
Calgary Fire Department

Major Outdoor Events Guide

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Contents

Introduction	1
Special Events Permit.....	2
Special Events Permit Conditions.....	2
Special Event Conditions:	2
Special Events Requirements	5
Tents / Canopy / Marquees	5
Straw Bales	6
Outdoor Cooking	7
Mobile Cooking Operation (Food Trucks)	9
Outdoor Seating	10
Signage and Exiting	11
Obtaining a Fireworks/Pyro/Open Flame Permit	11
On-Site SCO	11
Definitions	11
Reference Documents	13

Introduction

Major Outdoor Events Guide

The purpose of this document is to provide the Calgary Fire Department's (CFD) baseline standards and requirements necessary to establish a minimum level of fire and life-safety during any type of Outdoor Event or Festival in Calgary. Providing enjoyable and entertaining events in the safest manner possible for the City of Calgary.

To provide for safe emergency crowd movement and, where required, safe non-emergency crowd movement. An event shall be designed, constructed, and maintained to allow occupants for the time needed to evacuate, relocate, or defend in place.

This guide refers to all Special Events including, but not limited to, outdoor music festivals, fairgrounds, religious gatherings, street festivals, large fireworks display, marathons, beer gardens, and any other outdoor event or festival with a large gathering or assemblage of people in the City of Calgary.



Special Events Permit

A Special Events permit may be required from the CFD, as events often vary, additional Special Events permit conditions may be required to be met, tailored to each event, and determined by the Fire SCO and/or Authority Having Jurisdiction (AHJ).

- The authority having jurisdiction may require a review by an approved independent third party with expertise in the matter to be reviewed at the submitter's expense.
- The authority having jurisdiction may require design submittals to bear the stamp of a registered design professional.

Special Events Permit Conditions

Some or all the Special Event conditions shall be required to be met at the discretion of the Authority Having Jurisdiction (AHJ). Event factors that are taken into consideration for what is required from the event will be reviewed and decided upon in conjunction with the Interdepartmental Event Team (IET), Emergency Response Plan (ERP) review group and for private independent events, solely the CFD and the AHJ. These factors include but are not limited to;

- Event capacity
- Type of event
- Duration of event
- Site size and sprawl of event
- Demographic

Special Event Conditions:

1. **Pre-Event Meeting:** A pre-event meeting shall be held for the review of Special Events requirements and the preliminary review of any site maps, designs, and plans for the event. Ensuring clear communication and collaboration for a successful and safe event from the beginning of planning.
2. **Event Management Plan (EMP):** A single plan to encompass all plans related to the safety and operation of an event. All supervisory staff shall be trained on and up to date on the contents and working of the EMP, while ensuring that all personnel are informed and competent so that they can carry out their duties effectively. A copy the EMP shall be on-site and available to the AHJ upon request. Included in the EMP but not limited to:
 - a. Event Overview – identifying roles and responsibilities of the event staff and management, with details of the event (type, purpose, duration, etc.)
 - b. Capacity – expected capacity for the event, how many tickets to be sold and if needed a stamped drawing from a architect or engineering firm stating the design load.
 - c. Event Site Map with Zoning - Clearly map out entry points, exits, activity zones, high density areas, key locations (medical, security, command etc.), emergency access points, fire hydrants and connections, etc.
 - d. Crowd Management Plan;
 - Ingress & Egress – detailed process of managing the crowd through arrival and departure of the event, included in the queuing designs and when necessary ZoneX
 - Barrier Design & Movement – barriers being used, set up and how. Layout of the site and how it pertains to the movement of the crowds during the event. Any supervisors with contacts.

