



PUBLIC PROTECTION CABINET

DEPARTMENT OF HOUSING, BUILDINGS AND CONSTRUCTION
Division of Building Code Enforcement

KENTUCKY TEMPORARY STRUCTURES PLAN SUBMISSION /FIELD INSTALLATION GUIDE

FOR

**TENTS, PORTABLE BUILDINGS, BLEACHER/
GRANDSTAND SEATING SYSTEMS, RAISED/
ELEVATED FLOOR AND PLATFORMS**

DIVISION OF BUILDING CODE ENFORCEMENT
502-573-0373

101 Sea Hero Road Suite 100
Frankfort, Kentucky 40601-5405

www.dhbc.ky.gov



TEMPORARY STRUCTURE SUBMITTAL/ FIELD INSTALLATION GUIDE

This guide has been developed to assist potential vendors and owners and design professionals as to the requirements that are applicable to temporary structures which include but not limited to tents, canopies, membrane structures, grandstands/bleachers, raised/walking platforms / Performing/ Presenting platforms/stages and electrical inspections and permits.

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Contact List

All the following offices shall be contacted for applicability

Office	Contact Person	Phone Number
Plumbing Division	Frank Blevins	502-573-0397
Building Code Enforcement	Dale Spicer	502-573-0373
State Fire Marshal	Shawwna McMichael	502-573-0388
L-P Gas Inspections	Shawwna McMichael	502-573-0388
State Electrical Inspection	Ken Leathers	502-573-1797
Licensing HVAC	Roger Banks	502-573-0395
Licensing Plumbing	Diana Roberts	502-573-0397
Licensing Electrical	Tina Quire	502-573-2002
Health Department		Check Local County Office
County Electrical Inspection		Check Local County Office
Planning & Zoning		Check Local County Office

Overview of Tent Model Approval and Site Placement

All tents which are defined by Chapter 24 of the International Fire Code shall be submitted to this office for model approvals. Site placement approvals will be handled by either the Department of Housing or the local building department office, please refer to Section 104 of the Kentucky Building Code for jurisdiction responsibilities. The approval processes are broken down into 2 parts 1) Model Approval and 2) Site Placement Approval. Below is a description of this permitting process

Model Approval

Model approval is the first step and is a method of streamlining the tent permitting process. The intent of model approval is to approve a particular tent model for site placement in the Commonwealth. This will eliminate the need to provide design professional seals, structural analysis, fire propagation of tent covering to be submitted and approved for each individual site placement. Once a model approval is issued that particular model of tent will be able to be placed anywhere in the state.

Check List for Model Submittal and Approval

- Cover Letter or Letter of Transmittal
- Plans drawn to minimum scale of $\frac{1}{4}$ " = 1'-0"
- Title Sheet indicating code information
- Previously assigned Kentucky Temporary Tent Structure Model Approval Plan Application Form (pg. 5 of this guide)
- 4 Exterior Elevation Views
- Design Wind Loads
- Reaction factors for anchoring
- Design Professional seals and signatures on engineered tents
- Manufacturer's Specifications
- Flame Propagation Criteria for tent covering

Site Placement Approval:

If the tent has been issued a model approval to be placed in the state, the next step is to obtain a KTS site placement approval. Plans shall be submitted to the Division of Building Codes Enforcement for review and approval with a KTS Site Placement Application Form for all projects that fall under the state jurisdiction duties as outlined in Section 104.2 of the Kentucky Building Code. Tents that have calculated occupant loads under 100 persons and are not located on state owned properties shall submit locally for site placement approval if a Level I Inspection program exists. If a local inspection program does not exist then site placement approval shall be submitted to this office for review and approval. There are also local and county municipalities that have expanded jurisdictions which will be able to permit site placement approvals for all tents regardless of occupant loads except those placed on state owned properties. Plans shall include but not limited to a site plan indicating the distances between tents and other tents, property lines or other structures measured from the guy wires that anchor the tent structure, details on how the structure is to be anchored in accordance with manufacturer's installation instructions. The site placement plan submittal shall include an interior layout or floor plan illustrating intended use of the interior space and location of any and all seating systems, stages or elevated walking surfaces, fixtures and equipment located within. In addition an Emergency Plan/Operational Manual indicating a step by step procedure in case of severe weather shall be submitted. After the tent has been erected at the site and all inspections have been performed a final letter of completion shall be signed by the installer indicating that he has installed the tent in accordance with the manufacturer's specifications. Fees are calculated five cents per square foot minimum \$125.00 with check made payable to the Kentucky State Treasurer. Please allow 30 days for model approval, though review times may be considerably shorter depending on workload

Site Placement Check List

- Site Plan w/ tent location/distances to other tents, property lines & structures
- Emergency Plan/Operational Manual
- Dates of temporary use
- Anchoring details based on reaction factors
- Floor plan/ emergency lighting and exit sign locations
- KTS Site Placement Application Form (pg. 6 of this guide)

Final Certificates required after installation

- Electrical Certificate
- Final Field Inspection

Host/Owner Responsibilities

- Do all vendors have Model Approval and Site Placement Approval prior to installation?
- Do all vendors have a final electrical certificates and a Final Filed Inspection?
- Are all tent locations have a minimum fire separation distance as required by Section 430.11 of this guide (pg.8) of this guide?
- Does each vendor have an Emergency Plan/Operational Manual for a step by step procedure including shut down procedures for adverse weather conditions?



