

PART I – GENERAL**WORK SPECIFIED HEREIN**

- All labor, materials, equipment and services necessary to furnish and install the acoustical treatment and related items as indicated or specified.

SUBMITTALS

- Unless otherwise noted, the contractor shall prepare all shop drawings, product literature, etc. only as required to properly coordinate and construct the project.
- Review of submittals by the Professional of Record is limited to specific shop drawings as called for in the Project Manual.

COORDINATION

- Coordinate work with mechanical and electrical trades to incorporate ceiling light fixtures and air outlets into the ceiling layout.

PRODUCT DELIVERY, STORAGE AND HANDLING

- Store materials off the ground under watertight cover and away from sweating walls and other damp surfaces until ready for use. Remove damaged or deteriorated materials from the premises.

Provide the Owner with one (1) unopened case each of extra stock of each panel.

PROTECTIONS

- Protect finished work installed by other trades previous to acoustical treatment.

PART II – PRODUCTS**ACOUSTICAL MATERIALS**

- All units shall conform to ASTM E1264.
- Surface burning properties, all types: Flame spread of 25 or less and smoke developed of 50 or less when tested in accordance with CAN/ULC S102, substantiated by ULC labels on materials supplied.

LAY-IN UNITS

- Pattern: Refer to Materials and Product Schedule for additional information
- Finish: *Factory white paint.*
- Size: 610mm(24")x610mm(48") x16mm(5/8")
- Light Reflectance: *LR-1 (over 75%) (White Only)*
- NRC: .50 - .60
- STC: 35 - 39

SPECIAL LAY-IN UNITS

- Type: Refer to Materials and Product Schedule for additional information
- Finish: *0.0508 mm (2 mil) thick, white vinyl facing in stipple pattern.*

- Size: 610mm(24")x610mm(48") x13mm(1/2")
- STC: 45-49

SUSPENSION SYSTEMS (GENERAL)

- All main runners shall conform to the Intermediate Duty classification of ASTM C-635.

Exposed Grid Systems: Refer to Materials and Product Schedule for additional information

Finish: White factory applied paint finish.

Materials: Steel

EXPOSED GRID

- 610 mm (2') X 1220 mm (4') square grid pattern where indicated - *See Plans.*
- All locking cross tees supporting other cross tees shall conform to the same classification as the main runners.
- Main runners and cross tees shall be of cold rolled painted steel with finish as specified.
- *Angles:* Wall angle moldings shall be of cold rolled painted steel with finish as specified.

LIGHT FIXTURE INTEGRATION

- Lighting fixture types and locations require the normal grid spacing to be interrupted. Light fixtures are specified in the electrical section of the specifications. Provide all necessary materials, special fabrication, etc., necessary to proper spacing and installation of lighting fixtures.

PART III – EXECUTION**INSTALLATION**

- *General:* Furnish and install acoustical materials and suspension systems of the types, sizes and designs as specified herein and noted. Install ceiling suspension systems requiring seismic restraint in accordance with ASTM E580 and applicable Building Code requirements.
- *Preparation of Work:* Building shall be examined before beginning work to determine that it is properly enclosed and the structure is in proper condition to receive acoustical materials as specified. Installation of acoustical material shall not be made when the building is excessively cold and damp or hot and dry.
- *Temperature and Humidity:* Conditions closely approximating the interior conditions, which will exist, when the building is occupied shall be maintained before, during and after installation of ceiling materials. Area shall be broom cleaned and uninterrupted for free movement of scaffolding. Scaffolding shall be a type that will not scar or mar floor surfaces and will not damage other construction. Work not to proceed until satisfactory conditions described above preside.

- *Inspection:* Inspection locations to receive work and check existing dimensions. Ascertain before proceeding with work, that all required inspections have been made. Commencement of work constitutes acceptance of responsibility related to guarantee requirements.
- *Coordination:* Be responsible for coordination and compatibility of the acoustical ceiling treatment, suspension system, and air distribution as specified in this section and indicated. Coordinate work with mechanical and electrical trades to ensure proper compatibility and interfacing of their related spheres of responsibility.

EXPOSED GRID

- Install the ceiling suspension system per the recommendations of ASTM C-636 and UBC Standard 47-18. Loading of any component may not cause deflection of more than 1/360 of the span.
- Where ductwork prevents proper hanger wire spacing, provide uni-strut trapeze supports as required. Hanger wires shall not penetrate or be suspended from ductwork or roof deck.
- Provide additional hanger wires at applied beam ceilings as required by support for additional weight.
- Install main runners 1220 mm (48") o.c., and directly suspend by not less than 12 gauge galvanized steel wire (pre-stretched) spaced 1220 mm (48") o.c. along the main runners.
- Interconnect main runners by locking cross tees 1220 mm (48") long to form 610 mm (24") x 1220 mm (48") modules. Install proper length locking cross tees adjacent to all side of recessed light fixtures not supported by a main runner.
- Hanger wires shall be wrapped tightly at least 3 full turns.
- Fully lock all grid members together including stabilizers bars and structural attachments capable of support required loads.
- Trapeze around obstructions and level accurately.
- No vertical hanger wire shall be more than 25 mm (1") in 150 mm (6") out of plum without a counter-splayed wire. Splay wires to be taut, not causing ceiling uplift (note: do not penetrate ducts) or roof deck.
- Install vertical hanger wire 204 mm (8") from wall to support each runner end at all terminal ends of main and cross runners. At maximum of two adjacent walls, runners may be attached for alignment purposes to wall or wall angle, but not elsewhere.
- Hanger wire shall not be suspended from main roof deck (to avoid deck penetrations) but shall be suspended from the bottom of joists with clip ties as required.
- All splays shall be four No. 12 gauge wire, in line with main runners and cross runners at 45° angle maximum from horizontal plane of ceiling, connected with 50 mm (2 inches) of cross runner or stabilizer bar intersection on main. Locate first splay locations within 1220

mm (4'-0") maximum of all walls. Interior splays shall be maximum of 3 658 mm (12'-0") square feet in both directions.

- Install wall molding wherever suspension components meet vertical surfaces.
- Attach all fixtures positively to grid system.
- Attach hanger wires to grid within 75 mm (3 inches) of all fixture corners at intermediate duty suspension system. Tandem fixtures may utilize common wires.
- Heavy duty suspension systems do not require additional hanger wire attachment to the grid.
- All fixtures over 9 kg (20 pounds), but less than 25 kg(56 pounds) require two slack No. 12 gauge wires at opposite corners directly to the structure with approved hangers.
- Install lay-in units in a clean, neat manner.

CLEANING

- Upon completion of installation of acoustical material and suspension systems, clean dirty or discolored surface of acoustical units and suspension components in accordance with manufacturer's recommendations and leave free from defects. Components that are damaged or improperly installed shall be removed and replaced without additional cost to the Owner.

END OF SECTION