

# FOOD ESTABLISHMENT CONSTRUCTION GUIDE

Revised December 19, 2011 – Reviewed January 10, 2014

This construction guide is to be used in conjunction with the Oklahoma Food Service Establishment Regulations (OAC 310:257). *It should not be considered all-inclusive.* It is suggested that you contact the local health department official, code officials, fire department, and occupational licensing office for additional requirements.

A license applicant or license holder shall submit to the Health Department plans and specifications for plan review before (257-15-6):

- The construction of a new food service establishment;
- The conversion of an existing structure for use as a food service establishment;
- The remodeling of a food service establishment; or
- A change in type of food service establishment or food operation.

The plans and specifications shall be drawn to scale and include the (257-15-7):

- Intended menu;
- Proposed floor plan to include the location of all equipment, lighting and plumbing fixtures;
- The proposed finish materials for walls, floors and ceilings;
- Proposed equipment types, manufacturer and model numbers (if available); and
- Standard Operating Procedures for the facility.

## MINIMUM FACILITY REQUIREMENTS

### **1. FLOORS** (257-11-1, 3, 4, 5, 6)

- Floors of all food prep, food service, food storage, dishwashing areas, walk-in refrigerating units, toilet rooms and vestibules must be constructed of smooth, DURABLE material that is impervious to water and easily cleanable such as ceramic tile, terrazzo, durable grade linoleum or sealed concrete.
- Carpet is not allowed in food preparation areas, food storage areas or restroom facilities.
- Junctures between walls and floors must be correctly coved (3/8 inch radius and gaps no larger than 1/8 inch) and properly sealed.
- Pipes and utility lines shall not be installed on the floor.

### **2. WALLS AND CEILINGS** (257-11-1, 3, 4, 5, 8, 9, 10)

- Must be light colored [at least 50% light reflectance value (LRV)], smooth, durable, non-absorbent, sealed and easily cleanable
- Walls and ceiling in toilet rooms are not required to meet the 50% LRV, but must meet all other construction requirements.
- Exposed studs, joists and rafters are prohibited in all food preparation, bars, warewashing areas and toilets.
- Pipes and utility lines shall not be unnecessarily exposed.

### **3. WATER SUPPLY** (257-9-10, 11, 16)

Potable water for the needs of the food establishment shall be provided from a source that complies with state laws and regulations.

### **4. SEWAGE DISPOSAL** (257-9-46, 49, 52)

All sewage and wastewater shall be disposed into a public sewage system or an individual sewage disposal system that complies with state laws and regulations.

- 5. PLUMBING** (257-9-13, 15-17, 21, 25, 27, 30, 47-48); (International Plumbing Code (IPC) Sections 409, 412, 413, 608.2, Chapter 8)
- Plumbing shall be sized, installed and maintained in a safe manner and according to the International Plumbing Code, applicable local ordinance or health code.
  - The supply lines or fittings for every plumbing fixture shall be installed so as to prevent backflow. This includes all hose bibbs and water supply lines to carbonators.
  - Equipment and fixtures utilized for the storage, preparation and handling of food, including ice, shall discharge through an indirect waste pipe by means of an air gap. This requirement shall not apply to sinks used solely for dishwashing or handwashing.
  - An air gap between the water supply inlet and the flood level rim of the plumbing fixture, equipment, or non-food equipment shall be at least two (2) times the diameter of the water supply inlet and shall not be less than one (1) inch.
  - Floor drains must be easily accessible for maintenance and cleaning and be equipped with proper strainers. For equipment equal to or greater than 6" from the floor, drains must be at least flush with the front of the equipment. If equipment is less than 6" from the floor, drain must be at least 50% exposed.
  - A grease trap, if required, shall be installed to be easily accessible for cleaning and maintenance. Contact local plumbing department for requirements.
  - Water conditioning devices shall be designed and located to facilitate servicing and cleaning.
- 6. HOT WATER** (257-9-8, 9); (IPC Section 607)
- Hot water shall be supplied to all sinks.
  - Hot water shall be sufficient to meet the peak hot water demands throughout the food establishment.
  - The hot water supply to any fixture shall be installed on the left side of the fixture.
- 7. HANDWASHING FACILITY** (257-9-14, 18, 23, 26, 27, 35; 11-24, 25, 27, 28, 35)
- A minimum of one handwashing sink is required in all food preparation areas, bars, and warewashing areas. Based on the design of the facility, more than one sink may be required.
- The handwashing sink:
- Must be *conveniently located* and easily accessible;
  - Must provide water at a temperature of at least 100 °F through a mixing valve or combination faucet;
  - Metered faucets shall provide water for a minimum of 15 seconds;
  - Soap, disposable towels, hand wash sign, and trash container must be provided at all handwashing sinks;
  - Shall be located to avoid contamination of food and food contact surfaces. Splash guards may be necessary to accomplish this.
- 8. MOP SINK** (257-9-20; 11-34, 45)
- At least one mop sink or curbed cleaning facility with a floor drain shall be provided.
  - Provision for the proper storing and air-drying of mops, brooms and other cleaning equipment is required.
- 9. RESTROOMS** (257-3- 12(2); 9-19, 23(2), 61; 11-14, 28, 29, 30, 32, 36); (IPC Section 403)
- The number of restrooms provided for employees and customers is specified by the International Plumbing Code. City or County code officials having jurisdiction on this matter will make the final determination.
  - Public access to the restrooms may not be through food preparation areas, food and equipment storage areas, or warewashing areas.
  - Approved handwashing sinks shall be properly installed inside the restroom.
  - Restrooms shall be provided with tight fitting, self-closing doors.
  - Restrooms shall be provided with adequate, forced-air ventilation.
  - An adequate number of trash receptacles shall be provided. A covered trash receptacle must be provided in the women's restroom.