PUBLIC PROTECTION CABINET

Department of Housing, Buildings and Construction

Division of Building Code Enforcement
101 Sea Hero Road, Suite 100
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Steven L. Beshear
Governor

Ambrose Wilson IV
Commissioner

Robert D. Vance
Secretary

Jack L. Coleman
Deputy Commissioner

Kentucky Temporary Structures (KTS)

DATE OF THIS APPLICATION _____ **KTS Model Approval Plan Application Form**

This form to be completed by Manufacturer's Representative. Please CHECK ONE:

- Initial Model Approval Kentucky Building Code Edition to be reviewed under _____
- Previously Approved KTS Tent Re-evaluation for design changes or new code cycle

MANUFACTURER INFORMATION

NOTE: Complete the following information for the manufacturer or indicate your Kentucky assigned Kentucky Temporary Structure (KTS) number, here if applicable : _____

MANUFACTURER'S NAME: _____

MAILING ADDRESS: _____

CITY/STATE/ZIP: _____

FACTORY LOCATION: _____

NAME OF FACTORY REPRESENTATIVE: _____ PHONE NUMBER: _____

EMAIL ADDRESS: _____

MODULAR BUILDING INFORMATION

PROPOSED MODEL NAME OF TENT: _____ MODEL #: _____

OVERALL TENT SIZE: _____ WIDTH _____ LENGTH _____

AREA PER FLOOR: _____

MODEL PLAN SUBMISSION CHECKLIST

Note: Please check each item included with your Model Plan
All of this information is required with the Model Plan Submission.

- Cover Letter or Letter of Transmittal
- Plans drawn to minimum scale of 1/8" = 1'-0"
- Title Sheet indicating code information
- 4 Exterior Elevation Views
- Design Wind Loads
- Reaction factor for anchoring
- Manufacturer's Specifications
- Design Professional seals and signatures
- Flame Propagation Criteria for tent covering Per NFPA 701
- Plan Review / Inspection Fee of 5 cents per square feet (Minimum of **\$125.00 which ever fee is greater**)
Make check payable to the Kentucky State Treasurer.

The minimum distance between any Kentucky approved Tents exceeding 15,000 or used in cooking regardless of size and any other tent, canopy membrane structures or parked vehicles, buildings or structure shall be Twenty feet measured from the support ropes or guy wires

Please be advised all previous model plan reviews are invalid if the model has not been resubmitted for our review and approval under the new codes.



PUBLIC PROTECTION CABINET
Department of Housing, Buildings and Construction

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Kentucky Temporary Structures (KTS)
KTS Site Placement Application

NOTE: Indicate the Manufacturer's Model # _____ DOES THIS TENT HAVE KY TENT MODEL APPROVAL? _____

NAME OF PERSON SUBMITTING PLANS _____	PHONE (_____) _____ - _____	IS THE SITE REVIEW FEE INCLUDED WITH PLANS?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
MAILING ADDRESS: _____				
NUMBER / STREET, HWY, ROAD or P. O. BOX	CITY	STATE	ZIP CODE	

BUSINESS & PROJECT NAME: _____				
PROJECT LOCATION: _____				
NO./ STREET, HWY or ROAD (Please do not indicate P.O. Box or Postal Routes)	CITY	COUNTY		

OWNER OR CUSTOMER: _____	PHONE (_____) _____ - _____			
MAILING ADDRESS: _____				
NUMBER / STREET, HWY, ROAD or P. O. BOX	CITY	STATE	ZIP CODE	

ARCHITECT (NAME & FIRM) _____	PHONE (_____) _____ - _____			
AS THE ARCHITECT LISTED ABOVE, I AM RESPONSIBLE FOR CONSTRUCTION CONTRACT ADMINISTRATION. <input type="checkbox"/> YES <input type="checkbox"/> NO				
MAILING ADDRESS: _____				
NUMBER / STREET, HWY, ROAD or P. O. BOX	CITY	STATE	ZIP CODE	

DEALER NAME: _____	PHONE (_____) _____ - _____			
MAILING ADDRESS: _____				
NUMBER / STREET, HWY, ROAD or P. O. BOX	CITY	STATE	ZIP CODE	

MANUFACTURER NAME: _____	PHONE (_____) _____ - _____			
MAILING ADDRESS: _____				
NUMBER / STREET, HWY, ROAD or P. O. BOX	CITY	STATE	ZIP CODE	

SITE CONTRACTOR: _____	PHONE (_____) _____ - _____			
MAILING ADDRESS: _____				
NUMBER / STREET, HWY, ROAD or P. O. BOX	CITY	STATE	ZIP CODE	

BUILDING INFORMATION				
NUMBER OF TENTS IN THIS SUBMITTAL: _____ USE OF TENTS i.e.... COOKING, SALES, DANCING, DINING or other (please specify) _____				
IF NOT A TENT WHAT TYPE OF TEMPORARY STRUCTURE IS BEING SITED : <input type="checkbox"/> PERFORMING STAGE <input type="checkbox"/> ELEVATED FLOOR SYSTEM <input type="checkbox"/> OTHER: _____				
TENT/ STRUCTURE MEASUREMENTS: _____ WIDE BY _____ LONG TOTAL AREA IN NEW BLDG. OR ADDITION: _____ FT. ²				

WHAT DATES WILL THIS TENT/STRUCTURE BE PLACED ON SITE? _____

KTS SITE SUBMITTAL CHECKLIST THE SITE SUBMITTAL SHALL INCLUDE THE FOLLOWING:
<input type="checkbox"/> Site Plan w/ tent location/distances to adjacent buildings and property lines
<input type="checkbox"/> Anchoring details based on reaction factors
<input type="checkbox"/> Floor plan including emergency lighting and exit sign locations
<input type="checkbox"/> Operational manuals per Model Approval
<input type="checkbox"/> Dates of temporary use
<input type="checkbox"/> Emergency shut down procedures due to severe weather including the maximum wind speed before evacuation (not to exceed 75% of deigned listed wind speed)

SECTION 430 TEMPORARY STRUCTURES

430.1 Definitions. The following terms are defined in Chapter 2

AIR-INFLATED STRUCTURE. A structure that uses air pressurized membrane beams, arches or other elements to enclose space. Occupants of such a structure do not occupy the pressurized area used to support structure

AIR-SUPPORTED STRUCTURE. A structure wherein the shape of the structure is attained by air pressure and occupants of the structure are within the elevated pressure area. Air-supported structures are of two basic types:

Double skin. Similar to a single skin, but with an attached liner that is separated from the outer skin and provides an airspace which serves for insulation, acoustic, aesthetic or similar purposes.

