

Part 1 General**1.1 SCOPE**

- .1 The Scope of the work of this Section is to repair and patch holes made in existing building construction and maintain fire separations. Refer to Mechanical and Electrical Sections and drawings for areas that openings in existing construction are required and areas in which ceiling tiles will be affected.

1.2 RELATED REQUIREMENTS

- .1 Division 1 – General Requirements.

1.3 REFERENCES

- .1 ASTM International
 - .1 ASTM C635/C635M, Standard Specifications for the Manufacture, Performance and Testing of Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.
 - .2 ASTM C636/C636M, Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
 - .3 ASTM E1477, Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-92.1, Sound Absorptive Prefabricated Acoustical Units.
- .3 Green Seal Environmental Standards (GS)
 - .1 GS-11, Paints and Coatings.
- .4 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .5 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
 - .1 SCAQMD Rule 1113, Architectural Coatings.
- .6 Underwriter's Laboratories of Canada (ULC)
 - .1 CAN/ULC-S102, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 00 10 - General Instructions.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for ceiling panels and ceiling suspension system and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit 2 copies of WHMIS MSDS in accordance with Section 01 35 29.06 - Health and Safety Requirements.

- .3 Samples:
 - .1 Submit for review and acceptance of each unit.
 - .2 Samples will be returned for inclusion into work.
 - .3 Submit duplicate full size samples of each type acoustical units.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section Section 01 00 10 - General Instructions and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store materials inside, level, under cover. Protect from weather, damage from construction operations and other causes, in accordance with manufacturer's printed instructions.
 - .3 Handle materials to prevent damage to edges or surfaces. Protect metal accessories and trim from being bent or damaged.
 - .4 Store and protect acoustic ceiling materials from nicks, scratches, and blemishes.
 - .5 Replace defective or damaged materials with new.

Part 2 Products

2.1 COMPONENTS

- .1 Allow in price for the replacement of 100m sq. of damaged existing ceiling tiles.
- .2 All areas: the only acceptable material for Ceiling tile is Armstrong Commercial Standard Acoustic #755B Fissured Panel, Class A Standard white.
- .3 Acoustic units for suspended ceiling system: to CAN/CGSB-92.1.
 - .1 Pattern #755B – Fissured panel, class A
 - .2 Flame spread rating of 25 or less in accordance with CAN/ULC-S102.
 - .3 Smoke developed 50 or less in accordance with CAN/ULC-S102.
 - .4 Light Reflectance (LR) range of .81 to ASTM E1477.
 - .5 Edge type square.
 - .6 Standard white.
 - .7 Size 610 x 1220 x 16 mm thick. (24"x48"x 5/8" thick)
 - .8 Shape flat.
 - .9 Prior to ordering, to be coordinated with M&E fixtures to ensure both are either imperial or metric systems.
- .4 Acoustical Suspension:
 - .1 Existing to Remain
 - .2 Basic materials for suspension system: commercial quality cold rolled steel, zinc coated.

- .3 Suspension system: non fire rated, two directional exposed tee bar grid.
- .4 Hanger wire: galvanized soft annealed steel wire, 3.6 mm diameter for access tile ceilings.
- .5 Hanger inserts: purpose made.
- .6 Accessories: splices, clips, wire ties, retainers and wall moulding flush, to complement suspension system components, as recommended by system manufacturer.
- .5 Performance/Design Criteria:
 - .1 Maximum deflection: 1/360th of span to ASTM C635 deflection test.

2.2 ACCESSORIES

- .1 Touch-up paint: in accordance with manufacturer's recommendations for surface conditions:
 - .1 Paint: VOC limit 250 g/L maximum to GS-11.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for product installation in accordance with manufacturer's written instructions prior to acoustical ceiling installation.
 - .1 Visually inspect substrate in presence of Departmental Representative.
 - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative .

3.2 INSTALLATION

- .1 Installation: in accordance with ASTM C636 except where specified otherwise.
- .2 Re Install Any Removed Existing Suspension System:
 - .1 Erect ceiling suspension system after work above ceiling has been inspected by Departmental Representative.
 - .2 Secure hangers to overhead structure using attachment methods acceptable to Departmental Representative.
 - .3 Install hangers spaced at maximum 1200 mm centres and within 150 mm from ends of main tees.
 - .4 Install wall moulding to provide correct ceiling height.
 - .5 Interlock cross member to main runner to provide rigid assembly.
 - .6 Ensure finished ceiling system is square with adjoining walls and level within 1:1000.
 - .7 Sprinkler heads and other penetrations through the ceiling shall have a 52mm oversized ring, sleeve or adapter through the ceiling tile to allow for free movement of at least 25mm in all horizontal directions. Alternatively a swing

joint that can accommodate 25mm of ceiling movement in all horizontal directions is permitted at the top of the sprinkler head extension.

3.3 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 00 10 – General Instructions.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 00 10 - General Instructions

3.4 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by acoustical ceiling installation.
- .3 Protect existing removed ceiling tiles from damage during construction and re-install after work above is completed.

END OF SECTION