- Communications Before, during and after the event how all external information will be communicated to the attendees during normal and emergency operations. With Show Stop Procedures and scripts, identifying who is responsible for what. And how internal communications will be handled between the event staff and organizers.
 - Crowd Monitoring – any technologies used for crowd monitoring (CCTV, ID scanners, etc.), location and how they are being used.
 - Event Command Post – where it will be located and who will be staffing it with contacts.
 - Crowd Safety Risk Analysis – using tools and analysis models such as DIM-ICE, RAMP, Decision Support Matrix, Congestion Mapping, Threat Analysis, etc.
- e. Medical Plan if any third party is being used, who they are, where are they located, how are they communicating, roles and responsibilities of supervisors and staff with contacts, etc.
 - f. Security Plan – if any third-party security is being used, who they are, where are they located, how are they communicating, roles and responsibilities of supervisors and staff with contacts, etc.
 - g. Operations Plan – may have already been included with the other plans and info but another example of what type of plan to include in the Event Management Plan.
 - h. Mobility (Roads) Plan with Hostile Vehicle Mitigation (HVM) –
 - i. Fire Safety Plan – outlining procedures to prevent, respond to, and mitigate fire hazards. What equipment and personnel is on-site for response.
 - j. Waste Management Plan - outlines procedures for handling, reducing, and disposing of waste in an efficient and environmentally responsible manner.
 - k. Emergency Response Plan – Through the IET process or can be added as a part of the Event Management Plan defining roles, responsibilities, and protocols for different emergencies and coordination with emergency services. (hostile, weather, crowd, etc.)
3. **Trained Crowd Managers:** Crowd managers must be properly trained and capable of responding to emergencies, guiding evacuations, and assisting in maintaining crowd safety. With a qualified and trained Crowd Manager Supervisor and 1 trained crowd manager for every 250 attendees.
 4. **Tabletop Exercise:** A Tabletop Exercise is designed to stress test the Event Management Plan and help participants identify strengths and shortfalls, enhance their understanding of new concepts, and foster changes in existing attitudes and perspectives. Key features of a successful exercise include the guidance of an experienced facilitator, in-depth discussions, and the opportunity for slow-paced problem solving. The process involves several basic components: conducting an initial planning meeting, identifying costs and liabilities, securing support from senior leadership, assembling a planning team, executing the exercise, and developing an After-Action Report to capture lessons learned and recommendations for improvement.



5. On-Site Review & Inspection:

- Prior to the event an on-site inspection may be completed, to confirm and review the permit conditions and their accuracy.
- The organizer shall report any changes that would alter the site map or event operations or EMP prior to the final on-site inspection and review.
- Where it is evident that there is not an acceptable degree of safety provided, code violations, or unauthorized changes, any requirement shall be permitted to be modified if, in the judgment of the authority having jurisdiction, its application would be hazardous under normal occupancy conditions.
- The AHJ/Fire Safety Codes Officer holds the right to alter occupancy or permit requirement for any concern to life or safety, anytime, before, during or after an event.

6. **Event Command Post:** The Event Command Post is to act as the operational hub for coordination and communication during an event. It ensures seamless information flow among agencies, manages radio communications, documents critical records, and provides teams with the necessary resources to perform effectively. Personnel in the Event Command Post should have executive safety authority to manage incidents, which reduces incident response time and prevents an emerging incident from turning into a major incident. The Event Command Post also supports decision-making by disseminating relevant updates to senior management and operational staff, contributing to the overall safety and efficiency of the event. These agencies may include;

- Senior Event Management
- Calgary Police Services
- Medical Services, including voluntary sector
- AHS
- Calgary Fire Department
- Safety Consultant
- City Transit
- Security Dispatch and/or Supervisor
- Any other pertinent parties involved in the safety and operation of the event

7. **Post Event Debrief:** The Post Event Debrief is for the purpose of fostering improvement, learning, and focusing on the lessons learned from the past event in refining future safety and crowd management strategies. To be conducted within a timely manner post event (one month), the Post Event Debrief provides a thorough analysis of data, incidents, and feedback from attendees and stakeholders, identifying successes and areas for growth. The findings inform future decision-making, improve protocols, and support safer environments. Sharing the outcomes with the necessary city business units and event organizers ensures collaborative problem-solving, transparency, and alignment, contributing to continual improvement in event planning and execution.

Special Events Requirements

Tents / Canopy / Marquees

Clearance to Other Structures

NBC 3.1.18.3.

1. Except as permitted by Sentences (2) to (4), every tent and air-supported structure shall conform to Subsection 3.2.3.
2. Tents and air-supported structures
 - a. shall not be erected closer than 3 m to other structures on the same property except as permitted by Sentences (3) and (4), and
 - b. shall be sufficiently distant from one another to provide an area to be used as a means of emergency egress.
3. Tents and air-supported structures not occupied by the public
 - a. need not be separated from one another, and
 - b. are permitted to be erected less than 3 m from other structures on the same property provided this spacing does not create a hazard to the public.
4. Tents not more than 120 m² in ground area, located on fairgrounds or similar open spaces, need not be separated from one another provided this does not create a hazard to the public.
 - **Flame Resistance** - Every tent and air-supported structure and all tarpaulins and decorative materials used in connection with these structures shall conform to CAN/ULC-S109, "Flame Tests of Flame-Resistant Fabrics and Films."
 - **Fire Alarm System** - Where tents and air-supported structures are designed to accommodate more than 1,000 persons, a fire alarm and emergency communication system shall be provided.