Single skin. Where there is only the single outer skin and the air pressure is directly against that skin not occupy the pressurized area used to support the structure

CANOPY. A permanent structure or architectural projection of rigid construction over which a covering is attached that provides weather protection, identity or decoration. A canopy is permitted to be structurally independent or supported by attachment to a *building* on one or more sides.

MEMBRANE STRUCTURE. An air-inflated, air-supported, cable or frame-covered structure

PRIVATE EVENT. Any event that involves the use of temporary structures which are not open to the public, regardless of whether on public or private property, and do not charge an admission fee if occupied by less than 1,000 occupants

PUBLIC EVENT. Any event that involves the use of temporary structures which are open to the public, regardless of whether admission is charged or whether on private or public property.

TEMPORARY STRUCTURE. TEMPORARY STRUCTURE. Any structure erected for human occupancy on a temporary basis for less than 180 days within a 12 month period on a single premises. Temporary Structures include, but are not limited to, membrane structures, certified tents, certified canopies,. Stages, platforms and non-certified tents or non-certified canopies are, by definition, Temporary Structures if erected for a 30 days or less within a single permit cycle.

TEMPORARY STAGE. . A stage erected for a period of 30 days or less within a calendar year utilized for entertainment or presentations. Temporary stages may include overhead hanging curtains, drops, scenery or stage effects other than lighting and sound

TEMPORARY PLATFORM. A platform erected for a 30 days or less within a single permit cycle that has a raised area used for worship, the presentation of music, plays or other entertainment; the head table for special guests; the raised area for lecturers and speakers; boxing and wrestling rings; theater-in-the-round stages; or similar purpose. These platforms shall not have overhead hanging curtains, drops, scenery or stage effects other than lighting and sound.

TENT. A structure, enclosure or shelter, with or without sidewalls or drops, constructed of fabric or pliable material supported in any manner except by air or the contents it protects

TENT SECTION

430.2 General. All temporary structures, tents, canopies and membrane structures that are erected for a period less than 180 days shall comply with this section and all other applicable sections of this code.

430.3 State Model Approval. All tents greater than 400 square feet shall be submitted to the Department of Housing, Buildings & Construction for review and model approval to be erected in the Commonwealth. Future structural changes made to an approved tent shall be submitted for re-evaluation and approval.

430.3.1 Fees. The fee for state model approval is \$250.00. Re-evaluations of structural changes after model approval shall be \$100.00. Fees associated with a series or product line of tents shall be \$250.00 per series or product line. All fees shall be made payable to the Kentucky State Treasurer.

430.3.2 Construction Documents. A plan application and construction documents for state model approval shall include but not be limited to the following:

1. Plans drawn to minimum scale of $\frac{1}{8}'' = 1'-0''$
2. Manufacturer's Specifications
3. Structural drawings demonstrating reaction factors for wind load for each bearing element
4. Seals and signatures of a licensed design professional for all engineered/certified tents
5. Flame Propagation Criteria for tent covering per NFPA 701

430.3.2.1 Non-certified Tent Reaction Factors. Non-certified tent reaction factors shall be a minimum of 5lbs per square foot of exposed tent area and calculated by the formula below. This area shall be comprised of the square footage of tent area of 2 adjacent sides of a tent including the tent area of the roof as it appears in the elevation plane divided by the number of anchoring points.

$$RF = \frac{A_1 + A_2 + A_3 + A_4}{\# \text{ of AP}} \times 5$$

where:

RF = Reaction factor expressed in pounds per number of anchoring points

A₁ = square footage of tent area on one side of tent

A₂ = square footage of tent roof area above A₁

A₃ = square footage of tent area of adjacent side of A₁

A₄ = square footage of tent roof area above A₃

AP = anchoring points

Exception: Non-certified tents designed to meet a wind speed in excess of 45 mph per manufacturer's specifications.

430.4 Site Placement. Site placement of state approved tents and temporary structures shall be submitted for review and approval by the authority having jurisdiction in accordance with Section 104.0 and Krs 198B.60 (5)

Exception: Temporary structures utilized at a *private event* as defined by Chapter 2 of this code

430.4.1 Fees. Individual tent and temporary structures for site placement shall be \$125.00. Fees for groups of tents shall be accordance with Table 430.4.1

TABLE 430.4.1

AGGREGATE SQUARE FOOTAGE OF TENT AREA	AMOUNT OF FEE
0 - 2,000	\$250.00
2,001 – 5,000	\$350.00
5,001 – 10,000	\$500.00
10,001 – 15,000	\$750.00
15,001 – 20,000	\$950.00
20,001 – 30,000	\$2,000.00
30,001 – 50,000	\$2,850.00
50,001 – 70,000	\$3,250.00
70,001 – 100,000	\$4,000.00

430.4.2 Construction documents. A detailed site and floor plan for tents, canopies membrane structures and temporary structures shall be provided with each application for approval. The tent, canopy or membrane structure floor plan shall indicate details of the means of egress, seating capacity, arrangement of the seating and location and type of heating and electrical equipment. Site plan shall include distances between tents, temporary structures, buildings and distances to property lines.

430.4.2.1 Elevated Floor Systems. Any elevated floor system that supports temporary structures, membrane structures, tents and canopies shall be designed or certified by a licensed design professional documenting that such an elevated system can support the dead and live loads.

