

Approved: 2007-12-31

**Part 1 General**

**1.1 RELATED SECTIONS**

- .1 Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .2 Section 09 51 13 – Acoustical Panel Ceilings.

**1.2 REFERENCES**

- .1 American Society for Testing and Materials International (ASTM)
  - .1 ASTM C635-04, Standard Specifications for the Manufacture, Performance and Testing of Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.
  - .2 ASTM C636/C636M-06, Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1 Material Safety Data Sheets (MSDS).

**1.3 DESIGN REQUIREMENTS**

- .1 Maximum deflection: 1/360th of span to ASTM C635 deflection test.

**1.4 SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
  - .1 Submit drawings stamped and signed by professional engineer registered or licensed in Province of Newfoundland, Canada.
  - .2 Submit reflected ceiling plans for special grid patterns 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, and acoustical unit support at ceiling fixture lateral bracing and accessories.
- .3 Provide samples in accordance with Section 01 33 00 - Submittal Procedures.
  - .1 Submit one representative model of each type ceiling suspension system.
  - .2 Ceiling system to show basic construction and assembly, treatment at walls, recessed fixtures, splicing, interlocking, finishes, acoustical unit installation.

**1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Waste Management and Disposal:

- .1 Separate waste materials for recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

## **Part 2 Products**

### **2.1 MATERIALS**

- .1 Intermediate duty system to ASTM C635.
- .2 Basic materials for suspension system: zinc coated.
- .3 Suspension system: non fire rated, made up as follows:
  - .1 Two directional exposed tee bar grid.
- .4 Exposed tee bar grid components: shop painted satin sheen white colour. Components die cut. Main tee with double web, rectangular bulb and 25 mm rolled cap on exposed face. Cross tee with rectangular bulb; web extended to form positive interlock with main tee webs; lower flange extended and offset to provide flush intersection.
- .5 Hanger wire: galvanized soft annealed steel wire:
  - .1 3.6 mm diameter for access tile ceilings.
  - .2 To ULC design requirements for fire rated assemblies.
  - .3 2.6 mm diameter for other ceilings.
- .6 Hanger inserts: purpose made.
- .7 Accessories: splices, clips, wire ties, retainers and wall moulding reveal, to complement suspension system components, as recommended by system manufacturer.

## **Part 3 Execution**

### **3.1 MANUFACTURER'S INSTRUCTIONS**

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

### **3.2 INSTALLATION**

- .1 Installation: in accordance with ASTM C636 except where specified otherwise.
- .2 Install suspension system to manufacturer's instructions and Certification Organizations tested design requirements.
- .3 Do not erect ceiling suspension system until work above ceiling has been inspected by PWGSC Representative.
- .4 Secure hangers to overhead structure using attachment methods as indicated acceptable to PWGSC Representative.

- .5 Install hangers spaced at maximum 1200 mm centres and within 150 mm from ends of main tees.
- .6 Lay out centre line of ceiling both ways, to provide balanced borders at room perimeter with border units not less than 50% of standard unit width according to reflected 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, diffusers with additional ceiling suspension hangers within 150 mm of each corner and at maximum 600 mm around perimeter of fixture.
- .11 Interlock 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.

### **3.3 CLEANING**

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 Touch up scratches, abrasions, voids and other defects in painted surfaces.

**END OF SECTION**