

## **MEBAA2024: Outdoor Structure Building Guidelines: Chalet Line & Static Park (v1)**

### **1. General Overview, Introduction & Guidelines:**

Outdoor pavilion exhibitors are responsible for their own pavilion design and construction. No outdoor pavilion construction elements or fittings will be provided by F&E LLC FZE an Informa Company. All outdoor pavilion designs must be reviewed by the Organisers and venue before contractors/exhibitors will be allowed access to the site and permitted to commence build.

Outdoor pavilion working drawings (including all dimensions and elevations), risk assessment, method statement & insurance documentation must be submitted by strict deadline of **Friday 25<sup>th</sup> October 2024**. Failure to submit outdoor pavilion designs by this date will result in USD\$250 late submission fee and may result in delays on-site.

No outdoor pavilion build will be permitted to commence without the Organisers and venues written consent.

It is the responsibility of the exhibitor or their appointed contractor to examine the area allocated to them in order to avoid costly adjustments to outdoor pavilion structures. Where possible the Organisers will provide, on request detailed outdoor pavilion plots; however, please be aware that minor obstructions infrastructure amenities or height restrictions cannot always be indicated on these plans. Due to the nature and scale of the Dubai Airshow site, each outdoor pavilion area is subject to differing restrictions, it is imperative that exhibitors and their contractors contact our operations team directly to ensure they are aware of all restrictions applicable to their particular site, and/or arrange pre build up site venue visits and inspections of the area.

Please contact the Operations Team at [paul.booth@informa.com](mailto:paul.booth@informa.com)

Outdoor pavilion fitting regulations contained within this guide must be observed when planning outdoor pavilion design and layout. We are pleased to offer advice and guidance where required. Please feel free to contact the Operations Team directly with any enquiries.

*Please note the Organisers have the right to reject any outdoor pavilion plan that they deem to be:*

- a) Structurally unsafe.
- b) A health & safety risk.
- c) Considered to be too difficult to be completed in the time specified.
- d) Does not conform to the specifications listed in the manual and guidelines.
- e) Likely to unreasonably affect nearby exhibitor's sites in any way.

No major structural or design changes will be permitted any outdoor pavilion once permission to start build has been given. Note there will be a charge for the independent engineer approval set at USD\$700 per pavilion/structure design.

#### **Pavilion Construction Categories:**

Please note there are two areas where pavilion self-build construction is permitted:

- The chalet line.
- The static park.

The construction regulations and timings vary dependent upon which area the pavilion is located in. Therefore, it is vital that you read the following sections carefully.

### **Chalet Line Pavilion Specifications:**

Construction of chalet line pavilions can commence on **Friday 22<sup>nd</sup> November 2024** only when permission has been granted by the Organisers and the Venue.

The height restriction for chalet line pavilions is **9.0mtrs**; under no circumstances may construction exceed this height. Should you need to secure the structure to the site, your contractor must submit scale drawings with the exact fixing position, before permission will be granted. Any damage to the site incurred through securing the structure must be repaired after the show at the exhibitor's expense. All double storey structures must provide exterior fire escape staircases. Fire extinguishers must be provided by your contractor, a minimum of 2 extinguishers per 100sqm is required.

Fire exits must be clearly indicated on all plans submitted and internationally recognised signs must be used.

If you require a crane or heavy lifting equipment during construction, these must be ordered from the Organisers' official handling agent DSV (formerly GT Exhibitions). No other contractor will be able to operate cranes or heavy lift machinery during the build-up or breakdown.

Notice of the intended requirements of this equipment must be received by the Organisers no later than **Friday 25<sup>th</sup> October 2024**.

There is no provision of mains electricity on the chalet line for pavilions, power is supplied by generators. All generators must be ordered through the Organisers at [paul.booth@informa.com](mailto:paul.booth@informa.com) by **Friday 25<sup>th</sup> October 2024**. Failure to do so by this date will incur a 30% surcharge. Please also note the electrical requirements section in this document for further details.

