CONSTRUCTION GUIDELINES FOR BUILDING OR REMODELING FOOD FACILITIES

County of Orange Health Care Agency
Public Health Services, Environmental Health, Plan Check
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TABLE OF CHANGES

DATE	SECTION	REVISED TEXT	TYPE OF CHANGE

Types of changes explained

1. **ANI - Addition of New Information**: The document has added new content or details to clarify or fill a gap.
2. **SR—Structural Revision:** Changes to the organization of sections, headings, or format to improve readability.
3. **UI - User Input:** Changes based on external feedback from users, stakeholders, or experts.
4. **ERR - Error Correction:** Typos, grammatical issues, or factual errors have been corrected.
5. **DLR - Deletion of Redundant Content:** Removed duplicate or unnecessary content for brevity or to streamline the document.
6. **MT - Minor Tweak:** Small, insignificant changes were made that did not impact the document's meaning.
7. **VI - Visual Improvement:** Adjustment to the layout, formatting, or visual elements (e.g., tables, graphics).

INTRODUCTION

The OC Health Care Agency (HCA) Environmental Health Plan Check (Plan Check) is charged with safeguarding public health by ensuring food facilities are built to successfully comply with health and safety standards. Plan Check strives to complete thorough, efficient, and timely reviews and works closely in partnership with our plan submitters toward our shared goal of serving the community of Orange County.

This Plan Check Construction Guide for Retail Food Facilities (The Guide) outlines requirements for plan preparation before the submission for review. It is designed to provide clear and consistent standards for developers, contractors and stakeholders involved in the construction of retail food facilities. The Guide is a practical resource for navigating the plan review process and ensuring compliance with health and safety requirements. By following these guidelines, users can streamline their projects, reduce delays, and contribute to creating safe and compliant food facilities.

The Guide is intended to assist in meeting applicable health and safety requirements but not to supersede any state or federal law, local ordinance, or code.

Please note that The Guide is a living document meant to be revised continuously to reflect updates to standards and regulations. Therefore, to support environmental sustainability and ensure that users have the most current version, it is recommended that users review this document in PDF format.

Who is Required to Submit Plans?

Plans are required to be submitted for food facilities that are newly constructed, undergoing tenant improvements (TI), or remodeling existing structures. This includes changes to building spaces, kitchens, equipment, or menus. Per the California Retail Food Code (California Health and Safety Code, Part 7), these plans must be submitted to Plan Check for review. Plan Check evaluates the submitted plans, conducts inspections during construction, provides final approval, and issues a health permit to operate the newly constructed areas once the facility meets all health and safety requirements. If you are unsure whether your project requires a plan submission, please contact Plan Check at (714) 433-6074 or email plancheck@ochca.com.

When Should Plans be Submitted?

Plans must be submitted to and approved by Plan Check before construction can commence. All construction work must conform to local building codes and have the necessary approvals from other regulating jurisdictions, such as the local building and fire authorities. Please refer to the local building department for approval and permits before construction. If required, applicants are responsible for providing Plan Check's stamped and approved sets to city building departments and/or other regulating agencies/jurisdictions. It is also the applicant's responsibility to submit revisions to Plan Check if any changes/modifications are made to the approved plan. The use of approved materials and adherence to workmanship standards are crucial for ensuring a properly constructed and safe food facility.

What Codes Do Environmental Health Plan Check Enforce?

Plan Check enforces the California Retail Food Code (California Health and Safety Code, Part 7- "Cal Code"), which references the California Plumbing Code, California Mechanical Code, California Code of Regulations, Civil Code, Code of Federal Regulations, the Business and Professions Code, and others. These codes ensure that food facilities meet all health, safety, and operational standards. Cal Code is available online, or you may contact Plan Check for guidance.

Contact Us:

You may contact us via phone or email or visit our offices during regular business hours.

Office: 1241 E. Dyer Rd., Suite 120, Santa Ana, CA 92705

Counter Hours: 8:00 a.m. to 12:00 p.m.; 1:30 p.m. to 5:00 p.m. Monday to Friday

Plan Checkers on Duty are not available 12:00 p.m. to 1:30 p.m.; however, the office is open for payments and applications.

Phone Number: (714) 433-6074

Email: plancheck@ochca.com

PLAN CHECK PROCESS

PLAN REVIEW AND APPROVAL PROCESS

For a complete overview of the plan check process, refer to Figure 1 in the Appendix.

Submittal: The plan review process begins when plans are submitted to Plan Check and the plan review fees have been paid. All plans must be submitted electronically for review and approval. After plans have been uploaded to our system, an invoice will be provided for payment. Contact Plan Check for the latest fee schedule.

Initial plan reviews are completed within 20 business days of submittal. Please refer to the Plan Check Submittal Checklist in Table 1 to ensure you have included all the necessary documentation and information as a part of your plan submittal. Please visit our Electronic Plan Submittal page for instructions on our website.

Communication: Following a thorough review of the submitted plans, the designated plan checker will provide a report indicating the disposition of the plan, which will be emailed to the submitter. When corrections to the plan are necessary, the report will indicate the specific issues requiring attention or revision. You may contact the designated plan checker to discuss the comments or corrections marked on the report.

