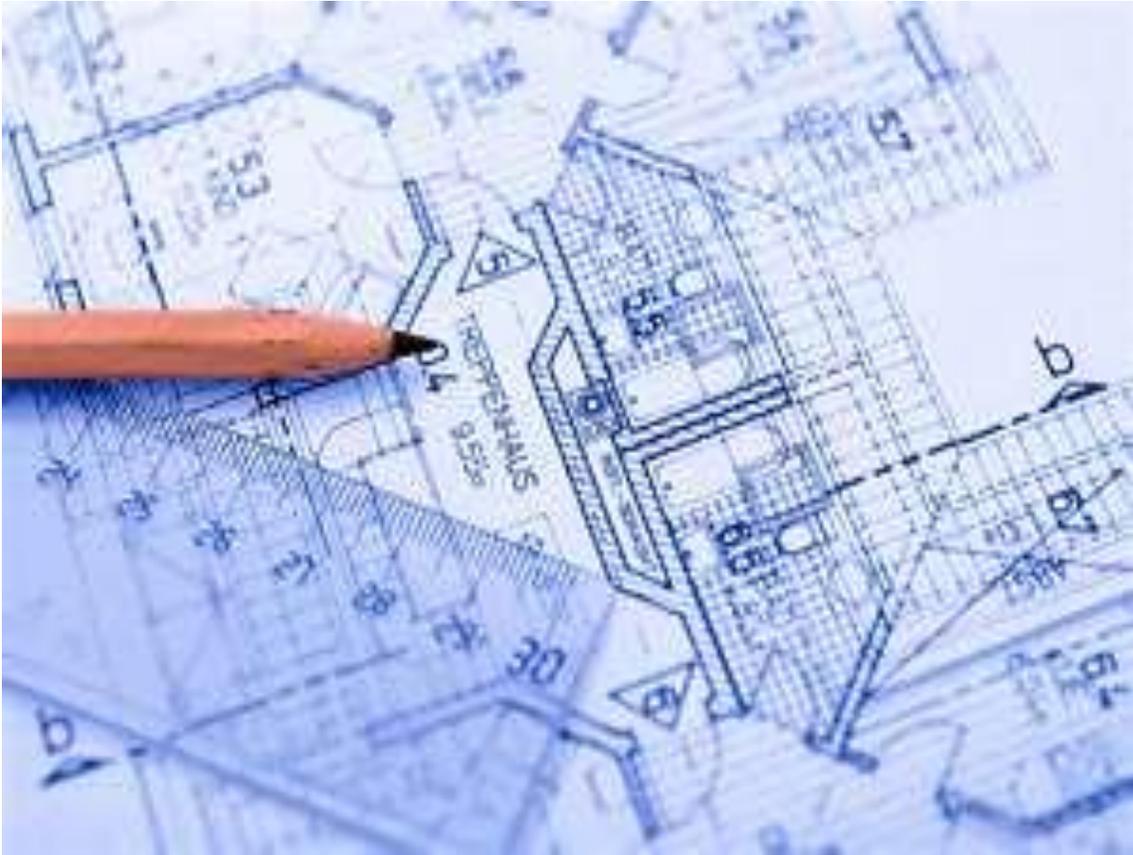


WILL COUNTY HEALTH DEPARTMENT

FOOD SERVICE AND RETAIL FOOD STORE CONSTRUCTION GUIDE



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INTRODUCTION

This guide is intended to assist architects, building contractors, food service equipment consultants, food service operators and other interested professionals in preparing a complete proposal for a food service or retail food store plan review.

The Illinois Department of Public Health requires that new and remodeled food service operations undergo a plan review by the local health department. Will County Health Department works closely with local municipalities throughout the entire process, from facility design to certificate of occupancy. Local municipalities have building, zoning, mechanical, electrical, plumbing, and fire protection requirements. You will need to contact these agencies prior to construction on their regulations and for approval to begin construction.

Our goal is to ensure food safety and sanitation remains a top priority for food service operators. A food service operation should be designed to be easy to maintain, have efficient food flow patterns and be prepared to handle the maximum number of customers. The design of a food service operation begins at the menu development. The type and variety of menu items will influence the type of equipment required. Equipment placement will be determined by the processes required to prepare the menu items. The amount of space required will be determined by the variety, type of menu items and the processes required to prepare menu items. **You must submit your menu with your proposal for review.**

Illinois Department of Public Health requires any food service operation that performs any food preparation or serves a high risk population be under the supervision of a certified food handler. A food service operator can become certified by taking an Illinois approved course and exam.

Visit <https://ildph.usasafeinspect.com/Education/CourseSearch.aspx> for a list of approved instructors.

As of July 1, 2014, all food handlers that handle unpackaged food, food equipment or utensils, or food contact surfaces are required to have a food handler training card. Information on food handler training is available at www.willcountyhealth.org environmental health Food Certification Program.

The following page is a Plan Review Checklist that will assist you in organizing all the documentation required for a successful plan review. We look forward to reviewing your proposal and providing guidance throughout the construction process with the end result of issuing a permit to operate. If you have any questions please contact Will County Health Department, Environmental Health Division at 815-727-8490.

APPLICATION FOR FOOD ESTABLISHMENT PLAN REVIEW CHECKLIST

To ensure your application submittal for a Will County Health Department permit is complete, please include the following items with your submittal:

(√)

1. A completed application ()
2. The applicable plan review fee (see fee schedule on the application) ()
3. Menu ()
4. Specification sheets or length and width of storage shelving ()
5. A detailed equipment layout/drawing ()
6. Specification sheets for all proposed equipment ()
7. A detailed room finish schedule for the entire facility ()
8. Detailed kitchen exhaust hood manufacturer shop drawings ()
9. Information on facility water and sewer provider ()
10. Location and size of grease trap, if applicable. Note: If culinary fats and oils are introduced to the sanitary waste a grease trap is required. ()
11. Plumbing plans, showing sanitary and grease waste lines and indirect connections ()
12. Specification sheet for the proposed hot water heater ()
13. Location of employee personal storage area ()
14. Location of chemical storage area. ()
15. Name of Pest Control Operator ()
16. Copy of Illinois Department of Public Health Food Safety and Sanitation Manager's certificates. ()

Have you submitted plans to the local authorities including building and fire department?

