



Designation: C636/C636M – 19

Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels¹

This standard is issued under the fixed designation C636/C636M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice covers the installation of suspension systems for acoustical tile and lay-in panels. It is applicable to contractors whose services are utilized for installing acoustical ceilings and to other trades if their activities are responsible for interference with ceiling components or performance as defined in this recommended practice.

1.2 While the practices described in this document have equal application to fire-resistive suspension systems, many systems impose additional requirements to obtain the fire endurance classification of particular floor-ceiling or roof-ceiling assemblies. These details are available from the listing agency and from the manufacturers.

1.3 Similarly, additional detailing is often necessary to meet sound attenuation requirements when ceiling plenums extend over contiguous rooms. Obtain these from the manufacturer of the acoustical material employed.

1.4 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system are not exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems result in non-conformance with the standard.

1.5 While many of the practices described in this practice have application to the installation of metal suspension systems in exterior environments, the specific design of exterior ceiling installations requires the review and approval of the architect or engineer, or both, who are responsible for the construction of the building or modifications to an existing building. While recommendations from the manufacturer are solicited, it remains the final responsibility of the architect/engineer to ensure proper application of the materials in question.

1.6 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the*

responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.

1.7 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Installation of Components

2.1 Hangers:

2.1.1 Where acoustical ceilings are suspended from a structure of wood construction, attach hangers with suitable mechanical devices either to the bottom edge of the wood joists or to the vertical face of the wood joists near the bottom edge. Holding power tests certified by the manufacturer must be available on request for bottom edge attachment devices.

2.1.2 Where acoustical ceilings are suspended from a structure of concrete construction, mount hangers using cast-in-place hanger wires, hanger inserts, or other hanger attachment devices whose suitability has been demonstrated by standard construction practice or by certified test data.

2.1.3 Space hangers for carrying channels or main runners 4 ft 0 in. [1200 mm] on centers. If local situations allow greater center distances between hangers, reduce the load-carrying capacity of the ceiling suspension system commensurate with the actual center-to-center hanger distances used. If local situations allow lesser center distances between hangers, increase the load-carrying capacity of the ceiling suspension system commensurate with the actual center-to-center hanger distances used.

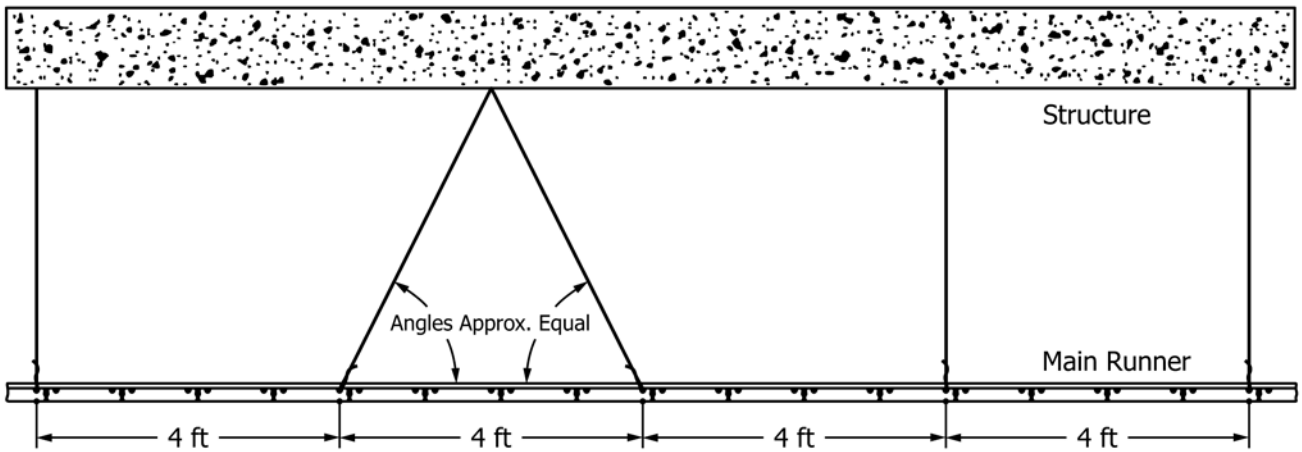
2.1.4 Each suspension wire shall not hang more than one in six out of plumb unless a countersloping wire or horizontal bracing is provided. See Fig. 1 for allowable countersloping methods. Suspension wires shall not press against ducts or pipes.