Straw Bales

1. All bales shall be treated and prepared as outlined in sentence (2) before being allowed into any public venue.
2. The owner, in accordance with NFC Division C Article 2.2.1.2., shall maintain a written record of tests and flame proofing treatment carried out. Treatment shall be as follows:
 - Straw or Hay Bales used for indoor displays shall be treated with a Fire Retardant that complies with CAN/ULC- S109-03 “Flame Tests of Flame-Resistant Fabrics and Films”.
 - All bales shall be compressed by ten (10) to twelve (12) inches and bound with steel wire or ½ inch steel banding.
 - Each bale shall be dried by evaporation.
 - Each bale shall be tagged with a non-combustible tag stating the date treated, the ULC approved fire-retardant product used and the name of the company doing the treatment.
 - If bales should become wet, they shall be immediately removed to the exterior of the building, dried by evaporation, and retreated before being used again.
 - Bales cannot be broken apart to enhance the display.
3. A Fire Department Inspector may ask to test any display bale at their discretion and the bale shall pass the flame test. If any of the bales tested at this display fail the flame test, all bales shall be removed from the venue and be retreated prior to reuse.

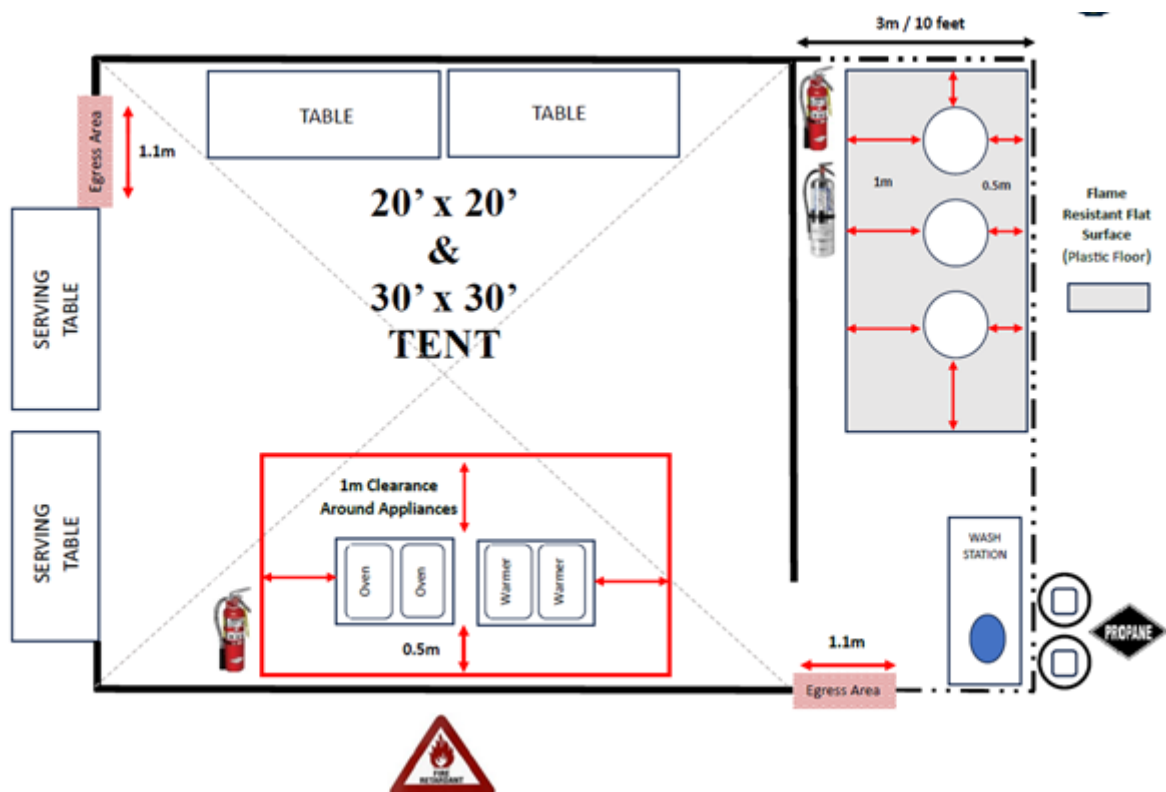
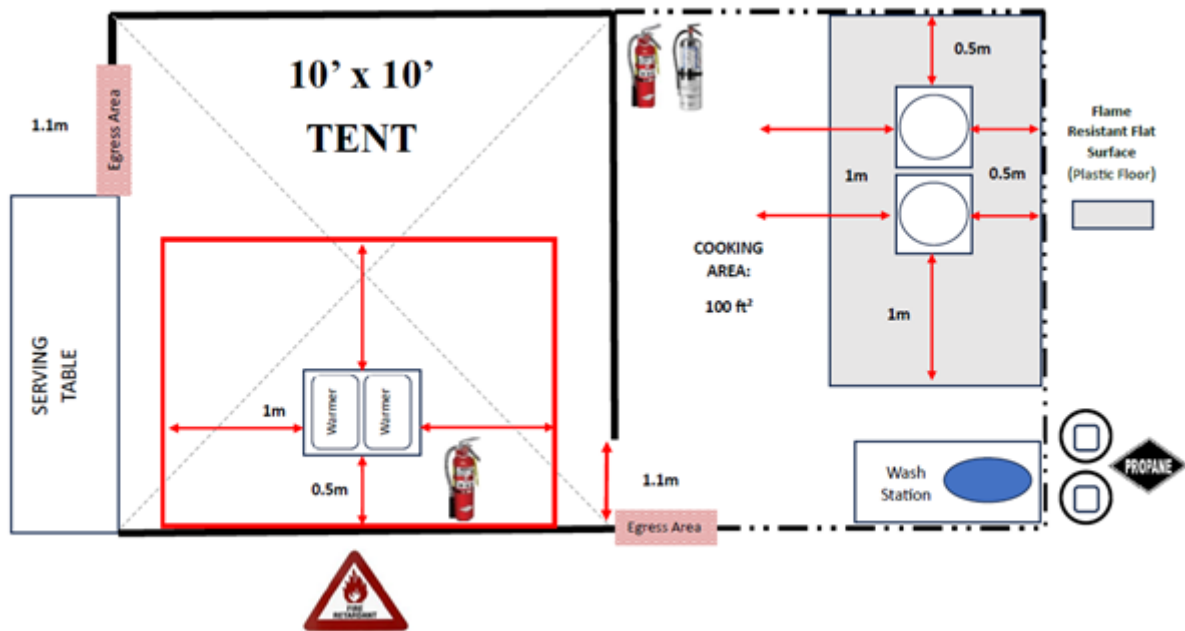
[Straw or hay bales for public events or display \(calgary.ca\)](http://calgary.ca)