YES _____ NO _____

ADDITIONAL REQUIREMENTS FOR MOBILE UNITS

1. Letter from the BASE OF OPERATION allowing the use of the facility. ()
2. Copy of the BASE OF OPERATION food permit (if located outside of Will County) ()
3. List of approved source food suppliers. ()
4. Specification sheet on generator. ()
5. Specification sheet for fresh water and waste water tanks. ()
6. Specification sheet on water pump and hot water heater. ()
7. Location of mobile operation and/or mobile route. ()
8. Have you obtained the necessary zoning and business license requirements? _____

Projected opening date: _____

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PLAN REVIEW AND INSPECTIONS

PLAN REVIEW:

1. Prior to any construction, your plans must be submitted to, reviewed and approved by this Department. Use the Plan Review Checklist to organize the required documentation.
2. Based on the size and complexity of the operation a plan review fee will be assessed (see application for fee schedule). The applicable plan review fee must be paid at the time of plan submission. Expedited plan review is available at two times the applicable fee. Expedited plans will have an initial review within (7) seven days of submission.
3. Please fill out the application for food establishment permit. Attach it to the supporting documentation and return it with the appropriate fee to the Will County Health Department at 501 Ella Avenue, Joliet, Illinois, 60433 or at 323 Quadrangle Drive Bolingbrook, Illinois 60440 or at 5609 W. Monee-Manhattan Road, Suite 109 Monee, Illinois 60449. Send check or money order payable to the "Will County Health Department". Credit or debit card payments can be made at www.govpaynow.com or phone 1-888-604-7888. Use Pay Code Location (PLC) #7078. Internet service fee 3.5%, phone service fee 5%, Gov\$wipe/In person service fee 3.5%
4. A clarification letter may be issued requiring additional information or clarification on the submitted plans. A copy of the clarification letter will be sent to you and the applicable building department. By copy of this letter, this Department is requesting that the appropriate building department withhold the issuance of a building permit for this establishment until a letter of approval from this office has been issued.
5. If all the information is received and in compliance with the applicable regulations, a plan approval letter will be issued. A copy of the plan approval letter will be sent to you and the applicable building department. A plan approval letter must be issued to you by this Department before you begin any structural work or purchase any equipment for your establishment.
6. The plan approval letter is issued based on the information provided. This Department expects the plan to be followed. If changes are made to the original plan then the changes must be submitted for review and approval prior to any installation or construction. If the changes are extensive an additional plan review fee may be assessed.
7. If it is determined that an existing facility has remodeled without submitting for a plan review an expedited plan review fee will be charged. If a new or remodeled facility calls for an opening inspection without submitting for a plan review an expedited plan review fee will be charged.

INSPECTIONS:

1. As the project nears completion, a food service operator must call for a pre-operational inspection. Pre-operational inspections are conducted after construction activities are completed and construction equipment and debris is removed. All utilities; gas, electric and hot water must be functioning. All equipment must be in place and all cooling units must be maintaining $\leq 41^{\circ}\text{F}$.
2. During the pre-operational inspection the following areas will be inspected for adherence to the original plan and compliance to applicable state and local codes/ordinances:
 - a. Finishes, fixtures and equipment have followed original proposal.
 - b. Garbage dumpsters and grease waste bins (if applicable) are located appropriately.
 - c. All outer openings are self-closing and tight-fitting.
 - d. Floors, walls and ceilings construction provides smooth, easily cleanable surfaces.
 - e. All fixtures are plumbed according to Illinois Plumbing Code.
 - f. All lights are properly shielded.
 - g. All equipment is commercial grade and NSF approved.
 - h. All cooling units have accurate, conspicuous thermometers and are at temperature.
 - i. All food storage shelving is 6" off the floor.
 - j. The exhaust hood passes a smoke test.
 - k. Restrooms are equipped with hot (at least 100°F) and cold water, liquid soap, paper towel or air dryer, toilet paper, covered waste can and self-closing door.
 - l. Hand sinks are equipped with hot (at least 100°F) and cold water, liquid soap paper towel and a waste can.
 - m. Dish machines are providing the appropriate level of chemical or heat for sanitizing.
 - n. All permanent equipment is sealed to walls with silicone caulk.
 - o. Escutcheon plates and plumbing penetrations are sealed with silicone caulk.
 - p. Any areas that cannot be reached for cleaning are sealed off from food splatter and moisture.
 - q. Operator has provided disposable gloves, hair restraints, probe thermometers, sanitizers and appropriate test kits.
 - r. Operator has provided the appropriate number of Illinois Department of Public Health Manager Food Safety and Sanitation certificates for food handlers.
3. A pre-operational report will be provided during the inspection. If there are any outstanding fees they will be included on the pre-operational report and must be paid before an opening inspection can be conducted. Once all the items on the pre-operational report are corrected, the food service operator must call for an opening inspection. During the opening inspection a report stating the facility is "okay to permit/ okay to operate" will be provided. This report can be taken to the local municipality to obtain a certificate of occupancy. The actual permit will be mailed to

the facility approximately 10 days after the opening inspection. The permit is required to be displayed where the public can see it.

FACILITY DESIGN:

A facility should be designed to keep food safe and so it can be cleaned quickly and effectively. A well-designed facility has the following features.