### **Static Park Pavilions Specifications:**

Construction of static park pavilions can commence on **Friday 22<sup>nd</sup> November 2024** only when permission has been granted by the Organisers & Venue.

The height restriction for static park pavilions is set at **4.5mtrs**; under no circumstances may construction exceed this height. The structure may not occupy any space more than that contracted for, this includes all air conditioning units but does not include generators and its fuel tank.

No fixing, drilling or pinning to the static park surface is allowed under any circumstance.

All static line structures/pavilions must be single storey build and have no upper mezzanine floors or upper terraces.

There is no provision for mains electricity on the static park. Power is supplied by generators. All generators must be ordered through the Organisers on weekly hire basis at [paul.booth@informa.com](mailto:paul.booth@informa.com) by **Friday 25<sup>th</sup> October 2024**. Failure to do so by this date will incur a 30% surcharge.

Exhibitors must order a generator that can run their exhibit for a full exhibition day as refuelling of generators is not permitted during the day on exhibition show open days. Fire extinguishers must be provided by your contractor, a minimum of 2 extinguishers per 100sqm is required. Fire exits must be clearly indicated on all plans submitted and internationally recognised signs must be used.

(Three) 3 vital key points to note when planning your pavilion on the static park at MEBAA2024 are:

- I. No water and waste supplies are available on the static park and the venue (Dubai Airport) do not allow any temporary measures for water/waste supply to be placed on the static park.
- II. There is no wired internet connection available on the static park. A temporary option will have to be supplied in the form of an Etisalat or DU (dongle/modem) wi-fi hot spot supplied by the pavilion build contractor.
- III. Disability access ramps should be placed on your pavilion in the static park, either incorporated into the design structure footprint. If the ramp is a pavilion 'add-on' and outside the footprint, the pavilion will be set back from the static park build line accordingly.

### **Pavilion Height Restrictions**

Strict height restrictions apply to the structures themselves and any items within the designated area as set out below:

- Static Park Pavilions: A Maximum height of 4.5m only (*to its/any highest point*)
- Chalet Line Pavilions: A Maximum height of 9.0m (*to its/any highest point*) dependant on location. Please contact [paul.booth@informa.com](mailto:paul.booth@informa.com) if you require assistance.

**2. Documentation Required For Design Submission:** Important - Please note that pavilion designs submitted for review at MEBAA2024 will not be considered or review process started, unless/until all the below requirements and documentation are fulfilled, and received by organisers who then send on for independent structural review and venue consent.

All pavilion designs submitted for approval must include:

- Heights of pavilion/structure
- Widths of pavilion/structure
- Lengths of pavilion/structure
- Full visuals of pavilion/structure, inside and outside including details of all stairways if required
- Emergency evacuation routes highlighted
- Risk Assessment (RA)
- Method Statement (MS)
- Contractors Insurance PLI (Public Liability Insurance) copy to the value of USD\$ 2,000,000.00
- STAAD models & files to accompany the steel work frame structure
- Full Structural Calculations: load bearing & wind, working to the venue structural codes. (Refer to section 7 below).

All calculations of loading and strength must be in English, and all drawings must be to scale. All pavilion calculations will be subject to an independent engineer's review & inspection with an administration fee of USD\$700 payable by the exhibitor or their appointed contractor. All complex structures are subject to a pre-show plan approval and on-site inspection & monitoring by F&E LLC FZE an Informa Company, appointed structural engineers and DAEP venue engineers. In the case of a particularly complex pavilion the Organisers may require additional structural calculations, method statements or technical detail to process the Pavilion review.

It is the responsibility of individual exhibitors and their appointed contractor to provide this additional information upon request and any associated costs will be charged to the exhibitor.

Please note permission to enter the exhibition premises and commence construction, will not be permitted without the full consent of the appointed independent structural engineer and the Venue review team.