Outdoor Cooking

- Tents must be CAN/ULC-S109-M Flame Resistant certified
- Tents used for cooking shall be a minimum of 3 metres from any other non-cooking tent, canopy or building.
- Cooking appliances must conform to ULC standards and be CSA certified.
- No “open flame” cooking appliances are permitted in tents.
- Gel (Sterno) fuel may be used for warming trays.
- Any cooking that may produce grease-laden vapours is not permitted to be located inside a tent without the proper ventilation in conformance with the requirements of NFPA 96. If NFPA 96 requirements are not met, appliances shall be located outside of tents and may be protected from weather by a non-combustible cover no larger than 2.5 M² in total area. These appliances must be placed so that they are a minimum of one (1) metre from the outside tent wall and protected from public access (fenced or barricaded).
- Microwaves, food warmers and chafing dishes are permitted inside tents.
- Appliances must be placed on a stable base to limit the risk of the appliance tipping. E.g., plywood.
- A one-metre (1m) clearance surrounding the appliance shall be maintained for the safe movement of public and staff.
- Class K fire extinguishers shall be provided for cooking appliance hazards that involve combustible cooking media (vegetable oils and animal oils and fats). Tagged and maintained.
- Each tent must have at least one 2A-10BC extinguisher.



Outdoor Cooking Tents & Canopies Layout



Mobile Cooking Operation (Food Trucks)

- All food trucks must have a current CFD Food Truck decal showing they have passed their required inspections to operate at any events in Calgary.
- If there is no decal, no decal will be given out, but an on-site inspection can take place. If the inspection fails, the truck will not be able to operate until the violations are corrected.
- To get a decal, the food truck will need to go through the City of Calgary's business licensing program and book a Mobile Food Inspection with CFD through 311 to obtain their inspection and a current CFD Food Truck decal.
- Food truck requirements include, but are not limited to:
 - Tagged and maintained Commercial Kitchen Canopy Suppression System
 - Tagged and maintained K Class Fire extinguisher
 - Tagged and maintained 2A-10BC extinguisher
 - Regular cleaning of hood and exhaust systems
 - Interlock and gas reset in proper working order
 - Canopies, hoods and ductwork for a ventilation system exposed within the kitchen or cooking area shall be fully sealed and constructed of stainless steel
- Mobile or temporary cooking operations shall not block fire apparatus access roads, fire lanes, fire hydrants, or other fire protection devices and equipment.
- Flammable and combustible liquids shall not be stored inside mobile cooking vehicles or in temporary cooking areas unless stored in accordance with NFPA 30.
- Mobile or temporary cooking operations shall be separated from the entrances and other exits of buildings or structures, combustible materials, vehicles, and other cooking operations by a clear space distance of 10 ft (3 m) or as prescribed by the AHJ.
- Mobile or temporary cooking operations shall be separated from other mobile or temporary cooking operations by a clear distance of 10 ft (3 m).
- When the mobile unit is parked, the vehicle shall be stabilized so that it will not move, either by jacking the vehicle or placing wheel chocks around the wheels.
- Internal combustion engine-driven generator units (subject to the provisions of NFPA 1192) shall be listed and installed in accordance with the manufacturer's instructions and shall be vapor resistant to the interior of the vehicle.

[Food and vendor requirements \(calgary.ca\)](http://calgary.ca)