430.4.2.2 Engineered and Non-certified Tents Use Limitations: Engineered and non-certified or non-engineered tents shall not be occupied or shall be evacuated during use when the sustained winds meet or exceed 75% of the listed wind speed rating of the temporary structure. Non-certified tents shall not be used or occupied for more than a 30 day period within a single permit cycle.

Exception: Emergency/Evacuation plan as approved by the authority having jurisdiction.

430.5 Approval required. Tents and membrane structures having an area in excess of 400 square feet (37 m²) shall not be erected, operated or maintained for any purpose without first obtaining a permit and approval from the authority having jurisdiction.

Exceptions:

1. Tents used exclusively for recreational camping purposes.
2. Fabric canopies open on all sides which comply with all of the following:
 - 2.1 Individual canopies having a maximum size of 700 square feet (65 m²).
 - 2.2 The aggregate area of multiple canopies placed side by side without a fire break clearance of 12 feet (3658 mm), not exceeding 700 square feet (65 m²) total.
 - 2.3 A minimum clearance of 12 feet (3658 mm) to all structures and other tents
3. Temporary structures utilized at a private event as defined by Chapter 2 of this code

430.6 Place of assembly. For the purposes of this chapter, a place of assembly shall include a circus, carnival, tent show, theater, skating rink, dance hall or other place of assembly in or under which persons gather for any purpose.

430.7 Permits. Permits shall be required as set forth in Section 3103 of this code.

430.8 Use period. Temporary tents, temporary structures, air-supported, air-inflated or tensioned membrane structures and canopies shall not be erected for a period of more than 180 days within a 12-month period on single premises.

430.9 Inspections. The entire tent, air-supported, air-inflated or tensioned membrane structure system shall be inspected at regular intervals, but not less than two times per permit use period, by the permittee, owner or agent to determine that the installation is maintained in accordance with this chapter.

Exception: Permit use periods of less than 30 days.

430.10 Inspection report. When required by the authority having jurisdiction, an inspection report shall be provided and shall consist of maintenance, anchors and fabric inspections.

430.11 Access, location and parking. Access location and parking for temporary tents, canopies and membrane structures shall be in accordance with this section.

430.11.1 Access. Fire apparatus access roads shall be provided in accordance with Section 506.2.2 of this code.

430.11.2 Location. Tents, canopies or membrane structures shall not be located within 20 feet (6096 mm) of lot lines, buildings, other tents, canopies or membrane structures, parked vehicles or internal combustion engines. For the purpose of determining required distances, support ropes and guy wires shall be considered as part of the temporary membrane structure, tent or canopy.

Exceptions:

1. Separation distance between membrane structures, tents and canopies not used for cooking, is not required when the aggregate floor area does not exceed 15,000 square feet (1394 m²).
2. Membrane structures, tents or canopies need not be separated from buildings when all of the following conditions are met:
 1. The aggregate floor area of the membrane structure, tent or canopy shall not exceed 10,000 square feet (929 m²).
 2. The aggregate floor area of the building and membrane structure, tent or canopy shall not exceed the allowable floor area including increases as indicated in the *International Building Code*.
 3. Required means of egress provisions are provided for both the building and the membrane structure, tent or canopy, including travel distances.
 4. Fire apparatus access roads are provided in accordance with Section 503.

430.11.3 Location of structures in excess of 15,000 square feet in area. Membrane structures having an area of 15,000 square feet (1394 m²) or more shall be located not less than 50 feet (15 240 mm) from any other tent or structure as measured from the sidewall of the tent or membrane structure unless joined together by a corridor.

430.11.3.1 Connecting corridors. Tents or membrane structures are allowed to be joined together by means of corridors. Exit doors shall be provided at each end of such corridor. On each side of such corridor and approximately opposite each other, there shall be provided openings not less than 12 feet in total aggregate (3658 mm) width.

430.11.3.2 Fire break. Membrane structures where the aggregate floor area is greater than 15,000 square feet shall have an unobstructed fire break passageway or fire road not less than 12 feet (3658 mm) wide and free from guy ropes or other obstructions shall be maintained on all sides of all tents, canopies and membrane structures.

430.12 Anchorage required. Tents, canopies or membrane structures and their appurtenances shall be adequately roped, braced and anchored to withstand the elements of weather and prevent against collapsing. Anchoring shall be in accordance with

Industrial Fabrics Association Procedural Handbook for the Safe Installation and Maintenance of Tentage or other methods as approved by the authority having jurisdiction.

430.13 Seating arrangements. Seating in tents, canopies or membrane structures shall be in accordance with Chapter 10 of this code.

430.14 Means of egress. Means of egress for temporary tents, canopies and membrane structures shall be in accordance with Sections 430.14.1 through 430.14.8.

430.14.1 Distribution. Exits shall be spaced at approximately equal intervals around the perimeter of the tent, canopy or membrane structure, and shall be located such that all points are 100 feet (30 480 mm) or less from an exit.

430.14.2 Number. Tents, canopies or membrane structures or a usable portion thereof shall have at least one exit and not less than the number of exits required by Table 430.14.2. The total width of means of egress in inches (mm) shall not be less than the total occupant load served by means of egress multiplied by 0.2 inches (5 mm) per person.

TABLE 430.14.2

Minimum Number of Means of Egress and Means of Egress Widths From Temporary Membrane Structures, Tents and Canopies

OCCUPANT LOAD	MINIMUM NUMBER OF MEANS OF EGRESS	MINIMUM WIDTH OF EACH MEANS OF EGRESS (INCHES)
		TENT OR CANOPY
10 to 199	2	72
200 to 499	3	72
500 to 999	4	96
1,000 to 1,999	5	120
2,000 to 2,999	6	120
Over 3,000 ^a	7	120

430.14.3 Exit openings from tents. Exit openings from tents shall remain open unless covered by a flame-resistant curtain. The curtain shall comply with the following requirements:

1. Curtains shall be free sliding on a metal support. The support shall be a minimum of 80 inches (2032 mm) above the floor level at the exit. The curtains shall be so arranged that, when open, no part of the curtain obstructs the exit.
2. Curtains shall be of a color, or colors, that contrast with the color of the tent.

