Allow replacement of wear susceptible parts by user or manufacturer.

.2 Guarantee of at least five-years of available replacement parts following discontinued products by manufacture.

.3 Provide instructions for replacing or repairing worn parts, including inventory numbers for parts and procedures for ordering replacement parts.

.4 Program allowing for refurbishing or return of used vertical louvre blinds.

.5 Permit disassembly of components for recycling of materials where recycling markets exist.

.6 Include stamps on major plastic components indicating composition code to facilitate recycling efforts.

2.2 COMPONENTS

.1 Sector:

EAST WING – All windows including Administration, Guard, East square tower.

WEST WING – All windows of West square tower and West block.

.1 Screen (97% opaque), manual chain operated, aluminum tube.

.2 Control system:

.1 Adjustment-free. Clutch system comprised of multi-banded steel springs to create pressure necessary to keep blind in desired position. Springs at 180^{o} to ensure smooth operation. Glass reinforced polyester components to military specification MIL M-24519. Clutch system will develop no more than 0.5 lb drag for easy life. System to be symmetrical for left or right hand installation.

.3 Chain:

.1 Stainless steel bead chain (90 lb test)

.4 Roller tube and screen attachment:

.1 Extruded aluminum alloy 6063-T5 diameter to prevent excessive bending. Adhesive tape or rivet not acceptable for attaching fabric to tube. Plastic rib attached to fabric and inserted in tube to prevent blind from accidentally falling off roller. Reinforced tube to prevent plastic rib from lifting fabric.

.5 Bottom bar:

.1 Extruded aluminum alloy 6063-T5, to keep shade straight, inserted in 38 x 10 mm pocket hem.

.6 Valence:

.1 Enamelled aluminum, colour selected y Departmental Representative in PPG range of colours, 103 mm high x 103 mm deep.

.2 Installed at top of windows against frame.

.7 Fabric:

.1 Ultrasonic, pressure or heat-welded to prevent fabric from fraying.

.2 Screen fabric average weight 14.1 oz/YD^2, thickness 0.019 inches (0.048 mm), 205 tear strength.

.3 Aluminum backing (2%) to reduce heat buildup.

.4 Fibreglass (34%) and vinyl (64%) on fibreglass. Microban, Greenguard and Greenguard for children and schools, certified NFPA 701 fire rating, certified ASTM E 2180 bacteria and fungus resistance.

.5 Acceptable products:

.1 Altex.

.2 Hunter Douglas.

.3 Sharewave 2410 performance + de Sol-R.

.4 Replacement products or materials approved by addendum in accordance with Instructions to Bidders.

.6 Colour selected from standard range by Departmental Representative.

.2 <u>Sector:</u>

<u>CENTRAL BUILDING – Multifunctional room (all windows – pedimented windows, arrow slit and dormers):</u>

.1 Fully opaque blind (100%), motorized, sealed pocket hem bar and black-out trim.

.2 Motorized roller blind, switch controlled.

.3 Motor:

.1 Motor 24V RS485 motor with SDN system connected to BACnet interface and RS485 communication protocol.

.2 24VDC:1.8A.

.3 Torque, motor speed: 28 RPM, motor length: 408 mm, motor diameter: 31 mm.

.4 FCC certified motors for safe operation.

.5 Acceptable products:

.1 Sonesse 30 RS485 motor by Somfy.

.2 Replacement products or materials approved by addendum in accordance with Instructions to Bidders.

.4 Motor accessories:

.1 Acceptable products provided and installed by specialized contractor:

.1 Somfy BACnet interface communication between motors and building system. Somfy No. 1870249.

.2 Distribution panel for Sonesse 30 24V RS485 motors, for power and communication.

.3 Distribution panels for 10, 15 or 20 moteurs required as indicated in Division 26.

.4 24V transformer for network power (Somfy No. 1822111). Hooked up to building electricity network (120 V). Only one transformer needed for entire network.

.5 Motor programming tool (during installation) (Somfy No 9017142).

.6 USB – Rs485 converter (Somfy No. RS485) for complete programming of motor (assignment of groups and/or intermediary positions.

.7 Replacement products or materials approved by addendum in accordance with Instructions to Bidders.

.5 Componants under division 26 (without being limited to):

.1 Hook-up to distribution panel and power supply, motor supply and hook-up to Dali network, BACnet programming.

.2 Motor: shielding wire, maximum 45.72 m (150’-0”) long.

.3 Network: shielding wire, interface to distribution panel.

.4 Wire between transformer and distribution panel.

.5 All BACnet interface programming.

.6 Roller tube and screen attachment:

.1 Extruded aluminum, 6063-T5 alloy, to prevent excessive bending.

.7 Bottom bar:

.1 Pedimented windows (1520 mm L X 3940 mm H +/-):

.1 Extruded aluminum, 6063-T5 alloy, with baked enamel matte black finish, 32 mm deep x 53 mm high, steel weighted. Rollers sliding inside side channels.

.2 Arrow slit (529mm L X 1575mm H +/-); East and West dormers (1520mm X 2000mm H +/-):

.1 Extruded aluminum, 6063-T5 alloy, with baked enamel matte black finish, 32 mm deep x 49 mm high, narrow end plugs, sliding inside side channel, weighted to keep shade straight. Brushes on bottom to maximize light blocking. Base attached to fabric with plastic strip.