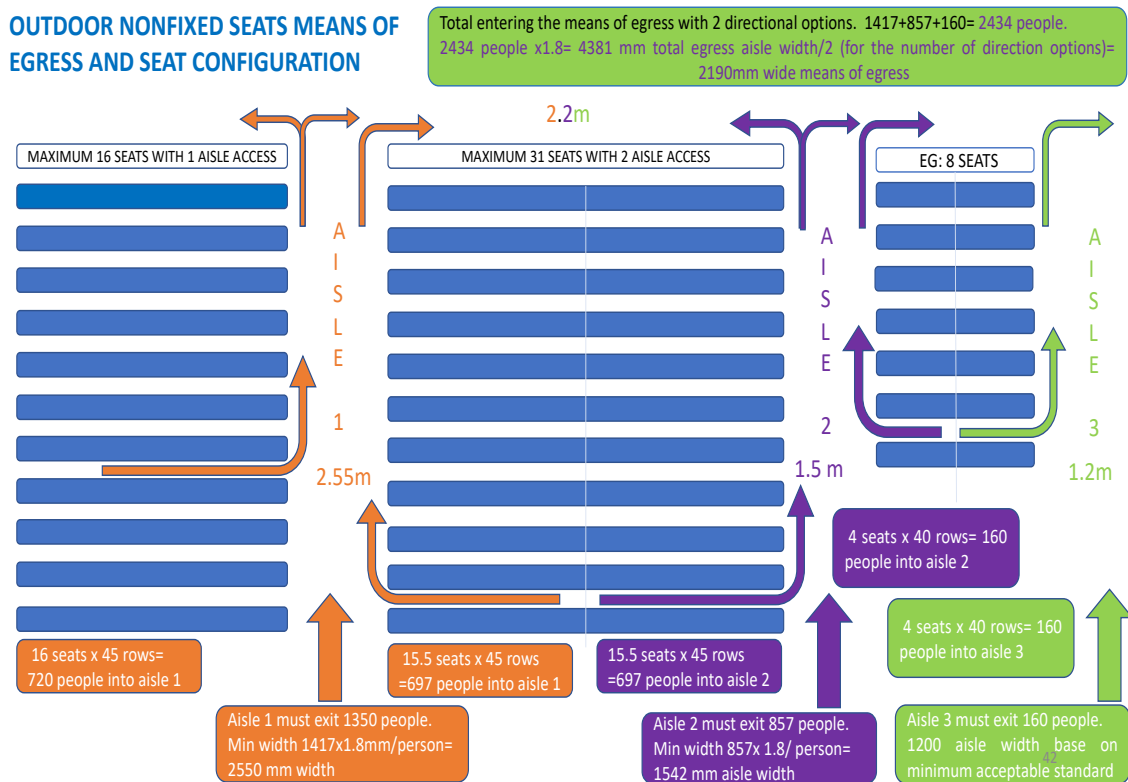


Outdoor Seating

Non-fixed Seating

- When non-fixed seats are provided in assembly occupancies,
 - The seats shall be arranged in rows having an unobstructed passage of not less than 400 mm between rows measured horizontally between plumb lines from the backs of the seats in one row and the edges of the furthest forward projection of the seats in the next row behind in the unoccupied position,
 - The width of an aisle is permitted to be reduced to not less than 750 mm when serving 60 seats or fewer,
 - Dead-end aisles shall not be longer than 6 m,
 - Every aisle shall terminate in a cross aisle, foyer or exit, and the width of the cross aisle, foyer or exit shall be at least the required width of the widest aisle that it serves, plus 50% of the total required width of the remaining aisles that it serves.
- When non-fixed seats are provided in outdoor assembly occupancies,
 - Aisles shall be located so that there are not more than 15 seats between every seat and the nearest aisle, and
 - The clear width of an aisle in millimetres shall be not less than the greater of 1 200 or the product of the number of seats served by that aisle and 1.8.

OUTDOOR NONFIXED SEATS MEANS OF EGRESS AND SEAT CONFIGURATION



Signage and Exiting

- Emergency exits to be staffed by trained personnel in the operation and use of the emergency exit.
- Temporary locking devices can be used for the integrity of the exit, at staffed exits with no special knowledge to unlock and open the exit approved by the AHJ.
- Exit signage should be big enough to be seen from anywhere on site with the green running man design.
- Means of egress shall be maintained in good repair and free of obstructions.
- Access and egress routes shall be maintained so that crowd management, security, and emergency medical personnel are able to reach any individual at any time, without undue hindrance.
- A fenced outdoor assembly occupancy shall have not less than two widely separated means of egress from the enclosure, unless otherwise required by one of the following:
 - 1000 persons shall have not less than three separate exits.
 - 4000 persons shall have not less than four separate exits.

Obtaining a Fireworks/Pyro/Open Flame Permit

Any additional Fireworks, Pyrotechnics or Open Flame permits required you can refer to the appropriate application on the city website.

These permits are required separately from any other Special Events Permit or requirements.

[Fireworks, pyrotechnics and movie special effects \(calgary.ca\)](https://calgary.ca/fireworks-pyrotechnics-and-movie-special-effects)

On-Site SCO

When it is deemed appropriate for the safeguarding of life and property from fire, explosion, panic, or other hazardous conditions that may arise in the temporary use of an occupancy and/or premises, one or more standby Fire Safety Officers may be required to be present before and during the activity.