## 10. LIGHTING (257-11-11, 31)

All lights shall be shielded, coated, or otherwise shatter-resistant in areas where there is exposed food, clean equipment, utensils, linens, and unwrapped single-service and single-use articles.

Adequate artificial illumination shall be provided in accordance with the following minimum requirements, measured at a distance of thirty (30) inches above the floor, or on the actual work surface:

- 50 foot-candles
  - ♦ in all food preparation areas, including under ventilation hoods.
- 20 foot candles
  - ♦ in consumer self-service areas and inside lighted equipment (including reach-in and under-counter refrigerators);
  - ♦ in areas used for handwashing, warewashing, equipment and utensil storage and in toilet rooms above toilet fixtures and hand sinks.
- 10 foot candles
  - ♦ in walk-in refrigeration units and dry food storage areas;
  - ♦ in other areas and rooms during periods of cleaning.

## 11. EQUIPMENT (257-5-41, 42, 43; 7-1, 9, 13, 15, 28, 31, 32 , 49, 54, 60-64)

- All equipment shall be certified by the American National Standards Institute (ANSI) or an equivalent organization. This includes, but is not limited to sinks, ovens, ranges, mixers, prep freezers, refrigerators, grills, griddles, fryers, ice machines, steam tables, slicers, grinders, food processors, crock-pot/hot holding units and other similar food processing equipment.
- Microwave ovens and handheld equipment/utensils do not have to be certified by ANSI or an equivalent organization.
- Equipment and utensils shall be designed and constructed of non-toxic, durable materials.
- Equipment shall be installed to facilitate cleaning.
- Floor mounted food equipment that is not easily moveable shall be elevated on wheels or legs with a minimum height of six (6) inches. This also includes dry storage shelving and shelving located in walk-in refrigerators and freezers.
- Wood and wood wicker shall not be used as a food-contact surface. Close-grained hard wood may be used for items such as cutting blocks, boards, bakers' tables, rolling pins, salad bowls.
- Equipment may be located under automatic fire sprinkler heads, but not under unshielded sewer lines or water lines.
- Food equipment shall be designed to provide protection of displayed food from consumer contamination. Sneeze or counter guards may be necessary in some areas.
- Soft drink machines for self-service and refilling shall be designed to prevent contact with the lip-contact surface of glasses or cups.
- Beverage tubing and cold-plate beverage cooling devices shall not be installed in contact with stored ice that is intended for consumption. This does not apply to cold plates that are constructed integrally with an ice storage bin.
- If a washing machine is used to wash items other than wiping cloths, a dryer is required. These items must be stored in a separate room, away from food processing, food or equipment storage, or warewashing areas.

**12. HOODS AND DUCTS** (257-7-22, 26, 53; 11-12, 32)

Ventilation hood systems and devices shall:

- Meet the requirements of locally adopted codes or the Mechanical Industry Regulations (OAC 158:50).
- Shall be installed in sufficient number and capacity above heat generating equipment that is capable of producing grease-laden vapors, and to prevent grease, condensation, smoke or noxious odors from collecting in the food establishment.
- Filters or other grease extracting equipment shall be designed to be readily removable for cleaning and replacement, if not designed to be cleaned in place.