1. The facility should have a good workflow. A good workflow keeps food out of the temperature danger zone and limits the number of times a food is handled.
 - a. Storage should be near receiving to prevent delays in getting food in proper temperature control.
 - b. Prep tables should be near refrigerators and freezers to reduce worker fatigue and facilitate good time management.
 - c. Hand washing sinks should be visible and easily accessible to promote good personal hygiene.
2. Reduce cross contamination by positioning equipment to prevent splashing and spillage from one piece of equipment to another. Raw food storage and preparation should be separate from ready to eat food storage and service. Soiled dishes and garbage should move through the facility without being a potential source of contamination.
3. A well planned facility is constructed with easily cleanable materials and equipment is placed to access around, under and behind for cleaning.

EQUIPMENT:

All food service equipment is required to be commercial grade. Equipment must meet the standards regarding design, materials and workmanship of the National Sanitation Foundation (NSF), Underwriter's Laboratory Environmental Public Health (UL-EPH) or Intertek (ETL-S). Specification sheets for all new and used equipment are required to verify approval. If specification sheets are unavailable then a list of equipment, including manufacturer and model number is required for review.



SPECIALTY EQUIPMENT:

1. Cold Plates: When installing ice bins, the cold plate must be an integral part of the bin. Drop-in cold plates are no longer allowed.
2. Dipper Wells: When dispensing hard packed ice cream a dipper well is required. Dipper wells must be plumbed in accordance with Illinois Plumbing Code. Dipper wells should be considered when dispensing cooked rice, mashed potatoes or whipped butter. Utensils may not be stored in stagnant water.
3. Custom Cabinetry: When custom cabinets are constructed in food storage, food preparation, food service or self-service areas they are required to be constructed of approved materials such as stainless steel or laminate. Countertops may also be constructed of material such as corian®, granite or other solid materials. Cabinetry that covers an open site drain (floor sink, floor hub drain) are required to be placed on 6 inch legs or the cabinet base must be open to floor to allow easy access to the open site drain for inspection and cleaning.
4. Food Preparation Sinks: When whole fruits and vegetables will be washed, trimmed and cut, a preparation sink shall be installed. Preparation sinks should be installed in food preparation areas and used only for washing or preparing food.
5. Single Service Dispensing Equipment: When providing unwrapped single service items, such as straws, napkins, cups and lids, dispensing equipment that will protect single service items shall be installed.
6. Open Food Displays: Provide equipment to consistently maintain all perishable and potentially hazardous foods at required temperatures. Ice and sterno are not reliable for maintaining temperature. When food is on display, such as at a buffet or salad bar, protect food from consumer contamination by:
 - a. Using easily cleanable sneeze guards.
 - b. Providing individual utensils, with long handles, for each food item.
 - c. Labeling food items to discourage consumer sampling.
7. Table-mounted Equipment: Install table-mounted equipment on four (4) inch legs, unless it is portable. Portable equipment weighs less than 75 pounds and has no rigid utility connection.
8. Floor-mounted Equipment: Install floor-mounted equipment on six (6) inch legs to facilitate cleaning under and around equipment. Floor-mounted equipment may be installed on castors. Use commercial-grade utility connections that are smooth and flexible with quick disconnects.
9. Beverage dispensing equipment: PVC under slab conduit for beverage dispensing lines are required to be capped on both ends. PVC caps may be cut large enough to accommodate the poly lines. Any gaps between the poly lines and the cap should be sealed with silicone caulk. Expansion foam is NOT an approved sealer.

REFRIGERATION:

Refrigerators and freezers are required to maintain potentially hazardous food below 41°F. All refrigerators and freezers must meet NSF standards for design and materials. Therefore, domestic refrigerators and freezers are not approved for retail food service.

Calculating the amount of refrigeration and freezer storage space is based on the menu and the expected volume of food. The amount and location of refrigeration and freezer equipment should complement the flow of food from receiving to point of service. Consideration must be given to separate raw meats/poultry/fish from ready to eat foods such as produce and prepared food items.

Accurate thermometers must be conspicuously located in all refrigerators and freezers.

1. Walk-in refrigerators: Walk-in refrigerators should be considered for long-term storage of perishable and potentially hazardous foods. If quick chilling techniques for prepared or cooked foods will be utilized walk-in refrigerators should be considered. Walk-ins should be located near the receiving area of the facility.
2. Reach-in Refrigerators: Reach-in units are used for short-term storage of perishable and potentially hazardous foods. These units should be conveniently located at points of food preparation and food assembly. The size and number of these units should accommodate the daily demands of the operation.
3. Freezers: Freezers provide long-term storage and should be located close to the receiving area. Additional reach-in freezers should be conveniently located to cooklines.
4. Display Refrigerators: Most display refrigerators are only for the display and storage of packaged or bottled beverages/products. These display refrigerators are not intended for the storage of potentially hazardous foods, prepared foods or non-commercially wrapped foods. Follow manufacturer specifications when using display refrigerators. Verify the intended purpose on the label located inside the display refrigerator.
5. Walk-in cooler or freezers constructed on the outside of the building must have an entrance to the unit from the inside of the facility. The door to the walk-in cooler or freezer must be within the food storage or food preparation areas. Local building departments should be consulted for outside structure requirements.

DRY STORAGE:

Provide enough suitable space for storing all non-perishable food items and all food-related items (paper products). The minimum space required is 25 percent of the overall kitchen space. Increase storage space to a minimum of 35 percent when liquor and beverages are part of the operation.

1. Equip dry storage area with shelving constructed of metal or material which has been finished to be smooth, easily cleanable, non-absorbent and non-corrosive. Cardboard, aluminum foil or shelf liners are not approved.