Definitions

Authority Having Jurisdiction: means a safety codes officer in the fire discipline exercising authority pursuant to designation of powers and terms of employment in accordance with the Safety Codes Act.

Canopy: Any fixed roof-like structure that is self-supporting in whole or in part, but having no sidewalls or curtains other than valances not exceeding 18 in. (455 mm) in depth.

Crowd Control: The restriction or limitation of group behaviour. Crowd control may be part of a crowd management plan or occur as an unplanned reaction to a group problem. It can include extreme measures to enforce order, such as the use of force, arrest, or threat of personal injury. It may employ barriers that alter the space available for occupancy and patterns of group movement.

Crowd Management: The systematic planning for, and supervision of, the orderly movement and assembly of people. Crowd management involves the assessment of the people handling capabilities of a space prior to use. It includes the evaluation of projected levels of occupancy, adequacy of means of ingress and egress, processing procedures such as ticket collection, and expected types of activities and group behaviour.



Tent: A temporary structure, the covering of which is made of pliable material that achieves its support by mechanical means such as beams, columns, poles, or arches, or by rope or cables, or both. Used at an open air event such as a fair or an exhibition. A tent will normally be constructed of a fabric held up by poles and attached to the ground by ties.

Marquee: Permanent roofed structure attached to and supported by a building.

Tabletop Training: A workshop style of training involving a realistic emergency scenario and requiring problem-solving participation by personnel responsible for management and support at emergencies.

Means of Egress: means a continuous path of travel provided for the escape of persons from any point in a building or contained open space to a separate building, an open public thoroughfare, or an exterior open space protected from fire exposure from the building and having access to an open public thoroughfare. Means of egress includes exits and access to exits.

Reference Documents

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7. National Fire. Protective Association (2024). *NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations*.
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10. The Event Safety Alliance, 2022. *The Purple Guide to Health, Safety and Welfare at Music and Other Events: Chapter 13 Crowd Management*. 2022-04-07 edition. [online] Available at: <https://www.thepurpleguide.co.uk> [Accessed 2 Jan. 2025].