430.14.4 Doors. Exit doors shall swing in the direction of exit travel. To avoid hazardous air and pressure loss in air-supported membrane structures, such doors shall be automatic closing against operating pressures. Opening force at the door edge shall not exceed 15 pounds (66 N).

430.14.5 Aisle. The width of aisles without fixed seating shall be in accordance with the following:

1. In areas serving employees only, the minimum aisle width shall be 24 inches (610 mm) but not less than the width required by the number of employees served.
2. In public areas, smooth-surfaced, unobstructed aisles having a minimum width of not less than 44 inches (1118 mm) shall be provided from seating areas, and aisles shall be progressively increased in width to provide, at all points, not less than 1 foot (305 mm) of aisle width for each 50 persons served by such aisle at that point.

430.14.5.1 Arrangement and maintenance. The arrangement of aisles shall be subject to approval by the authority having jurisdiction and shall be maintained clear at all times during occupancy.

430.14.6 Exit signs. Exits shall be clearly marked. Exit signs shall be installed at required exit doorways and where otherwise necessary to indicate clearly the direction of egress when the exit serves an occupant load of 50 or more.

1. Two separate circuits, one of which shall be separate from all other circuits, for occupant loads of 300 or less; or
2. Two separate sources of power, one of which shall be an approved emergency system, shall be provided when the occupant load exceeds 300. Emergency systems shall be supplied from storage batteries or from the on-site generator set and the system shall be installed in accordance with the National Electrical Code

430.14.7 Means of egress illumination. Means of egress shall be illuminated with light having an intensity of not less than 1 foot-candle (11 lux) at floor level while the structure is occupied. Fixtures required for means of egress illumination shall be supplied from a separate circuit or source of power.

430.14.8 Maintenance of means of egress. The required width of exits, aisles and passageways shall be maintained at all times to a public way. Guy wires, guy ropes and other support members shall not cross a means of egress at a height of less than 8 feet (2438 mm). The surface of means of egress shall be maintained in an approved manner.

430.15 General. All tents, canopies and membrane structures, both temporary and permanent, shall be in accordance with this section. Permanent tents, canopies and membrane structures shall also comply with the *International Building Code*

430.15.1 Flame propagation performance treatment. Before a permit is granted, the owner or agent shall file with the authority having jurisdiction a certificate executed by an approved testing laboratory certifying that the tents; canopies and membrane structures and their appurtenances; sidewalls, drops and tarpaulins; floor coverings, bunting and combustible decorative materials and effects, including sawdust when used on floors or passageways, shall be composed of material meeting the flame propagation performance criteria of NFPA 701 or shall be treated with a flame retardant in an approved manner and meet the flame propagation performance criteria of NFPA 701, and that such flame propagation performance criteria are effective for the period specified by the permit.

430.15.2 Label. Membrane structures, tents or canopies shall have a permanently affixed label bearing the identification of size and fabric or material type

430.15.3 Certification. An affidavit or affirmation shall be submitted to the authority having jurisdiction and a copy retained on the premises on which the tent or air-supported structure is located. The affidavit shall attest to the following information relative to the flame propagation performance criteria of the fabric:

1. Names and address of the owners of the tent, canopy or air-supported structure.
2. Date the fabric was last treated with flame-retardant solution.
3. Trade name or kind of chemical used in treatment.
4. Name of person or firm treating the material.
5. Name of testing agency and test standard by which the fabric was tested.

430.15.4 Combustible materials. Hay, straw, shavings or similar combustible materials shall not be located within any tent, canopy or membrane structure containing assembly occupancy, except the materials necessary for the daily feeding and care of animals. Sawdust and shavings utilized for a public performance or exhibit shall not be prohibited provided the sawdust and shavings are kept damp. Combustible materials shall not be permitted under stands or seats at any time. The areas within and adjacent to the tent or air-supported structure shall be maintained clear of all combustible materials or vegetation that could create a fire hazard within 20 feet (6096 mm) of the structure. Combustible trash shall be removed at least once a day from the structure during the period the structure is occupied by the public.

430.15.5 Smoking. Smoking shall not be permitted in tents, canopies or membrane structures. Approved "No Smoking" signs shall be conspicuously posted.

430.15.6 Open or exposed flame. Open flame or other devices emitting flame, fire or heat or any flammable or combustible liquids, gas, charcoal or other cooking device or any other unapproved devices shall not be permitted inside or located within 20 feet (6096 mm) of the tent, canopy or membrane structures while open to the public unless approved by the authority having jurisdiction.

430.15.7 Fireworks. Fireworks shall not be used within 100 feet (30 480 mm) of tents, canopies or membrane structures.

430.15.8 Spot lighting. Spot or effect lighting shall only be by electricity, and all combustible construction located within 6 feet (1829 mm) of such equipment shall be protected with approved noncombustible insulation not less than 9.25 inches (235 mm) thick.

430.15.9 Safety film. Motion pictures shall not be displayed in tents, canopies or membrane structures unless the motion picture film is safety film.

430.15.10 Clearance. There shall be a minimum clearance of at least 3 feet (914 mm) between the fabric envelope and all contents located inside the tent or membrane structure.

430.15.11 Portable fire extinguishers shall be provided as required by Section 906 of this code.

430.15.12 Fire protection equipment. Fire hose lines, water supplies and other auxiliary fire equipment shall be maintained at the site in such numbers and sizes as required by the authority having jurisdiction.

430.15.13 Occupant load factors. The occupant load allowed in an assembly structure, or portion thereof, shall be determined in accordance with Chapter 10 of this code.