.8 Cassette

.1 Covered on four sides. Rounded removable front. 94 mm high x 96 mm deep (cassette TEKNO C-95), hides roller and protects fabric and mechanism from dust, extruded aluminum alloy 6063-T5, baked matte black paint. Carbon fibre ends matched to aluminum cassette colour.

.9 Side channels:

.1 Pedimented windows (1520mm L X 3940mm H +/-):

.1 Extruded aluminum, 6063-T5 alloy, with baked enamel or anodized finish, 20mm wide x 48 mm deep,

.2 L-shaped aluminum, 90 mm façade x 64 mm as indicated, with side channels to block light infiltration.

.3 Acceptable products:

.1 ST-3 model by Altex.

.2 Replacement products or materials approved by addendum in accordance with Instructions to Bidders.

.2 Arrow slit (529mm L X 1575mm H +/-) East and West dormers (1520mm X 2000mm H +/-):

.1 Extruded aluminum, 6063-T5 alloy, with baked enamel matte black finish, side channels 60 mm wide x 43 mm deep, to guide bottom bar, brushes inside side channels to reduce light infiltration.

.2 Acceptable products:

.1 T-460 model by Altex.

.2 Replacement products or materials approved by addendum in accordance with Instructions to Bidders.

.10 Fabric:

.1 Ultrasonic, pressure or heat-welded to prevent fabric from fraying.

.2 Black-out, 4-ply laminated fiberglass, 0.33 mm (0.013 inches), 100% opaque, M1 and NFPA 701 fire rating.

.1 Acceptable products:

.1 Colour: No. 6000-08D, black (white on back), TexOpaque 6000 range by Altex.

.2 Replacement products or materials approved by addendum in accordance with Instructions to Bidders.

.11 Acceptable products for roller blind components (blinds, control, hardware and accessories):

.1 Altex.

.2 Hunter Douglas.

.3 Sol-R.

.4 Replacement products or materials approved by addendum in accordance with Instructions to Bidders.

.12 Colour selected by Departmental Representative in range of PPG colours.

.3 See diagrams of components at 3.4.2 for component installation subcontractors.

Partie 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 INSTALLATION

.1 Take all measurements on site prior to fabrication of blinds.

.2 Installer certified by manufacturer with minimum 10 years experience in installation of roller blinds and motorized roller blinds.

.3 Install product in accordance with manufacturer's instructions.

.4 Blind and components adjusted for smooth operation.

.5 Components installed by electricity contractor (in compliance with Division 26).

.1 Blind components for multifunctional room only:

.1 Motor hook-up: shielded 16/4 wiring. Maximum length: 45.72 m (150'-0").

.2 BACnet interface to distribution panel: shielded Cat5 for network.

.3 Transformer to distribution panel: 16 AWG 2 Cond. wiring.

.4 Motor to shielded 16/4 wiring.

.5 Control panel power supply.

.6 Transformer hook-up to building power supply.

.7 All BACnet interface programming.

3.3 FIELD QUALITY CONTROL

.1 Quality control in compliance with Section 01 45 00 Quality Control.

.2 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

3.4 SCHEDULES

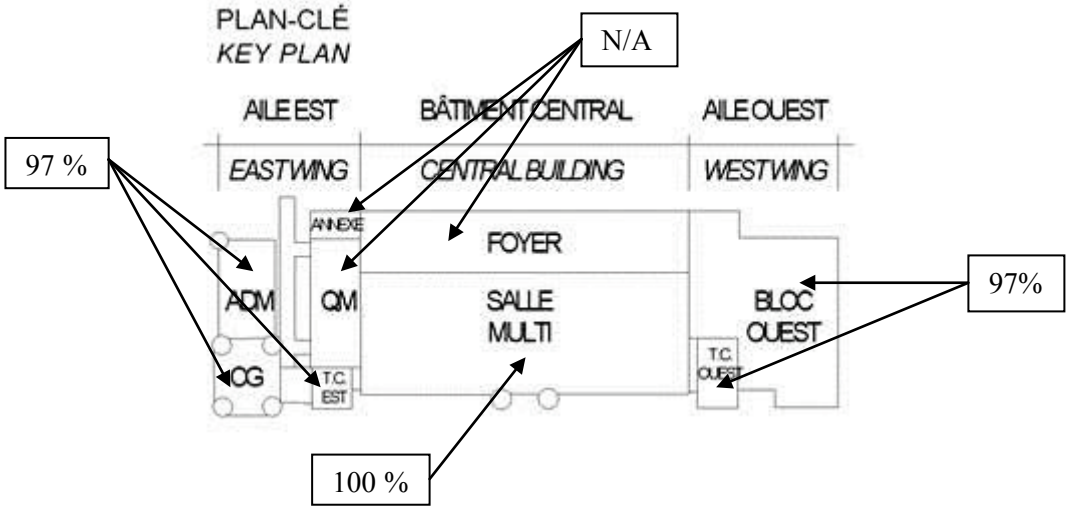
.1 Key plan.

.1 Opacity percentage referred to in plan below:

.1 Administration, square towers (East and West), West block: 97%.

.2 All multifunctional room windows: 100%

.3 QM, annexe and foyer: non applicable.



END OF SECTION