Special Event Planning and Inspection Checklist
(This checklist will be used to review the application and check the site.)
Please address each and every item on this sheet.

☐ A SCALED AND DIMENSIONED SITE PLAN THAT INCLUDES:
   O Location of all booths, tables, displays, vendors, etc.
   O Location of all buildings, structures, fences, walls, dumpsters, signs, landscaping, surface material, food apparatus, change in grade, etc. for a minimum of 20 feet (20') around the perimeter of the temporary structure or assembly area (whichever is greater) and/or encountered in any exit route to the public way.
   O Protection of the Public- Stakes, Posts, Cables, Poles, Holes etc.
   O A scaled and dimensioned Aisle/Exit plan- include marking each aisle/exit for the duration of the event.
   NOTE: MINIMUM OF TWO EXITS REQUIRED FOR OCCUPANCY OF 10 OR MORE
   O Seating Plan or Floor Plan- including maximum in each section and aggregate at any one time.
   O Complete signed and stamped specifications and drawings for all bleacher/platform/riser/performance areas- including occupancy, loads, and structural details for all imposed loads and anchorage points.
   O Accessibility for people with disabilities- Parking, Seating, Signage, Ingress/Egress, etc.

☐ STRUCTURAL, WIND UPLIFT, STAKING/BALLASTING PLAN, FIRE RESISTANCE, FLAME SPREAD, AND SMOKE GENERATED DATA FOR EACH TENT/CANOPY, please include a dimensioned hold-down pattern and uplift resistance (weight or stake pull-out) and engineering documents- if available. IFAI Tent Rental Division’s Pullout Capacity of Tent Stakes (attached) will be referenced.

☐ SETUP & TEARDOWN INFORMATION- INCLUDE DATES, TIMES, AND INSTALLER(S).
   NOTE: ALL SETUPS MUST BE COMPLETED BEFORE THE EVENT WILL BE ALLOWED TO START.

☐ MATERIAL SAFETY DATA SHEETS AS APPLICABLE.

☐ USHERING/ SECURITY TRAINING/PROCEDURES MANUAL:
   O Procedures for handling overflow and for identifying and keeping exits/egress clear.
   O Maximum number anticipated & maximum number admitted/seated.
   O Protocols for additional temporary or folding chairs. How many?
   O Overnight Security Procedures.
   O Procedure for emergency medical situations.

☐ SEVERE WEATHER PLAN: Please include implementation triggers i.e. wind speed, lightning proximity and evacuation/sheltering plan(s).

☐ FIRE SAFETY
   O Location, type, and identification type for all fire extinguishers
     _ If cooking or open flame on site, a portable ABC (minimum 10#) in each booth, readily accessible.
     _ If deep fry unit is used an ADDITIONAL “K-rated” fire extinguisher is required.
   O All compressed gas cylinders secured and upright.
   O Flammable gasses and liquids must be stored at least five feet from any ignition source.

☐ UTILITY PLAN- ANY UTILITY THAT WILL BE BROUGHT TO, THROUGH, OR UTILIZED.
   NOTE: EMERGENCY and EXIT LIGHTS REQUIRED IN ANY ENCLOSED AREA WITH 10 OR MORE OCCUPANTS
   O Electric- (Grounded, GFCI protection is REQUIRED on all 110/120 Volt circuits. - including LIGHTING)
     _ Generator installation and Grounding
     _ EXTENSION CORDS
     _ Properly sized (14-3 Max 12 Amps; 12-3 Max 16 Amps; 10-3 Max 24 Amps)
     _ Trip hazard protection.
     _ Intact 3-prong plug at each end
     _ Connections are made above grade- no plugs on the ground.
   O Toileting, Diaper Changing and Hand Washing Facilities- including Accessible.
     _ Location and number of all available facilities.
     _ One hand sink for every three toilets plus one sink in each food service booth.
   O Water/ Wastewater
     _ Identify all water sources, including hoses- food grade hoses required for potable.
     _ Identify wastewater disposal sites, including method for separating/disposing grease/oil.
     _ Identify lawn sprinkler controls (if the area is sprinkled)

☐ GARBAGE/REFUSE/TRASH/LITTER/CHARCOAL/ DISPOSAL- PROVIDE DETAILS & LOCATIONS.
4.) Increasing the height of the stake knot above the ground decreases stake holding capacity.

Figure 15. Stake Knot Height

5.) Holding power varies with anchor types.

6.) DOUBLE STAKING

Double staking is the practice of driving another stake a short distance behind the primary stake and close-lying both stakes together with the free end of the guy rope.