430.15.14 Heating and cooking equipment. Heating and cooking equipment shall be in accordance with Sections 430.15.14.1 through 430.15.14.7.

430.15.14.1 Installation. Heating or cooking equipment, tanks, piping, hoses, fittings, valves, tubing and other related components shall be installed as specified in the *International Mechanical Code* and the *National Fuel Gas Code (NFPA 54)*, and shall be approved by the authority having jurisdiction.

430.15.14.2 Venting. Gas, liquid and solid fuel-burning equipment designed to be vented shall be vented to the outside air as specified in the *National Fuel Gas Code (NFPA 54)* and the *International Mechanical Code*. Such vents shall be equipped with approved spark arresters when required. Where vents or flues are used, all portions of the tent, canopy or membrane structure shall be not less than 12 inches (305 mm) from the flue or vent.

430.15.14.3 Location. Cooking and heating equipment shall not be located within 10 feet (3048 mm) of exits or combustible materials.

430.15.14.4 Operations. Operations such as warming of foods, cooking demonstrations and similar operations that use solid flammables, butane or other similar devices which do not pose an ignition hazard, shall be approved by the authority having jurisdiction provided that all other applicable requirements of this section are met.

430.15.14.5 Cooking tents. Tents where cooking is performed shall be separated from other tents, canopies or membrane structures by a minimum of 20 feet (6096 mm).

430.15.14.6 Outdoor cooking. Outdoor cooking that produces sparks or grease-laden vapors shall not be performed within 20 feet (6096 mm) of a tent, canopy or membrane structure.

430.15.14.7 Electrical heating and cooking equipment. Electrical cooking and heating equipment shall comply with the National Electrical Code (NFPA 70).

430.15.15 LP-gas. The storage, handling and use of LP-gas and LP-gas equipment shall be in accordance with Sections 430.15.15.1 through 430.15.15.3.

430.15.15.1 General. LP-gas equipment such as tanks, piping, hoses, fittings, valves, tubing and other related components shall be approved and in accordance with Chapter 38 and with the *NFPA 54 National Fuel Gas Code*.

430.15.15.2 Location of containers. LP-gas containers shall be located outside. Safety release valves shall be pointed away from the tent, canopy or membrane structure.

430.15.15.2.1 Containers 500 gallons or less. Portable LP-gas containers with a capacity of 500 gallons (1893 L) or less shall have a minimum separation between the container and structure not less than 10 feet (3048 mm).

430.15.15.2.2 Containers more than 500 gallons. Portable LP-gas containers with a capacity of more than 500 gallons (1893 L) shall have a minimum separation between the container and structures not less than 25 feet (7620mm).

430.15.15.3 Protection and security. Portable LP-gas containers, piping, valves and fittings which are located outside and are being used to fuel equipment inside a tent, canopy or membrane structure shall be adequately protected to prevent tampering, damage by vehicles or other hazards and shall be located in an approved location. Portable LP-gas containers shall be securely fastened in place to prevent unauthorized movement.

430.15.16 Flammable and combustible liquids. The storage of flammable and combustible liquids and the use of flammable-liquid-fueled equipment shall be in accordance with Sections 430.15.16.1 through 430.15.16.3.

430.15.16.1 Use. Flammable liquid-fueled equipment shall not be used in tents, canopies or membrane structures.

430.15.16.2 Flammable and combustible liquid storage. Flammable and combustible liquids shall be stored outside in an approved manner not less than 50 feet (15 240 mm) from tents, canopies or membrane structures. Storage shall be in accordance with this code and Chapter 34 of the International Fire Code.

430.15.16.3 Refueling. Refueling shall be performed in an approved location not less than 20 feet (6096 mm) from tents, canopies or membrane structures.

430.15.17 Display of motor vehicles. Liquid- and gas-fueled vehicles and equipment used for display within tents, canopies or membrane structures shall be in accordance with Sections 430.15.17.1 through 430.15.17.5.3.

430.15.17.1 Batteries. Batteries shall be disconnected in an appropriate manner.

430.15.17.2 Fuel systems. Vehicles or equipment shall not be fueled or defueled within the tent, canopy or membrane structure.

430.15.17.2.1 Quantity limit. Fuel in the fuel tank shall not exceed one-quarter of the tank capacity or 5 gallons (19 L), whichever is less.

430.15.17.2.2 Inspection. Fuel systems shall be inspected for leaks.

430.15.17.2.3 Closure. Fuel tank openings shall be locked and sealed to prevent the escape of vapors.

430.15.17.3 Location. The location of vehicles or equipment shall not obstruct means of egress.

430.15.17.4 Places of assembly. When a compressed natural gas (CNG) or liquefied petroleum gas (LP-gas) powered vehicle is parked inside a place of assembly, all the following conditions shall be met:

1. The quarter-turn shutoff valve or other shutoff valve on the outlet of the CNG or LP-gas container shall be closed and the engine shall be operated until it stops. Valves shall remain closed while the vehicle is indoors.
2. The hot lead of the battery shall be disconnected.
3. Dual-fuel vehicles equipped to operate on gasoline and CNG or LP-gas shall comply with this section and Sections 430.15.18.1 through 430.15.18.5.3 for gasoline-powered vehicles.

430.15.17.5 Competitions and demonstrations. Liquid and gas-fueled vehicles and equipment used for competition or demonstration within a tent, canopy or membrane structure shall comply with Sections 430.15.18.5.1 through 430.15.18.5.3.

430.15.17.5.1 Fuel storage. Fuel for vehicles or equipment shall be stored in approved containers in an approved location outside of the structure in accordance with Section 430.15.17.2.