Pavilion build progress will be monitored continually by on-site Health & Safety officers who reserve the right to halt stand build progress should any Health or Safety issues arise. The Organisers reserve the right to deny access and prevent work being carried out by, or on behalf of, any exhibitor who has not submitted pavilion design drawings in accordance with these regulations.

### **3. Hot-Working (Grinding & Welding):**

Hot-Working within the existing MEBAA2024 chalets is strictly forbidden as this is a breach of the venue health & safety policy. Anyone found carrying out this practice will be asked to leave the venue by the organisers immediately.

Hot-working on temporary structures/pavilions although not encouraged onsite, is allowed if necessary and as an integral part of design. Before undertaking hot-work, a permit to work (PTW) will have to be applied for at least 24hours in advance from the organiser's office.

The PTW application will need to include the following information and below procedure must be met before work can be carried out:

- A risk assessment will have to be submitted to accompany the task carried out.
- Up to date and valid certificates of the equipment to be used will have to be submitted for inspection.
- The PTW will then be signed off by competent person undertaking the task & counter signed by a certified fire safety officer at both the start of work and completion.
- All fire prevention methods will have to be adhered to (extinguishers & blankets supplied and all housekeeping in place).
- All correct hot-work full PPE will have to be worn and the task will then be monitored on site by fire watchman and/or an appointed safety officer from the organisers or venue.

#### **4. PPE (Personal Protection Equipment) Requirements:**

All health & safety guidelines and safe working practices must be always adhered to during MEBAA2024. Failure to do so will result in suspension of work until the H&S team are satisfied that control measures have been put in place for you to carry on.

Full PPE clothing and equipment are compulsory and must be used and worn at all times. Failure to do so will also lead to work being suspended.

- *Details of equipment to be used and worn while onsite at MEBAA2024 can be found at the end of this document.*

#### **5. Electrical Requirements (Outside Structures):**

No private or outside generators shall be permitted for use at MEBAA2024 only those hired through the official supplier. All these gen-sets are then subject to final inspection on site by the H&S team prior to energising. All temporary installation and distribution must be inspected and tested in accordance with the UAE Fire & Life Safety Policy by a competent person. A suitable testing and inspection result sheet may need to be produced on request by the venue and organisers.

Note: With specialist consultation, it is recommended that as a minimum an inspection and test sheet model as in accordance to BS7909 would be accepted as evidence of this policy and procedure. A sample sheet will be available on request.

The following arrangements shall also apply as applicable:

No person shall work on any electrical system unless they are proved competent to do so.

Contractors may be required to provide written method statements before work commences, or conform to permit to work (PTW) systems as part of the agreed work method.

Electrical distribution cabling, leads and tails must be terminated in the correct method with safeguards against direct contact. All outdoor cabling be resistant to water ingress with the correct IP rated connection and fittings.

Temporary installations from a generator must first be installed into a distribution board that is protected by the main switch rated with a 30mA RCD and each locally distributed circuit protected by a suitably rated MCB, it is not permissible to connect items directly to any industrial generator or any other source of electrical distribution which is not protected by a suitably rated RCD.

Any main switch or deviation from this will need to be reviewed and approved by the organiser and venue.

Portable electrical equipment must be in good order and be fit for purpose, only authorised and trained staff will be allowed to use this equipment with evidence of suitable (PAT) portable appliance test available on request.

Portable equipment that is used at MEBAA2024 must be tested with an approved (PAT) portable appliance tester as indicated below and indicate tested date with a sticker on each appliance.

Outdoor use – 3 monthly.

Indoor use – 6 monthly.

Dangerous equipment or those that are deemed to be unsafe will be removed from the site and if necessary, destroyed by the organisers or the venue.