**13. REFRIGERATION** (257-7-24, 37, 49; 5-55(1), 59)

Refrigeration units shall:

- Be capable of operating at 41°F or below at all times, including peak usage times;
- Be provided with an easily visible thermometer, accurate to plus or minus 3°F;
- Be provided in adequate number and size to meet food storage and proper cool down requirements of foods as determined by menu items;
- **RESIDENTIAL, HOME-TYPE REFRIGERATORS ARE NOT PERMITTED.**

**14. HOT FOOD STORAGE OR DISPLAY** (257-5-59; 7-24, 37)

All hot storage or display facilities shall:

- Be capable of maintaining hot food to an internal temperature of 135°F or above; and
- Be provided with an easily visible thermometer, accurate to plus or minus 3°F.

**15. STORAGE** (257-5-37; 7-11, 47, 105)

- Food, clean utensils and equipment, linens, and single-service articles shall be stored a minimum of six (6) inches above the floor.
- Items that are kept in closed packages may be stored less than six (6) inches above the floor if stored on dollies, pallets, racks and skids if appropriate moving equipment is available onsite.
- All exposed surfaces of cabinetry and shelving shall be finished with a smooth, nonabsorbent, corrosion-resistant, easily cleanable surface.

**16. CUSTOMER SELF SERVICE** (257-5-41, 43)

Adequate sneeze shields shall be installed at all displays of unpackaged foods accessible for service by the customer.

**17. DISHWASHING FACILITIES** (257-7-15, 25, 37(e), 38-44, 49, 51-52, 57-58, 66-77, 90, 91, 95; 11-44)

A commercial dishwasher or a three-compartment sink is required. Accurate test kits shall be provided.

In a bar area, a separate dump sink or waste sink must be provided.

- The three compartment sink:
  - ♦ Must be NSF certified or equivalent;
  - ♦ Must have rounded (coved) corners, be smooth, and have no welded seams;
  - ♦ Must have adequately sized self-draining drain boards, racks, tables or shelving to accommodate soiled and clean items;
  - ♦ Must have compartments large enough to accommodate immersion of at least half of the largest piece of equipment or utensil used in the establishment; and
  - ♦ **SHALL NOT BE USED FOR HANDWASHING OR FOR THE DISPOSAL OF MOP WATER.**

## 17. DISHWASHING FACILITIES (Continued)

- The commercial dishwasher:
  - ♦ Must be NSF certified or equivalent with appropriate data information plate;
  - ♦ An exhaust system is to be provided above hot water sanitizing machines to remove steam;
  - ♦ Accurate thermometers shall be installed on all dishwashers; and
  - ♦ Dish washing machines shall be equipped with a device that audibly or visually indicates when more detergent needs to be added.
  - ♦ Dishwashing machines that use a chemical sanitizer shall be equipped with a device that audibly or visually indicates when more sanitizer needs to be added.
  - ♦ Hot water sanitizing machines must have an accurate pressure gauge.

## 18. OUTER OPENINGS (257-11-15)

- If windows or doors are kept open, the openings must be protected against the entry of insects and rodents by sixteen (16) mesh to one (1) inch screens, properly designed air curtains or other effective means.
- Outer opening doors shall be equipped with adequate self closing devices and vermin resistant thresholds.

## 19. GARBAGE AND REFUSE (257-9-54-57, 59, 60, 64, 65, 66, 67, 68, 69; 11-20)

- Receptacles for refuse, recyclables, returnables and materials containing food residue shall be durable, cleanable, insect and rodent resistant, leak proof and non-absorbent.
- Receptacles used outside the food service establishment shall be designed and constructed to have tight-fitting lids, doors or covers. They must be in good repair and have a drain plug, if applicable.
- The outdoor storage surface for refuse shall be constructed of non-absorbent material, such as concrete or asphalt, and shall be smooth, durable, and sloped to drain.

## 20. LIVING AND LAUNDRY AREAS (257-7-59(c); 11-21, 22)

- No operation of a food establishment shall be conducted in any room used as living or sleeping quarters.
- Laundry equipment may be installed in storage rooms containing only pre-packaged food or packaged single-service items.

## 21. EMPLOYEE LOCKER AREAS (257-11-33)

- Lockers or other suitable facilities shall be provided and used for the storage of employee's clothing and other possessions.
- Dressing rooms shall be provided, if the employees regularly change their clothes, in the establishment.

## 22. OTHER

- All electrical, mechanical, and plumbing work **MUST** be performed by individuals currently licensed by their respective Oklahoma licensing boards.
- Other requirements may be applicable based on your specific facility function. Please check with all relevant licensing and regulatory agencies if you have any questions.



Environmental Public Health Division  
5051 S.129<sup>th</sup> East Avenue  
Tulsa, Oklahoma 74134  
Phone 918-595-4300 • Fax 918-595-4339