2. All shelving must be at least six (6) inches off the floor.
3. Provide eighteen (18) inches of clearance from the ceiling to the top of items stored on the shelving.
4. Provide ventilation to keep dry goods cool and dry. Temperature should be between 60-70°F and humidity should not exceed 70%.
5. Any outside dry storage space must meet all the requirements for cleanable floors, walls and ceilings. The door must be equipped with a weather strip to eliminate any air gaps and a self-closer. These storage units are used solely for non-food items such as takeout containers, cups, lids, napkins etc. in the original carton. No food may be stored in outside storage buildings.
6. Facilities utilizing solid fuel such as wood shall provide a designated interior and exterior storage area. Interior storage should be limited to one day supply and stored separate from food and food related items. Exterior storage should implement protective measures to ensure insect and rodent control. Interior and exterior wood storage areas should be elevated on cleanable racks 6" above the floor. Exterior wood storage areas must meet local municipality requirements.

ROOM AND AREA FINISHES:

FLOORS:

Floors in food storage rooms, food preparation rooms, walk-in refrigerators and freezers, dish washing rooms, bars, server stations, self-service beverage/condiment areas, janitor's closets, employee locker rooms, employee toilet rooms, and public restrooms used by food service employees are required to be constructed of smooth, light in color, durable materials.

- a. Commercial grade (1/8" thick) vinyl tile (VCT) with 4" sanitary cove base is the minimum acceptable material.
- b. Quarry, ceramic or terrazzo tile with 4" sanitary quarry, ceramic or terrazzo cove tile base is acceptable with complete grout installation. Grout sealer should be applied to ensure that food debris and moisture do not infiltrate below floor tile.
- c. Due to separation and breakage, tile and vinyl bases are not recommended for walk-in refrigerator or freezer installation. Instead manufacturer screeds can be used to provide an effective 3/8 radius cove on both interior and exterior sides of the unit. Other approved methods include a grout radius as an integral part of the flooring material or a corrosion-resistant metal.
- d. Monolithic poured floors require specific approval for kitchen applications. The material must be able to be installed at least 1/8" thick with a 4" integral sanitary cove base. Manufacturer specification sheets must be

provided as part of the plan review process. The application of this material must be made in accordance with manufacturer recommendations. The installer and operator must provide Will County Health Department with a signed agreement as to the installation and performance of the material.

- e. Sealed concrete is allowed only in retail grocery store receiving, warehousing and inside walk-in refrigerator and freezers that do not contain any onsite prepared foods. Frozen, dairy and meat/seafood walk-ins may have sealed concrete floors but bakery, deli, and poultry prep walk-ins may not have sealed concrete floors.
- f. Carpet is prohibited in any area subject to grease or water. Carpet may be installed in areas of a retail grocery store that may not be subject to splash or spillage of liquid grocery items. Carpet may be installed in dining areas however, bars, server stations, buffet lines or self-service beverage condiment stations that are part of the dining area may NOT have carpet. Carpeting, if used in approved areas, must be closely woven construction, properly installed, easily cleanable and maintained in good repair.
- g. Sheet vinyl, linoleum, laminate flooring, wood, sawdust, wood shavings, peanut hulls or similar material are prohibited.
- h. Mats and duckboards may be of non-absorbent, grease resistant material and of such size, design and construction to facilitate easy cleaning.

WALLS:

Walls in food storage rooms, food preparation rooms, dish washing rooms, bars, server stations, self-service beverage/condiment areas, janitor's closets, employee locker rooms, employee toilet rooms and public restrooms used by food service employees are required to be smooth, easily cleanable, durable, light in color, continuous and uniform.

- a. Finished drywall painted with a light color washable paint is acceptable in areas not subjected to splash.
- b. Walls behind cook lines must be stainless steel or the equivalent.
- c. Interior bar walls and undersides of bar counter tops must have a smooth, non-absorbent and light colored finish that can withstand frequent cleaning. Exposed joints or other support structures will not be accepted.
- d. Splash zones of mop basins and utensil washing areas must be finished with a durable, waterproof material such as fiberglass reinforced panels (FRP) or stainless steel.
- e. Ceramic wall tiles with complete grout installation and sealer are acceptable in all areas.

- f. Stainless steel corner guards are recommended in high traffic area or areas subject to moving equipment.
- g. Wallpaper, wood, corkboard, and grooved paneling are not approved wall surfaces. Wallpaper as part of “brand” may be installed in areas not subject to splash of food debris or water.
- h. Concrete masonry blocks shall be sealed with pore filler and painted with a light in color washable enamel.
- i. Manufacturer fabricated walls and ceiling panels for walk-in refrigeration units with National Sanitation Foundation (NSF) approval are acceptable.

CEILINGS:

Ceilings in food storage rooms, food preparation rooms, dish washing rooms, janitor’s closets, employee locker rooms, employee toilet rooms and vestibules are required to be smooth, easily cleanable, durable, light in color, continuous and uniform.

- a. Finished drywall with light in color washable enamel paint is acceptable in all areas.
- b. In grid drop ceilings, vinyl coated gypsum board ceiling tiles are acceptable in all areas. In grid drop ceilings, 2X2 or 2X4 fiberglass reinforce panels are acceptable in all areas
- c. Open structure ceilings are acceptable as part of a dining area decor for bars, server stations and self-service beverage/condiment dispensing areas.
- d. Fissured acoustic ceiling tiles or fiberglass backed ceiling tiles are not acceptable ceiling finish material.

PLUMBING:

Install and maintain plumbing in accordance with the Illinois Plumbing Code and all applicable local requirements.

WATER SOURCE:

An adequate supply of potable (drinkable) water must be provided to satisfy the food service establishment needs.

1. Water can come from a public water supply.
2. Water can come from a health department approved NCPWS water supply. Non-Community Public Water Supply (NCPWS) is a water

supply that serves 25 or more people at least 60 days per year. NCPWS are subject to an annual sample, by this department, for bacteria and nitrate. Surveys are conducted on NCPWS biennially.

