Booths and displays containing structures, canopies, lighting truss, or suspended items that are covered with fabric or solid materials exceeding an accumulated total of 750 sq. ft. may require the installation of an Automatic Fire Sprinkler System (AFSS). The following information will assist you in determining whether or not you require an AFSS, and ways to design around it.

**Defining “Covered”**

The term “covered” is defined as any item consisting of covered elements in which the material used for creating the covering has cross sectional openings of less than \( \frac{1}{4} \) inch in two dimensions, and/or a construction that results in less than 50% of the material being open.

Materials/components that are considered covered include; standard scrim, sharks-tooth, smoke-out, deck structures, stairs, acoustic ceilings, etc. These common components are considered covered because the cross sectional opening of the material is less than \( \frac{1}{4} \) inch.

The unobstructed openings in the material must be at least \( \frac{1}{4} \) inch in two directions.

This is an example of steel plating with \( \frac{1}{2} \) inch holes. Even though the openings are greater than \( \frac{1}{4} \) inch, this material is considered “covered” due to the majority of the material being covered (less than 50% is open).
Defining “Covered Area”
A “Covered Area” is defined as any area containing covered elements that are separated (horizontally) by less than 10 feet. A 50’ x 50’ booth space that has several covered structures throughout the booth that are all closer than 10 feet (horizontally) would be considered one (1) covered area. However, a 50’ x 50’ booth space that has four (4) 100 sq. ft. covered structures that are all separated by 10 feet or more would have four separate covered areas within the one booth space.

**One (1) Covered Area**
Covered structures with less than 10 feet of separation.

**Four (4) Covered Areas**
Covered structures with 10 feet or more separation.

Allowable Coverage
The maximum amount of covering allowed in any one “area” is 750 square feet (sq. ft.). Any area (as described above) that contains covered elements exceeding 750 sq. ft must be protected with an approved Automatic Fire Sprinkler System (AFSS). No other type of protection is allowed for areas exceeding 750 sq. ft. AFSS’s must be installed by a LACC approved California licensed Fire Sprinkler Contractor. In addition to the installation of an AFSS, the strategic placement of fire extinguishers and smoke detectors are required as well. Placement will be determined by the Fire Inspector after reviewing design plans. Areas that have overlapping covered elements are not considered when calculating the amount of square footage in a covered area. Calculations are based on a “plan-view perspective” only.
The amount of covered area in this example is 500 sqft based upon a “Plan-View Perspective”. Although the two elements total 600 sqft, the overlapping portion is not considered in the covered area calculations.

**Design**
The key to avoiding an AFSS in large exhibits is to design the booth in such a manner to create multiple “covered areas” by maintaining at least 10 feet of uncovered (horizontal) separation between covered elements of the booth. In a large booth, having four covered structures of 750 sq. ft. is permissible without the need to install an AFSS as long as the covered areas are separated (on all sides) by at least 10 feet.

Creating one covered area that is 1,000 sq. ft. and three others that are 750 sq. ft. or less would result in the need to install an AFSS in the 1,000 sq. ft. area only (the other three would not require an AFSS).

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Area 3 requires an AFSS because it is over 750 sqft. However, areas 1 & 2 do not require AFSS’s because they are separated by at least 10 feet.

The addition of the canopy results in having one large covered area. The two 600 sqft structures and the canopy must be protected by an AFSS.
Other things to consider

1. Neighboring booths must be considered when planning covered elements within 10 feet of the neighboring exhibit. If the neighboring exhibit has a covered structure that is within 10 feet of your structure, then the aggregate total is used to determine the amount of “covered area”.

2. The total amount of covered area that is allowed in any exhibit hall, or public space cannot exceed 10% of the size of the room as it is configured via the use of air walls. For example, Petree Hall is 21,500 sq. ft. (when Halls C&D are combined). The maximum amount of ALL cover areas within Petree Hall added together cannot exceed 2,150 sq. ft. (10%). Approvals to build covered areas are given based on the order in which requests containing “complete information” are received. Delaying the submittal of covered area plans may result in the denial to build said covered area.

3. Under certain circumstances LACC meeting rooms located on the second level of the Convention Center can be covered up to the lesser of the
following two parameters: 70% of the total area of the meeting room, OR, 750 sq. ft. A 24-hour Fire Watch must be established once the covered area has been constructed, until the time it is removed. Show Security personnel shall be used for fire watch duties. There must be a designated officer in the room at all times with a readily available means of communication (i.e., radio or phone) to immediately contact LACC Security in the event of smoke or fire. If the event has multiple rooms with covered areas, a LAFD Fire Inspector may be required to patrol all of the meeting room spaces and corridors that contain covered areas during the non-show hours of the event. Payment for Fire Inspector can be handled through LACC’s Exhibitor Services.

4. Sprinkler systems can only be installed in the South, West, and Kentia halls. Installing sprinkler systems in Concourse Hall, Petree Hall, all meeting rooms and public spaces is not allowed. Therefore, projects must be planned in these areas so that no covered area exceeds 750 sq. ft., and that the covered area is in compliance with the 10% (70% in LACC meeting rooms) requirement mentioned above.

5. All fabrics and materials must be certified as “Flame Proof” or “Flame Retardant” by the California State Fire Marshall. Flame proof certificates must be kept in the booth for Fire Inspector review. Flame proofing certificates from other states (or countries) will not be accepted. Material believed to be acceptable but not having a California certificate can be sent to the LAFD Fire Inspector for testing. Test samples should be 12"x12" in size and should be mailed with any other pertinent information to the Fire Inspector at the address listed below.

6. Booths containing more than 400 sq. ft. of covered elements are required to submit a “Covered Area Drawing” to the Fire Inspector and the LACC Building Superintendent / Show Operations at the address listed below. Send two (2) plan view drawings of the entire booth indicating (by use of color, shading, or pattern) the areas/elements that are covered and the calculated square footage of each covered area. Also include the respective dimensions (in feet & inches) of the structures/elements and the amount of horizontal separation between them. In addition send perspective/isometric drawings to better define the project. Drawings may be e-mailed in a PDF or JPEG format. Plans must be submitted for ANY proposed covered area in LACC meeting rooms. Plans must show the entire meeting room and the square footage thereof, and the respective design and square footage of the proposed covered elements.

7. Non-combustible stages and platforms that do not exceed 5 feet in height “may” be exempt from the 750 sq. ft. limitation provided that no
combustible materials or sources of heat are placed under the stage/platform. Projects involving stages/platforms not exceeding 5 feet in height require a covered area drawing to be submitted as indicated above. The covered area plan should denote the height of the platform and use a different shading pattern to distinguish the platform from the other covered elements in the booth.

8. LACC fire sprinkler systems shall not be impeded or obstructed. A clearance of 36 inches must be maintained from all LACC sprinkler heads.

9. Battery operated smoke detectors must be installed as an early warning device in any covered area that exceeds 100 sq. ft.

10. Stairs, ramps, vehicles and/or equipment are considered “covered” and therefore must be included in the covered area calculations.

11. For information on approved licensed Fire Sprinkler Contractors that have worked in the facility, contact the Building Superintendent / Show Operations.

For further information, clarification or discussion, please contact:

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