Portable distribution boards and ancillary equipment provided by the venue, exhibitor, exhibitors principle contractor or subcontractor including, cabling and plugs are the responsibility of their appointed technical electrician; no person may interfere with or attempt any repair of electrical equipment. Interference or attempted repair of electrical equipment by anyone other than their licensed technical electrician is reportable as a criminal offence. If a fault is suspected in any circuit or apparatus e.g. because of a repeated blowing fuse, the organisers should be contacted, the appointed technical electrician be called, and the appliance taken out of use.

Circuit breakers must be used, and sockets must never be overloaded. All structures must be earth bonded prior to installation of electrical items, this must be inspected prior to use by the venue/organisers technical H&S team.

Emergency lighting and fire alarms within all complex structures must have been installed and tested in accordance to the UAE Fire & Life Safety Policy prior to the event.

Cables that run above head height must be tied neatly and secured to anchor points where they cannot impede emergency exits or cause injury. Cables must be at least 2m high. Cable ramps must be used wherever cables will cross floors.

#### **6. Early Access & Late Working (Extra Build Up Days & Hours):**

If you require extra build up time to complete your structure safely and need to continue working outside the publicised build up hours (late working), you will need to inform the Organisers Office situated on level one of the main exhibition hall by 14:00 hrs on that day. Sufficient H&S coverage from the organisers can then be assigned. You will need to supply the names of all employees working late and a main point of contact mobile number for the onsite supervisor.

A charge of AED1000 per hour (USD\$275) per structure, per day from (18:00pm-22:00pm) will apply and no work can continue after 22:00hrs. Please note that all payments must be made in advance and a late working permit obtained before out of hours working can commence.

The following requirements must be adhered to:

- Adequate power supply ordered to carry out work
- Temporary light rigs installed to supply enough light to create a safe working environment
- All personnel must adhere to the strict venue PPE ruling
- Welfare breaks provided so workers have sufficient rest periods

Late working bookings onsite (for the same day) can be booked by using and scanning the 'Late working QR code' which is situated in the organisers office or from the organisers H&S team managing the events build up.

The organisers H&S team will monitor work onsite and can suspend work at any point if they feel a breach of H&S practice has occurred.

If you would require extra build up time in the form of additional workdays (early access) to complete the structure/pavilion, a request can be made to the organisers in advance of the scheduled build up timetable.



The confirmation of early access will be subject to all Health & Safety rulings being adhered to, approval to start construction from the venue being granted through complete documentation submission and payment of USD\$1500 per structure/pavilion, per day being paid.

\*Note all early access build up day timings will be fixed at 08:00am -to- 18:00pm only.

- All pavilion construction must be completed by 18:00hrs on Saturday 7<sup>th</sup> December 2024. No late night or overnight work will be permitted after this time/date.
- All pavilion exhibits set up (small snags only) have to be completed by 18:00hrs on Sunday 8<sup>th</sup> December 2024, as the remaining time is required for deep cleaning and security checks of the venue before opening. No construction or deliveries will be allowed on the chalet/static line after this point.

**PLEASE NOTE THAT THESE DEADLINES WILL BE STRICTLY OBSERVED THIS YEAR (2023) AND NO RE-ENTRY WILL THEN BE PERMITTED BEFORE 08:00am ON TUESDAY 10<sup>th</sup> DECEMBER 2024.**

#### **7. MEBAA2024 Outdoor Performance Bond: (Process, Fines and Ruling) \***

At MEBAA2024 we are introducing a build-up performance bond payable against each (per) structure you are constructing outdoors.

This bond will be \$10,000USD per structure, payable during the review process and note that no permission to start build will be granted until this money is received. This payment can be made in cheque form.

The bond will be held by Informa finance and be part of the monitoring onsite procedure against the show build up ruling that all outdoor structures must be fully complete by **18:00pm Saturday 7<sup>th</sup> December 2024.**

The build-up will be monitored and reviewed by the organiser's operations team, their H&S team and the venue engineering team, and a progress assessment made in real time, as the end of build-up time approaches as to how much work is then remaining on your structure (if any).