430.15.17.5.2 Fueling. Refueling shall be performed outside of the structure in accordance with Section 430.15.17.3.

430.15.17.5.3 Spills. Fuel spills shall be cleaned up immediately.

430.15.18 Separation of generators. Generators and other internal combustion power sources shall be separated from tents, canopies or membrane structures by a minimum of 20 feet (6096 mm) and shall be isolated from contact with the public by fencing, enclosure or other approved means.

430.15.19 Standby personnel. When, in the opinion of the building code official, it is essential for public safety in a tent, canopy or membrane structure used as a place of assembly or any other use where people congregate, because of the number of persons, or the nature of the performance, exhibition, display, contest or activity, the owner, agent or lessee shall employ one or more qualified persons, as required and approved, to remain on duty during the times such places are open to the public, or when such activity is being conducted.

430.15.19.1 Duties Before each performance or the start of such activity, standby personnel shall keep diligent watch for fires during the time such place is open to the public or such activity is being conducted and take prompt measures for extinguishment of fires that occur and assist in the evacuation of the public from the structure.

430.15.19.2 Crowd managers. There shall be trained crowd managers or crowd manager supervisors at a ratio of one crowd manager/supervisor for every 250 occupants, as approved.

430.15.20 Vegetation removal. Where public safety is compromised as determined by the authority having jurisdiction Combustible vegetation shall be removed from the area occupied by a tent, canopy or membrane structure, and from areas within 30 feet (9144 mm) of such structures.

430.15.21 Waste material. The floor surface inside tents, canopies or membrane structures and the grounds outside and within a 30-foot (9144 mm) perimeter shall be kept clear of combustible waste. Such waste shall be stored in approved containers until removed from the premises

430.16 Temporary Stages Platforms and Overhead Support Structures.

430.16.1 Temporary Stages Platforms and Overhead Support Structures. All temporary stages, platforms and overhead support structures associated with temporary stages and temporary platforms erected for less than 30 days shall be in accordance with this section.

Exceptions:

1. Temporary stages and platforms that are less than 1,000 square feet and 8,600 lbs. and are limited to 12 individuals plus lights, sound, scenery and equipment on the stage does not exceed 3,600 lbs. and has a height of less than 48 inches measure from grade to performing surface.
2. A temporary stage/ platform, not exceeding **600 sq. ft.**, that is on a wheeled vehicle that is not designed as a temporary stage or platform is deemed to comply if the weight per axle of the wheeled vehicle is not exceeded by the total weight of all persons and items located on the stage.

430.16.2 Overhead Support Structures. Overhead support structures associated with temporary stages and temporary platforms shall be designed, erected and maintained in accordance with ANSI E1.21 *Temporary Ground-Supported Overhead Structures Used To Cover The Stage Areas And Support Equipment In The Production Of Outdoor Entertainment Events* and applicable sections of this code.

430.16.3 Handrails, Ramps, Guards and Stairways. Handrails, ramps, guards and stairways shall be constructed as required by Chapter 10 of this code.

430.16.4 Elevated Floor Systems. Any elevated floor system that supports temporary stages or platforms shall be designed or certified by a licensed design professional documenting that such an elevated system can support the dead and live loads.

Temporary Grandstands/ Bleachers Guidelines

General Requirements

1. All temporary grandstands and bleachers shall be secured in order to resist the wind loads for a 3 second gust for 90 mph.
2. All temporary grandstands shall be designed to carry all live loads.
3. All temporary seating shall be first permitted and approved prior to installation by the Department of Housing, Buildings & Construction.
4. Fees shall be calculated at 14 cents per square foot area bleacher minimum \$250.00. The area of the bleacher shall be calculated in the plan view.
5. All grandstands and bleachers shall meet Section 1025.0 of the 2006 International Building Code
6. **Discontinuous rails.** Where there is seating on both sides of the aisle, the handrails shall be discontinuous with gaps or breaks at intervals not less than three rows and not exceeding five rows to facilitate access to seating and to permit crossing from one side of the aisle to the other. These gaps or breaks shall have a clear width of at least 22 inches and not greater than 36 inches, measured horizontally. Where handrails are not a continuous single rail between cross-over gaps or breaks, multiple shorter handrails shall be allowed with the horizontal spacing between the rails measured parallel to the rail support, being less than or equal to 10 ½ inches. The handrail shall have rounded terminations or bends.
7. **Handrail extensions.** Within aisle stairs, the horizontal extension is not required beyond the bottom or top riser, provided the handrail begins at the first riser and is continuous, except where gaps or breaks are permitted in Section 1025.13.1 to the top row of seats.
8. Minimum aisle width shall be in accordance with Section 1025.9, 2006 International Building Code (IBC)
9. **Cross aisles.** Cross aisles located more than 30 inches above the floor or grade below shall have guards in accordance with Section 1013. Where an elevation change of 30 inches or less occurs between a cross aisle and the adjacent floor or grade below, guards not less than 26 inches above the aisle floor shall be provided.

Exception: Where the backs of seats on the front of the cross aisle project 24 inches (610 mm) or more above the adjacent floor of the aisle, a guard need not be provided.

10. **Guards.** Guards shall be located along open-sided walking surfaces, mezzanines, industrial equipment platforms, stairways, ramps and landings that are located more than 30 inches above the floor or grade below. Guards shall be adequate in strength and attachment in accordance with Section 1607.7. Guards shall also be located along glazed sides of stairways, ramps and landings that are located more than 30 inches above the floor.
11. **Sightline-constrained guard heights.** Unless subject to the requirements of Section 1025.14.3, a fascia or railing system in accordance with the guard requirements of Section 1013 and having a minimum height of 26 inches shall be provided where the floor or footboard elevation is more than 30 inches above the floor or grade below and the fascia or railing would otherwise interfere with the sightlines of immediately adjacent seating. At bleachers, a guard must be provided where the floor or footboard elevation is more than 24 inches above the floor or grade below and the fascia or railing would otherwise interfere with the sightlines of the immediately adjacent seating.
12. **Guards at the end of aisles.** A fascia or railing system complying with the guard requirements of Section 1013 shall be provided for the full width of the aisle where the foot of the aisle is more than 30 inches above the floor or grade below. The fascia or railing shall be a minimum of 36 inches high and shall provide a minimum 42 inches measured diagonally between the top of the rail and the nosing of the nearest tread.
13. **Bench seating.** Where bench seating is used, the number of persons shall be based on one person for each 18 inches of length of the bench.