Figure 17. Double Staking

A rule of thumb for double staking suggests that the distance between stakes be equal to one-third the depth of the stakes in the ground.

Figure 18. Double Staking Errors

Compliments of:

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This handout supplements any instructions or warnings that are provided by the manufacturer of the tent. You should consult the manufacturer’s instructions and warnings each time you install a tent. This handout does not replace the manufacturer’s instructions and warnings. If you are unable to locate any instructions or warnings, consult your rental agent or the manufacturer. To avoid personal injury or property damage, read and follow the manufacturer’s instructions and warnings and the supplement information contained in the IFAI’s Tent Installation and Maintenance Handbook for the Safe Installation and Maintenance of Tentages before you install a tent. In the event there is a conflict between the manufacturer’s instructions and warnings and the instructions contained in this manual, always follow the manufacturer’s instructions and warnings.
B1) Estimating Pullout Capacity of Tent Stakes


Pullout Capacity for a Single Stake

The method estimates the stake pullout capacity for a "baseline" stake, and then applies correction factors for conditions that vary from the baseline case. The baseline case for a tent stake is as follows:
1. Stake diameter is 25mm [1.0 inch]
2. The side of the stake is smooth
3. The stake is driven vertically
4. The stake is embedded (driven) 915mm [36 inches] in the ground
5. The load is applied at 811mm (3 inches) above the ground surface, and
6. The load is pulled at a 45 degree angle.

Adjusting Estimated Capacity for Conditions Different than Baseline Case

The pullout capacity for a stake that is different from the baseline case can be estimated as the baseline capacity multiplied by factors that adjust for the variation in conditions from the baseline (such as a different stake embedment, stake inclination, stake diameter, fastening height, and pull angle). The pullout capacity for the stake can be determined as the baseline capacity, multiplied by the appropriate adjustment factors as follows:

\[ P = P_0 \times C_d \times C_i \times C_j \times C_k \times C_l \times C_m < 1134 \text{kgs (2500 lbs)} \]

Where \( P \) = pullout capacity for a single stake, \( P_0 \) = pullout capacity for a standard stake (the baseline case), \( C_d \) = correction factor for embedment depth, \( C_i \) = correction factor for fastening height, \( C_j \) = correction factor for stake inclination, \( C_k \) = correction factor for load angle, and \( C_m \) = correction factor for stake diameter. The appropriate correction factors can be obtained from the Tables below.

Table 2. Correction Factor for Stake Inclination

<table>
<thead>
<tr>
<th>Stake Inclination</th>
<th>Correction Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>For stake angle from 0 to 15 degrees</td>
<td>1.00</td>
</tr>
<tr>
<td>For stake angle &gt; 15 degrees</td>
<td>0.77</td>
</tr>
</tbody>
</table>

Note: Table 2 requires the stakes in the group to satisfy the conditions set for the baseline case.

Ribbed vs. Smooth Stake

Results of the testing program showed no significant difference in pullout capacity between 22mm [1-inch] diameter steel stakes with smooth sides and a 25mm [1-inch] steel stake with ribs for most pullout tests. However, structural yielding in the ribbed stakes occurred at pullout loads lower than the smooth steel stakes because of the difference in the structural strength. Accordingly, the pullout capacity of ribbed stakes should be limited to a pullout capacity no greater than 724 kgs [1600 lbs].

Determination of Capacity for Group Stakes

The pullout capacity of group stakes can be estimated by multiplying the baseline capacity of a single stake by an "effectiveness factor" as follows:

\[ P_g = P_0 \times E_f \]

Where \( P_g \) is the capacity of the stake group, \( P_0 \) is the pullout capacity for a single stake under baseline condition, and \( E_f \) is the effectiveness factor for the group of stakes. The effectiveness factors for a group of stakes can be determined using Table 2.

Two important details and cautionary notes about using Table 1 for estimating capacity are:
1. Table 1 requires a subjective measure [Stake Penetration Resistance] for estimating pullout capacity. More accurate and precise methods are available and given in the IFAI Tent Staking Study. However, the more accurate methods require a greater effort for determining soil strength.
2. Table 1 provides a relationship between driving resistance and baseline stake capacity for the soil conditions at the time of driving. If the stake is driven during dry conditions, and then the ground becomes saturated, a loss of soil strength and pullout capacity will result. The loss of soil strength is not possible to predict with confidence without an extensive soil testing or stake pullout testing program. However, results from the IFAI tent staking study indicated that the pullout capacity of stakes driven in saturated ground are about one-half the capacity of the stakes driven in the same ground under dry conditions.