Accordingly, the decision will then be made if a performance bond fine is warranted.

\*More details to follow on this subject

## 8. Structural Performance Specifications MEBA2024:

### PART 1 - QUALITY ASSURANCE

- A. Comply with applicable provisions of the following specifications and documents:
1. ASCE/SEI 7-05, "Minimum Design Loads for Buildings and Other Structures, 2005"
  2. AISC "Manual of Steel Construction American Institute of Steel Construction Inc. 15<sup>th</sup> edition", 2017.
  3. AISI "Cold-Formed Steel Design Manual American Iron and Steel Institute" edition 2017.
  4. AISC 360-16 "Specification for Structural Steel Buildings".
  5. AISC 303-16 "Code of Standard Practice for Steel Buildings and Bridges".
  6. Research Council on Structural Connections (RCSC) "Specification for Structural Joints Using High Strength Bolts." edition 2014.
  7. ASTM A6 (ASTM A6M) "Specification for General Requirements for Rolled Steel Plates, Shapes, Sheet Piling, and Bars for Structural Use."
  8. American Welding Society ANSI/AWS D1.1/D1.1M-2010" Structural Welding Code - Steel".
  9. "AA-ADM 2015, Aluminum Design Manual, 2015 Edition".
  10. "ANSI/AWC NDS-2015 National Design Specification (NDS) for Wood Construction".
  11. BS 5974:1990 Temporarily installed suspended scaffolds and access equipment.
  12. BS 5975: 2008 Code of practice for temporary works procedures and the permissible stress design of falsework
  13. BS EN 12811-1:2003 Temporary works equipment: Scaffolds - Performance requirements and general design
- B. Professional Engineer Qualifications: Contractor shall engage a professional engineer who is legally authorized to practice in the jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for projects with structural framing that are similar to that indicated for this Project in material, design, and extent.

### PART 2 - PERFORMANCE REQUIREMENTS

- A. Structural Performance: Contractor shall engineer the extent of the structural framing and their connections work shown in the drawings required to be fully designed by the contractor to withstand design loadings indicated in accordance with the codes and standards indicated in this section.
- B. Engineering Responsibility: Contractor shall engage a qualified engineer to prepare calculations, Shop Drawings, and other structural data for structural members and connections.
- C. Design Calculations: The contractor is to submit design criteria, reference codes and loads used, fully detailed computer analysis and design including input data file, analysis model, end restraints and the associated output diagrams of all straining actions, support reactions, stresses and code checking in addition to design calculations for all connections. Softcopy of all structural analysis and design models is mandatory for review.

**1. Structural Loads:**

Dead Load	<ul style="list-style-type: none"> <li>• Self-weight of all components</li> <li>• Weight of roof cladding and side walls</li> <li>• Any additional permanent loads.</li> </ul>
Live Load	<ul style="list-style-type: none"> <li>• ASCE 7-05</li> <li>• Areas of Public Assembly: Uniform load = 4.79 KN/m<sup>2</sup></li> <li>• Minimum roof live load/ sand = 0.6 KN/m<sup>2</sup></li> </ul>
Wind Loads	<ul style="list-style-type: none"> <li>• ASCE 7-05</li> <li>• Basic wind speed V=32 m/sec (3-sec. gust) to be used with a wind load factor of 1.6 for ASCE 7-05</li> <li>• Importance factor I=1.0</li> <li>• Exposure C</li> </ul>
Temperature Variation	<ul style="list-style-type: none"> <li>• - Uniform -25 °C or +25 °C</li> </ul>
Indoor Stands	<ul style="list-style-type: none"> <li>• Minimum indoor lateral pressure of 25Kg/m<sup>2</sup> applied on one side of the indoor stand at a time</li> </ul>

**2. Load Combinations:**

- The load combinations are to be in accordance with ASCE 7-05

**3. Serviceability:**

- In addition to strength, all serviceability limit states shall be considered in the design of the exhibition stands including but not limited to vertical deflection, lateral drifts and vibration. Refer to AISC design guides AISC DG3 'Serviceability Design Considerations for Steel buildings', and AISC DG11 'Vibration of Steel-Framed Structural Systems due to Human Activity' (both second editions).