Temporary Portable Buildings

All structures that are constructed off site and shipped and placed on site shall be subject to the requirements of the Kentucky Industrialized Building Systems (KIBS) review process. This process consists of a 2 step process 1) Model Approval and 2) Site Placement Approval. Contact Dale Spicer at the Department of Housing, Buildings and Construction at (502) 573-0373

Exception: Structures such as vending trailers that are registered through the Department of Motor Vehicles.

Definitions

Industrialized Building System or Building System. As defined in KRS 198B.010(16) and shall apply to buildings of any size or use, all or any component parts of which are of closed construction made from pre-cast concrete panels or pre-cut wood sections fabricated to individual specifications in an off-site manufacturing facility and assembled in accordance with manufacturer's instructions.

KRS 198B.010 (16) "Industrialized Building System" means any structure or component thereof which is wholly or in substantial part fabricated in an off-site manufacturing facility for installation or assembly on a permanent foundation at the building site. (Kentucky Revised Statute KRS 198B.010 (16)).

Step One: Model Approval:

You need to contact the company that you are leasing or buying your KIBS structure from and document if they have submitted plans for Model Approval to the Manufacturing Housing Division of the Department of Housing Buildings & Construction. If the company has not, then they must submit construction documents to the Manufacturing Housing Division. The plans shall be reviewed and approved to be sited in Kentucky. These drawings shall be signed and sealed by a responsible design professional registered in the state of Kentucky. Once approved by this Division they will issue a KIBS number. Check and see if your company has a KIBS number already issued for this modular unit. If you are purchasing this unit from a previous owner check and see if the unit has been previously approved to be sited in Kentucky by looking on the unit usually by the electrical panel box. Look for KIBS numbers or KY "M" Labels that usually begin with an "M" followed by a 6 digit number. Kibs numbers usually are 3 digit numbers followed by a Letter A or B, then 7 digits for example: 209B-013-0712. If the unit has not gone through the model approval then a plan submittal shall be submitted to the Manufacturing Housing Section of the Division of Building Codes Enforcement. For more information and details about site placement approval please contact Benny Robinson at (502) 573-1795. Fees are calculated in accordance with section 121.3.1 Kentucky Building Code (KY Changes) minimum \$250.00.

Step II: Site Placement Approval:

If the Modular unit has been approved to be placed in the state, the next step is to obtain a site placement approval. Plans shall be submitted to the Division of Building Codes Enforcement for review and approval. Plans shall include but not limited to a site plan, details of how the structure is to be anchored (tie downs) and footing/ foundation details. If the structure is to be placed on new or existing concrete pad or asphalt a letter from a licensed design professional registered in the state of Kentucky shall document that the concrete pad or asphalt is capable of supporting the load of the structure. In addition site built details for stairs and ramps. Details shall include but not limited to landing dimensions for the top and bottom of ramp/ stairs, tread/riser dimensions, handrail details including handrail extensions, guard details and slope of ramp. Please note that typical prefabricated stairs do not meet the commercial requirements of the code. For more information and details about site placement approval please contact Dale Spicer at (502) 573-0373. Fees are calculated in accordance with section 121.3.1 Kentucky Building Code (KY Changes) minimum \$250.00

Guidelines for Electrical Inspection

1. Contractor must have a Kentucky Electrical Contractors License and Masters license. All electrical work shall be **directly** supervised by a licensed person at all times.
2. All electrical generators, transformers, panels, disconnects, lighting, receptacles and cabling shall not be energized until inspected by a state electrical inspector.
3. All 15 and 20 amp 120 volt receptacles provided will be GFI protected. NEC 525.23
4. All electrical generating and or power distribution equipment must be "listed" by a nationally recognized testing laboratory such as UL. NEC 90.7
5. All electrical installations shall be performed in accordance with the current edition referenced in the Kentucky Building Code.
6. Ground fault protection shall be provided for we electrical systems and services of more than 150 volts to ground with main disconnecting means rated at 1000 amps or more. NEC 240.13 & 230.95
7. All conductors supplied by a transformer secondary shall have properly sized over current protection provided on the secondary side of the transformer. NEC 240.4(F)
8. All transformers shall be considered separately derived systems and shall have a properly sized system bonding jumper installed within the transformer NEC 250.30(A)(1)
9. All transformers, generators, electrical panels and office trailers (powered) shall have a grounding electrode system provided by installing 2 ea 5/8 ground rods at each. NEC 250.64 & 250.53
10. Cables on the drawings run as much as 600ft without increasing cable size to compensate for voltage drop due to distance. (See runs from Distribution Gear to the Transformers)
11. Cables/Flexible cords shall be continuous without spice or tap between boxes or fittings. NEC 525.20(D)
12. Cables/Flexible cords accessible to the public shall be arranged to minimize tipping hazards. NEC 525.20(G)
13. Camlock and other type cable plug/connectors not covered with listed weatherproofing rubber shields shall not be placed directly on the ground and shall be elevated 12 inches by a non-conductive supporting means such as wood or plastic and then wrapped in plastic bags/duct tape. This shall be done not creating a trip hazard.
14. Electrical equipment installed outdoors shall be installed in suitable enclosures and shall be protected from accidental contact by unauthorized personnel or by vehicular traffic NEC 110.26(F)(2)