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**Partie 1            General**

**1.1                RELATED REQUIREMENTS**

- .1        Section 09 21 16 – Gypsum Board Assemblies.
- .2        Section 09 51 13 – Acoustical Panel Ceilings.
- .3        Division 23 – Ventilation, Heating and Air Conditioning.
- .4        Division 26- Electricity.

**1.2                REFERENCES**

- .1        American Society for Testing and Materials (ASTM International)
  - .1        ASTM B221-08, Standard Specification for Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
  - .2        ASTM C635/C635M-07 Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
  - .3        ASTM C636/C636M-08 Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.

**1.3                DESIGN CRITERIA**

- .1        Design Requirements: maximum deflection: 1/360th of span to ASTM C635/ASTM C635M deflection test.
- .2        Submit calculations attesting that the design of suspended ceilings of Part 4 of NBC 2010, regarding seismic performance of suspended ceilings.

**1.4                ACTION AND INFORMATIONAL SUBMITTALS**

- .1        Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2        Provide ceiling plans for unusual grid layouts, as indicated.
- .3        Indicate lay-out, insert and hanger spacing and fastening details, splicing method for main and cross runners, location of access splines, change in level details, access door dimensions, and locations and acoustical unit support at ceiling fixture, lateral bracing and accessories.
- .4        Submit drawings stamped and signed by professional engineer registered or licensed in Quebec, Canada certifying that the ceiling design under this section meets contract requirements and calculation criteria and complies with NBC – Part 4 seismic stipulations for site class A.

**1.5 SAMPLES:**

- .1 Submit samples in accordance with Section 01 33 00 - Submittals.
- .2 Submit one representative model of each type ceiling suspension system.
- .3 Ceiling system to show basic construction and assembly, treatment at walls, recessed fixtures, splicing, interlocking, finishes, acoustical unit installation.

**1.6 WASTE MANAGEMENT AND DISPOSAL**

- .1 Waste management: Refer to Section 01 74 21 – Construction Waste Management and Disposal.

**1.7 ACCEPTABLE MATERIALS AND PRODUCTS**

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

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**Partie 2 Products**

**2.1 MATERIALS**

- .1 Intermediate duty system to ASTM C635/ASTM C635M.
- .2 Basic materials for suspension system: commercial quality cold rolled steel, zinc coated.
- .3 Aluminum soffits and transitions: aluminum extrusions to ASTM B221, 6063 alloy.
- .4 Suspension system: non fire rated, made up as follows:
  - .1 Suspension system for **Type TA1 and TA3** acoustic tile.
    - .1 Exposed tee system 14 mm wide: factory finished, white finish.
      - .1 Produit acceptable : Suprafine XL de Armstrong
      - .2 Replacement product approved by addendum in accordance with Instructions to Bidders.
  - .2 Suspension system for **Type TA2** acoustic tile.
    - .1 Exposed tee system 24 mm wide: factory finished, white finish.
      - .1 Acceptable product: Prelude XL de Armstrong
      - .2 Replacement product approved by addendum in accordance with Instructions to Bidders.

- .3 Aluminum soffits and transitions: aluminum extrusions fabricated by manufacturer, including standard accessories. Grids finish: baked polyester powder white paint, matched to suspension system.
- .4 Refer to drawings for dimensions.
- .5 Hanger wire: galvanized soft annealed steel wire, 2.6 mm in diameter.
- .6 Hanger inserts: purpose made.
- .7 Accessories: splices, clips, wire ties, retainers and wall moulding [flush] [reveal], to complement suspension system components, as recommended by system manufacturer.

### **Partie 3 Execution**

#### **3.1 INSTALLATION**

- .1 Sauf indication contraire, installer les éléments d'ossature conformément à la norme ASTM C636.
- .2 Installation: to ASTM C636 except where specified otherwise.
- .3 Do not erect ceiling suspension system until work above ceiling has been inspected and approved by Departmental Representative.
- .4 Install suspension system to manufacturer's instructions.
- .5 Install hangers spaced at maximum 1200 mm centres and within 150 mm from ends of main tees.
- .6 Install suspension system according to shop drawings and suspended ceiling plan.
- .7 Ensure suspension system is co-ordinated with location of related components.
- .8 Install wall moulding to provide correct ceiling height.
- .9 Completed suspension system to support super-imposed loads, such as lighting fixtures, diffusers, grilles and speakers.
- .10 Support at light fixtures with additional ceiling suspension hangers within 150 mm of each corner and at maximum 600 mm around perimeter of fixture.
- .11 Attach cross member to main runner to provide rigid assembly.
- .12 Frame at openings for light fixtures, air diffusers, speakers and at changes in ceiling heights.
- .13 Finished ceiling system to be square with adjoining walls and level within 1:1000.

#### **3.2 CLEANING**

- .1 Touch up scratches, abrasions, voids and other defects in painted surfaces.

**END OF SECTION**