- Minimum vertical natural frequencies:

A- 3 HZ for floors

B- 5 HZ for stairs

**4. Ceiling Rigging:**

- Ceiling rigging inside the Exhibition Hall is permitted and shall be coordinated with the venue.
- Exhibitors shall be fully responsible for the structural integrity of any subframe support used in the hoisting system.
- All Rigging loads (values and locations) shall respect the allowable loading criteria for the structure.





**5. Proprietary Outdoor Tents:**




- Submit technical data sheets of any proprietary outdoor tent with full details pertaining to structural design and performance. Structural calculations of tent overall stability and required ballasts/counterweights shall be submitted for review and approval.

Tent use shall be in strict compliance with corresponding technical manual and design limitations. Example: Parapet walls shall not be added to a proprietary tent structure not designed with such provision. The fabricator is responsible for selecting and completing details of structural-steel connections required to withstand specific design loads and submit for approval. An experienced steel detailer and qualified professional engineer shall select and complete the design of elements and connections.



**PPE Requirements onsite at MEBAA2024:**

Hazard	Advice	PPE	Examples
<p>Slippery surfaces</p> <p>Nails and sharp objects on the floor</p> <p>Heavy items dropped during movement or fitting</p>	<p>Safe footwear should be worn to prevent slipping and foot injuries.</p> <p>Safe footwear is mandatory during the construction activities of build-up/breakdown for ALL personnel entering the halls.</p> <p>General recommendation: EU Approved to class EN345 (safety footwear)</p>	Safe footwear	
<p>Moving vehicles</p> <p>Vehicle/pedestrian interaction</p> <p>Poor visibility</p>	<p>Hi-visibility vests have highly reflective properties or a colour that is easily discernible from any background.</p> <p>Wearing Hi-visibility vests is mandatory during the construction activities of build-up/breakdown for ALL personnel entering the halls.</p> <p>General recommendation: EU approved to class EN 471</p>	Hi-Visibility jacket/ vest	
<p>Danger of falling objects or overhead work taking place</p>	<p>A hard hat should be worn to protect the head if an object falls from a height.</p> <p>General recommendation: EU approved to class EN397</p>	Hard hat	
<p>Person working at a height</p>	<p>Persons working at height where there are no guard rails should be clipped on via a lanyard or wearing fall arrest equipment.</p> <p>General recommendation: EU approved to class EN361 (full body harness)</p>	Lanyard/fall arrest equipment	

<p>Contact with hazardous chemicals</p> <p>Contact with human fluids</p> <p>Dirty workplace</p> <p>Handling sharp objects</p> <p>Objects being moved (trapping)</p>	<p>Protect hands from harm using appropriate type of gloves (consider glove material, dexterity needs, performance)</p> <p>General recommendation: EU approved to class EN388 (mechanical) and EN 374 (chemical)</p>	<p>Safety gloves</p>	
<p>Inhalation of dust, gas or fumes</p>	<p>Protect the body from breathing or ingesting hazardous materials.</p> <p>General recommendation: EU approved to class EN149</p>	<p>Respirator</p>	
<p>Impact with moving objects</p> <p>Eye contact with chemicals</p>	<p>Protect eyes using suitable glasses</p> <p>General recommendation: EU approved to class EN166</p>	<p>Safety glasses</p>	
<p>Loud noise</p>	<p>Protect ears from noise using appropriate type of device with correct attenuation.</p> <p>General recommendation EU approved to class EN352-2 (earplugs)</p>	<p>Ear plugs</p>	