2.1.5 Hangers formed from galvanized sheet metal stock shall be suitable for suspending carrying channels or main runners from an existing structure provided that the hangers do not yield, twist, or undergo other objectionable movement.

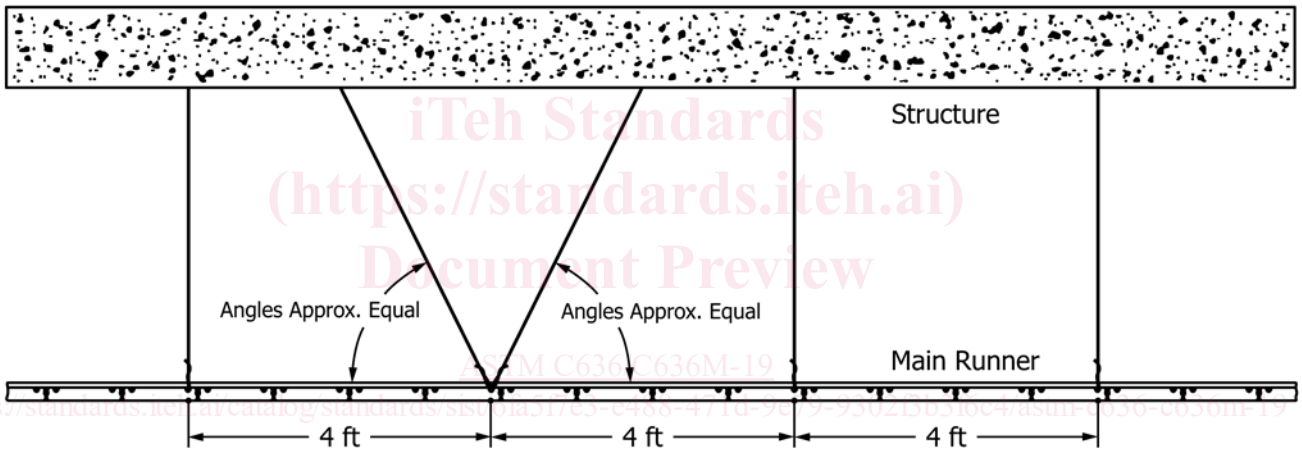
2.1.6 Wire hangers for suspending carrying channels or main runners from an existing structure shall be prepared from

¹ This practice is under the jurisdiction of ASTM Committee E33 on Building and Environmental Acoustics and is the direct responsibility of Subcommittee E33.04 on Application of Acoustical Materials and Systems.

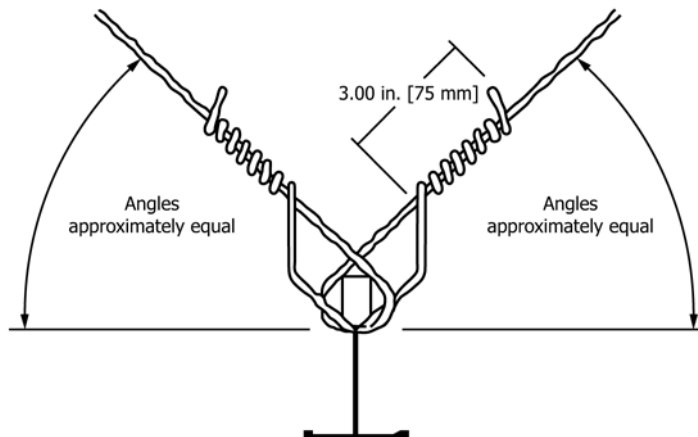
Current edition approved April 1, 2019. Published May 2019. Originally approved in 1969. Last previous edition approved in 2013 as C636/C636M – 13. DOI: 10.1520/C0636_C0636M-19.



Method 1 - Countersplay In-Vertical-Plane of the Main Runner with Common Point at Building Structure



Method 2 - Countersplay In-Vertical-Plane of the Main Runner with Common Point at Main Runner



Method 3 - Countersplay Out-of-Vertical-Plane of the Main Runner

FIG. 1 Allowable Countersloping Methods

a minimum of No. 12-gage [2.70 mm] galvanized, soft-annealed, mild steel wire.

2.1.7 In some installations hanger wires are secured to special attachment devices that support the carrying channels