SEWAGE DISPOSAL:

All water-carried sewage must go to an approved wastewater treatment system. If the facility will be serviced by a private sewage disposal system it must be appropriately sized. Contact Will County Health Department Environmental Health Division for sizing requirements.

GREASE INTERCEPTORS:

When a facility is served by a municipal sewer system the local sanitary district will determine the number and size of the grease traps/interceptors. Contact the local municipality. If the facility will be serviced by a private sewage disposal system the grease interceptor is required when culinary fats and oils are introduced to the private sewage disposal system. When grease interceptors are installed they should be:

1. installed outside for easy maintenance.
2. installed on the inside and flush with the finished floor when it is not feasible to be installed on the exterior.
3. located within the facility where food contact surfaces are not subject to contamination by the cleaning process.
4. with no gaps between the grease interceptor and the floor finish. Fill gaps with grout, silicone caulk and/or construct a frame using washable, vinyl trim.

In existing buildings, where there is a structural reason why the grease trap cannot be installed flush with the finished floor consideration will be given to alternative locations as long as accessibility and cleanability are priority.

POTABLE WATER CROSS CONNECTION PREVENTION:

Cross-connection is a physical link between safe water and dirty water. Air gaps and backflow prevention devices are used to prevent cross-connection.

1. All water inlets (faucets) must have an air gap between the water inlet (safe water) and the fixture it is serving (dirty water). The air gap between the water faucet and flood rim of the sink must be twice the diameter of the inlet or at least one inch.
2. The potable (safe) water supply must be protected from all contaminants, including chemicals. Automatic chemical feed systems at dish machines, mop basins and three compartment sinks must be equipped with an appropriately installed backflow prevention device.

3. Pre-rinse sprayers when not in the storage clip must provide an air gap. Pre-rinse sprayers hanging below the flood rim of the sink are a submerged inlet and pose a potential risk of cross connection.
4. Vacuum breakers are backflow prevention devices used on submerged inlets such as toilets, urinals, dish washing machines, garbage grinders and threaded water faucets at a mop sink and interior/exterior hose bibbs.

INDIRECT WASTE CONNECTIONS:

Indirect waste connections are required on dish washing machines, dish washing sinks, pot washing sinks, pre-rinse sinks, silverware sinks, bar sinks, soda fountain sinks, beer tap sinks, potato peelers, ice machines, ice bins, steam tables, steam cookers, salad bars, dipper wells, chinese stoves, walk-in refrigerator and freezer condensate and other similar fixtures.

1. An indirect connection discharges waste through an air gap into the drainage system. An air gap is required to be twice the size of the supply.
2. The indirect piping from the fixture to the air gap must not exceed five (5) feet.
3. Indirectly connected fixtures must discharge to a vented trap placed as close as possible to the fixture and in the same room.
4. Floor drains and floor sinks accepting waste through an indirect connection must be visible and accessible for cleaning.
5. Indirect waste receptors (floor sinks, etc.) should be designed and sized to prevent overflows and splashing.
6. Food service equipment, sinks or buckets cannot receive the discharge of an indirect waste pipe. However, the clear waste water of a walk-in refrigerator or freezer may discharge to a mop basin or utility sink.
7. Direct connections of a utensil washing sink or a dish washing machine must meet specific requirements outlined in the Illinois Plumbing Code. Plumbing drawings must be available and reviewed to ensure that all the requirements are met before a final approval is obtained.
8. Garbage grinders, when installed, must be directly connected to sanitary sewer.

FLOOR DRAINS:

1. Floor drains shall be located every 400 ft² throughout the establishment to facilitate cleaning.
2. Floor drains shall be located in areas that require frequent water flushing to clean the floor or equipment.

3. Floor drains may not be installed in walk-in refrigeration units unless the following conditions are met:
 - a. The floor drain is not connected to sanitary line carrying fecal material (from toilets).
 - b. The floor drain is connected to the grease waste line or separate sanitary line.
 - c. The floor drain is equipped with a backwater valve.
 - d. Floor drains may be located in refrigerated process rooms or high moisture storage areas, such as produce coolers, provided the doors to the area or room have been undercut or are swing doors.

JANITORIAL SINKS:

Provide janitorial sink(s) for general cleaning activities. Janitorial sinks are used to provide cleaning chemical solutions and disposing of mop water or other similar waste. Cleaning tools, such as mops, dustpans, brooms, and brushes should be cleaned at the janitorial sink.

1. Install a curbed cleaning basin with a floor drain or a utility sink on every level of the operation. The minimum size of the curbed cleaning basin must be 3 feet square and the curbing at least 4 inches high.
2. The basin or sink should be connected to sanitary sewer. Check with the local municipality to determine if the basin/sink must be on the grease waste line.
3. Provide hot and cold water under pressure, with a mixing faucet and approved backflow protection.
4. Provide a method to hang clean, wet mop heads that allows them to dry.
5. Allow enough space in the janitorial area to easily access the mop basin/sink, store cleaning chemicals and store cleaning equipment. Other stationary equipment such as water heaters, softeners, or filtration systems may not obstruct the accessibility of the mop basin.
6. Janitorial sinks should be located to avoid contamination to food contact surfaces.

COMMERCIAL KITCHEN VENTILATION:

Type I hoods are required for food service equipment that produce smoke, grease laden vapors, particulate matter and odors. A type I hood is defined as a stainless steel hood certified by UL, NFPA, or NSF with a fire suppression system. Many Type I hoods carry a listing label and are manufactured and installed according to the manufacturer's and listing agencies' requirements. Examples of equipment requiring this type of hood system include

but not limited to: stoves, ranges, fryers, griddles, ovens, broilers, smokers, hot plates (except induction cookers) and salamanders.

Type II hoods are required for all food service equipment that produces steam, mist, heat and vapors. A type II hood is defined as a stainless steel hood certified by UL, NFPA, NSF and usually does not require a fire suppression system. Type II hoods can be classified as condensate or heat/fume. Examples of equipment requiring a Type II hood include but are not limited to pizza ovens, rotisseries, bakery ovens, gas convection ovens, pasta cookers, conveyor ovens, ban maries, steam-jacketed kettles and dish washers.

Cooking equipment that uses solid fuel, such as wood or charcoal requires a dedicated exhaust hood.

A commercial exhaust hood is not required for steam tables, completely enclosed ovens, soup wells, Panini presses, electric rice cookers, electric cheese melters, coffee makers and toasters.

The size of an exhaust hood is determined by the overall length of the equipment to be located under the hood plus appropriate overhang. The hood system must capture all air rising off the equipment at maximum input.

Other design guidelines to keep in mind:

- Determine the lowest, sustainable exhaust rate that will ensure full capture and containment of effluents.
- Introduce dedicated make-up air at low velocity, using perforated perimeter supply.
- There shall be no more than seven (7) feet from bottom of the hood to the finished floor.
- There shall be no more than four (4) feet from the bottom of the hood to the cooking surface.
- When practical, heavy-duty equipment should be placed in the middle of the lineup under the hood or under an exhaust riser.
- When practical, light-duty equipment, including ovens may be placed on the end of the line.
- Locate equipment as close to the wall as possible extending the front overhang.
- Provide at least six (6) inches of overhang on both sides and in front.
- Use side panels and end panels.
- Use approved baffle filters or grease extractors. Mesh filters can no longer be approved for Type I hoods.
- Fire suppression tanks should not be located over sinks or food preparation areas.

The local building department and local fire protection district has final approval of all exhaust systems.

GENERAL VENTILATION:

All rooms shall have sufficient ventilation to keep them free of excessive heat, steam, condensation, vapors, obnoxious odors, smoke and fumes. Ventilation systems shall be installed and operated according to law and when vented to the outside shall not create an unsightly, harmful or unlawful discharge.

All rooms, from which obnoxious odors, vapors or fumes originate, such as restrooms, shall be mechanically vented to the outside.

LIGHTING:

Adequate lighting is required in all food service areas to facilitate cleaning and to promote worker safety.

Food preparation and utensil washing areas should be well lit. A light intensity of 50 foot candles measured 30 inches above the floor is adequate.

Bars and service areas should be well lit with 50 foot candles measured 30 inches above the floor however a dimmer switch or other method to reduce light intensity for ambiance is acceptable.

Utensil and equipment storage areas and restrooms are required to have a light intensity of 30 foot candles measured 30 inches above the floor.

Dry food storage areas, walk-in refrigeration units and other areas are required to have a light intensity of 20 foot candles measured 30 inches above the floor.

Shields to protect food from physical contamination of broken glass is required in all food storage, including outside storage units, food preparation, food service areas, utensil washing areas and food display/self-service areas. Effective shields are drop-in acrylic lens, fluorescent bulb sleeves and end caps, shatter resistant covers or coated bulbs.

EMPLOYEE AREAS:

Employee personal belongings, such as coats, purses and backpacks, are required to be stored separate from food and food related items. In a designated area, provide lockers, coat racks, coat hooks or other suitable facilities for employees to store their personal belongings.

If employees routinely change clothes within the establishment, areas shall be designated for that purpose. Those areas shall not be located in areas used for food storage, food preparation, food service or utensil storage or washing.

Employee personal food shall not be stored in food storage, food preparation or food service areas. Personal food shall be stored in separate refrigeration in an employee break room or stored in a labeled container on the lowest shelf of a refrigeration unit.

Employee medications shall not be stored in food storage, food preparation or food service areas. Employee medications and first aid supplies shall be stored in a way that prevents them from contaminating food and food-contact surfaces. Medications requiring refrigeration may be stored in a labeled container on the lowest shelf of a refrigeration unit.

Eating, drinking and smoking are prohibited in food storage, food preparation, food service and utensil washing areas. Smoking is prohibited in all public buildings. Designate a separate break area for eating and drinking if employees are not allowed to eat and drink in the dining room.

RESTROOMS:

Separate restrooms are not required for employees. Employees may use public restrooms. Public restrooms may not be located in a manner which causes customers to enter food storage, food preparation, food service or ware washing areas to access the restroom. Public restrooms should be convenient and accessible to employees.

The minimum number of restrooms and handicap accessibility are determined by the local building department. WCHD does not have enforcement authority or jurisdiction over ADA regulations. Contact the local building department for ADA regulations.

Mechanical ventilation to the outside is required in all restrooms.

Restrooms are required to be equipped with self-closing doors and the door should close tightly in the door frame without additional pushing or pulling.

Restrooms are required to have hand sinks equipped with hot (at least 100°F) and cold water by means of a mixing valve or combination faucet. Hand sinks in **public restrooms** shall have hot water not exceeding 110°F, for customer scald protection. Any self-closing, slow-closing, or metered faucet must provide a flow of water for a minimum of 15 seconds without the need to reactivate the faucet. Hand sinks are required to have:

- A supply of dispensed liquid hand cleansing soap.
- A supply of dispensed single-use paper towel and/or a warm air drying device.
- Employee restrooms hand sinks are required to have dispensed single-use paper towels.
- A covered waste can.

HAND WASHING SINKS:

Provide a sufficient number of hand sinks. Hand washing sinks must be within the line of sight for each work station, within the same room, and no farther than 20 feet to allow convenient use in food preparation, food service and utensil washing areas. Bars are required to have a designated hand sink within the bar service area.

All hand sinks must be accessible to food handlers during all hours of operations. Food handlers should not have to move anything to access the hand sink.

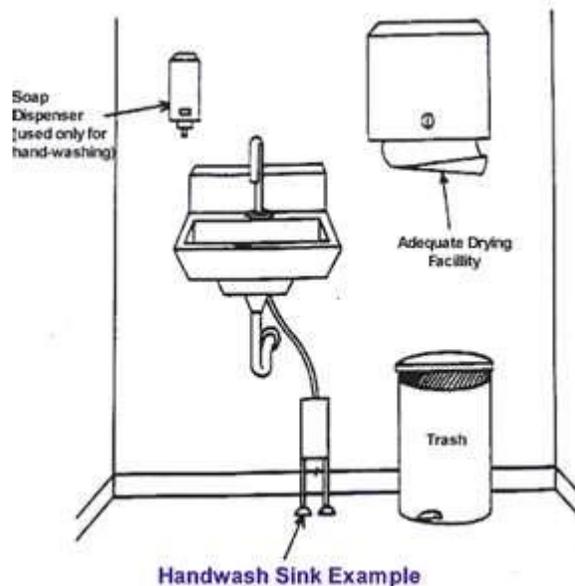
Hand sinks are required to have hot and cold water tempered by means of a mixing valve or combination faucet. Hand sink water temperature should be between 100°F and 110°F.

Hand sink faucets must be equipped with wrist blade-type handles, self-closing motion activated faucets, or metered faucets. All motion detecting faucets must be hard-wired, not battery operated. Any self-closing, slow-closing or metered faucet shall be designed to provide a flow of water for at least 15 seconds without the need to reactivate the faucet.

Each hand sink is required to have a supply of dispensed hand-cleansing soap and a supply of single-use disposable paper towels. An easily cleanable waste receptacle shall be located conveniently to each hand sink. The use of common towels is prohibited. Air hand drying devices are prohibited in food preparation, food service and utensil washing areas.

Hand sanitizing dispensers and disposable glove stations may be located convenient to hand washing sinks and used as a supplement to proper hand washing.

Hand washing sinks, located within 18 inches of a food contact surface, food storage shelf, food service area, vegetable prep sink or three compartment sink, are required to be equipped with splash guards. The splash guard must be at least 8 inches high and constructed of stainless steel. The splash guard should be securely fastened to the wall and sink and any seams created should be sealed with clear silicone caulk.



SANITIZING EQUIPMENT:

Hot Water Systems:

Facilities with the minimum three-compartment sink, hand sink and utility sink require at least a 40 gallon capacity hot water heater. Facilities with less than the minimum fixtures can be evaluated for hot water capacity.

Facilities proposing a hot water-on-demand system, that offers no storage capacity, may be approved for a food service facility if it is sized properly. All specifications must be provided to this department for review and approval prior to installation.

Facilities using a commercial dish washing machine must provide hot water at the appropriate temperature and volume to meet the maximum demand for the make and model of machine to be installed.

Manual Utensil Washing:

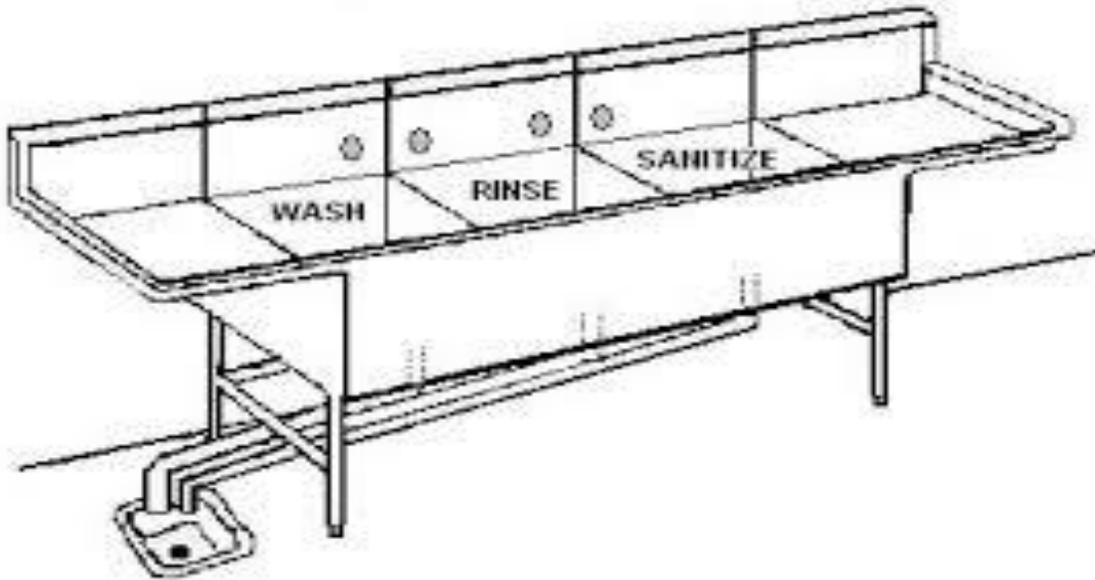
A three-compartment sink with stainless steel integral drain boards is required for manual utensil washing. Each compartment must be large enough to submerge the largest piece of equipment to be cleaned and sanitized. Drain boards must equal the area (length and width) of the sink compartments.

The three-compartment sink shall be equipped with at least one swing arm faucet that provides water to each sink. Sprayer faucets may be installed so long as no cross connection is created and appropriate air gap is met.

Water for manual dish washing shall be maintained at not less than 120°F.

Chemical dispensers shall be installed with backflow prevention devices and in a manner that provides approved level of sanitizer in water that shall be greater than 75°F but not exceed 120°F.

Existing facilities with three-compartment sinks that do not have two drain boards may use dedicated stainless steel carts for staging soiled and clean dishes. Clean dishes may be allowed to air dry on shelving installed over a three-compartment sink.



THREE COMPARTMENT SINK WITH INDIRECT CONNECTION TO FLOOR SINK

Mechanical Utensil Washing:

All spray-type dish washing machines must comply with the current edition of NSF Standard #3.

A soiled dish table or drain board of adequate size is needed to stage soiled dishes before washing. The soiled dish table must not drain into the washing compartment of the dish washing machine. Install a pre-rinse sink as needed so that larger food particles can be rinsed off before entering the dish washing machine.

A clean dish table or drain board large enough to allow dishes and utensils to air dry is required. This installation must provide room for temporary storage of utensils and racks immediately after being removed from dish machines, Slope the clean dish table to drain into the machine. The clean dish table must be at least the size of the soiled dish table.

Machine or water line mounted numerically scaled indicating thermometers accurate to $\pm 3^{\circ}\text{F}$ shall be provided to indicate the temperature of the water in each tank of the machine and the temperature of the final rinse water as it enters the manifold.

Mechanical exhaust ventilation is required over the dish washing machine to remove steam and vapors effectively.

Chemical sanitizing dish machines shall be equipped with a sanitizer alert system which includes a visual and audible alarm, designed and approved for the specific machine installed, is needed to warn the user automatically when the sanitizer supply has depleted.

Hot water sanitizing dish machines are required to heat 140°F water to at least 180°F for the final sanitizing rinse. This requires a booster heater.

Chemical sanitizing requires the appropriate test kit for the approved sanitizer to verify that an effective level of sanitizer for the reduction of pathogens to a safe level is being used. Chlorine test kits are used for household bleach and other chlorine based sanitizers. Quat test strips are used for quaternary ammonia based sanitizers

Hot water sanitizing requires thermal labels, T-sticks or maximum registering thermometers to verify water temperature

INSECT AND RODENT CONTROL:

All pesticides applied in a food service facility must be applied by an Illinois Licensed Pest Control Operator.

BUILDING:

All masonry or cement foundations must be rodent proof.

Cover all building vents with a minimum of 16 mesh per inch wire screen.

Seal openings into the foundation and exterior walls around pipes, wires and conduits.

Seal around all conduit or plumbing penetrations in walls, floors and ceilings with silicone caulk.

DELIVERY DOORS:

All delivery doors leading to the outside must be self-closing and tight-fitting. Self-closing arms or hinges and rubber or brush type threshold sweeps are required to deny pest entry.

Vertically opening garage-type delivery doors must be protected from pests. An overhead air curtain with a minimum velocity of 750 feet of air per minute measured 3 feet above the floor is required. A suitable alternative pest control for these types of doors would be considered.

All exterior doors for customers are required to be self-closing and tight-fitting. Automatic sliding customer doors must be equipped with an overhead air curtain with a minimum velocity of 750 feet of air per minute, measured 3 feet above the floor.

Exterior doors open for ventilation must be equipped with a full 16 mesh per inch screen door to prevent pest entry. The screen door must also be self-closing.

WINDOWS:

All windows opening to the outside must be equipped with at least 16 mesh per inch screening.

Drive –thru and walk-up service windows are required to provide flying insect protection by one of the following methods:

Windows can be equipped with a self-closing device, such as a spring-loaded bump pad or an electronic opener. When the food handler steps away from the window it should automatically close.

Windows can be equipped with an air curtain so that fast moving air is produced vertically downward. The air flow runs parallel with the window and is within 1 inch (inside or outside) of the window opening. The air curtain must protect the entire width of the window opening. Minimum air velocity is 750 feet per minute, measured at the furthest point in the window opening from the air curtain.

GARBAGE AND REFUSE:

Interior garbage containers shall be insect-proof and rodent-proof. Containers shall be constructed with materials that are easily cleanable and non-absorbent. Tight-fitting lids shall be provided for interior garbage containers.

Exterior garbage containers, such as garbage dumpsters, grease bins and recycle containers must be placed on a washable surface such as asphalt or concrete. These containers should be placed as far away from the facility's doors and windows as possible.

Check with local buildings regarding the requirements for garbage and refuse enclosures.

Garbage dumpsters are required for all food establishments. Grease bins or grease recycling systems are required for facilities that must dispose of spent fryer oil. Garbage and grease removal should be as frequent as needed to prevent dumpster overflow.

LAUNDRY:

Laundry facilities in a food service establishment shall be restricted to the washing and drying of linens, clothes, uniforms and aprons necessary to the operation. Such operations may be conducted in separate storage rooms containing packaged foods or packaged single-service items. Food preparation areas are not acceptable for laundry.

If linens, uniforms or aprons are laundered on the premises, an electric or gas dryer is required. Dryers must be vented to the outside.

If wiping clothes are the only item laundered onsite and they are immediately placed in a sanitizing solution after laundering then a dryer is not required.

Soiled uniforms, aprons and linens shall be stored in non-absorbent containers or washable laundry bags until removed for laundering.

Clean uniforms, aprons and linens shall be stored in a clean place and protected from contamination until used.

ANIMALS:

Living animals, including dogs, cats, rodents, birds and turtles, shall be excluded. This exclusion does not apply to edible fish, crustacean, shellfish or to fish in aquariums.

Retail food stores may allow animals into a facility provided they submit a written policy to the health department for review and approval. This policy should include:

1. What part of the facility will animals be allowed in?
2. How will animals be contained in the facility?
3. How will animal saliva, vomit, urine and feces be cleaned?

Patrol dogs accompanying security or police officers and support animals shall be permitted in dining areas and the sales floor of a retail food store. Support animals are defined as canines and primates trained to assist handicapped persons.