Submitting Revisions: Plan revisions must be submitted electronically with a response letter or correspondence that clearly indicates the locations of the corrected items on the plans. The revised plans must reflect all changes noted.

Revised plans are reviewed in the order received. Plan Check understands the urgency and costs associated with project delays and strives to review plans as quickly as possible. Since turnaround times are greatly affected by demand and staff availability, please contact Plan Check or your designated plan checker for an anticipated review date**.**

Additional Fees: A total of three plan reviews are included in the plan check service fee. If your project requires more than an initial review and two revision reviews, additional reviews will be charged at the hourly billing rate. Contact Plan Check for the latest fee schedule.

Approval: When the plan can be approved, the submitter receives an email from Plan Check indicating that the plan is approved and available for download. All approved plans are digitally stamped, and a plan approval letter is attached. If a physical wet stamp is required, please coordinate with your designated plan checker to obtain the stamp. Construction may commence once approval has been issued by Plan Check and all other required approvals from regulating jurisdictions are obtained. The submitter/project owner is responsible for obtaining all other approvals for the proposed work. Plan Check does not forward approvals to city building departments or other regulating jurisdictions. The Plan Check approved plans must be available at the construction job site during all construction phases.

All approved plans are valid for a maximum of one year from the notification date to the submitter. Approved plans may be canceled if proper communication about the project is lacking. In such cases, you must initiate a new plan submission (including the submittal fee) to continue with the project.

Revision After Approval: Plans that have been revised after Plan Check approval must be submitted for review and approval as a revised plan. Review of plan revisions after plan approval will be charged at the hourly rate. Contact Plan Check for the latest fee schedule.

Projects That Do Not Fall Under Our Jurisdiction: Projects whose scope of work does not fall under Plan Check's jurisdiction may be stamped with a "Not Under Our Jurisdiction" designation. This process can only be completed electronically. Please contact Plan Check for more information.

Records Request: All plans and materials submitted to Plan Check are classified as public records and may be obtained through a records request. Please call our records department to initiate a record request (714) 433-6015. Please note that all plans (unapproved and approved) are subject to HCA retention policy and may not be available beyond the retention date. Plans that have received final approval are retained for three years, while canceled projects are maintained for one year.

Expedited Services: Expedited plan reviews are available based on employee availability. Please contact Plan Check or visit our webpage to learn more about the expediting process and fees. Expedited plan reviews are generally completed within 10 business days.

Plan Check Submittal Checklist – What to Provide With the Plans

Plan Check needs several items in addition to plans to complete the review. The Plan Submittal Checklist provides a list of items needed for a seamless plan review process. Please use this checklist to ensure all components are submitted and avoid delays. Refer to Table 1 in the Appendix section.

Sample Submittal: To submit finish samples, they must be properly labeled with the project name and address, service request (SR) number if applicable, and finish identifier (i.e. "restroom wall tile"). Samples may be brought in-person during business hours, or mailed/shipped to: Environmental Health, Attn: Plan Check, 1241 E. Dyer Road, Suite 120, Santa Ana, CA 92705.

In addition, look for the note "**+ WITH PLANS**" to see what specific information is needed to accompany plans in order to facilitate plan review without additional comments.

Information Documented On the Plans

This checklist provides the critical details needed on the plans to ensure your plan checker can conduct a comprehensive plan review and minimize delays. Refer to Table 2 in the Appendix section.

In addition, look for the note "**→ ON PLANS**" to see what specific information is needed on the plans to facilitate plan review without additional comments.

PLAN CHECK CONSTRUCTION INSPECTION PROCESS

For a complete overview of the plan check process, refer to Figure 1 in the Appendix section.

Note: when the scope of work requires approvals from the building and safety department, the building official's inspection card must be onsite during Plan Check's inspections.

Please note that no food, utensils, linens, or single-use articles may be stored or held in the food facility until written approval is obtained from Plan Check. This includes dry goods like soda boxes or canned items. If you need "Stock and Train" approval, please contact your plan checker.

Preliminary Construction Inspection: A preliminary construction inspection is highly recommended when the facility is approximately 80% completed. This inspection will help identify any deficiencies early in the construction process and can mitigate potential delays and costs. It is never too early to call for a preliminary construction inspection; however, floor sinks, finishes, and some equipment are typically in place at the time of the inspection. Note that special flooring types need an additional preliminary inspection after the flooring is installed but before equipment is set. See instructions under the flooring finishes section of this guide.

Final Construction Inspection: A final construction inspection is required when the facility is 100% completed with all health-related requirements. During the final construction inspection, the facility must meet the following requirements, depending on the scope of work:

- All construction work related to the food facility must be completed.
- The facility must be completely enclosed with no gaps greater than ¼ inch.
- Hot and cold running water must be available. Hot water at hand sinks shall be at least 100°F, not exceeding 108°F, if the faucet's water temperature is not easily adjustable. All other sinks must be at least 120°F.
- Toilets must be flushable.
- All equipment should be installed and functioning as intended by the manufacturer.
- Coolers must be at 41°F or below, and freezers must be at 32°F or below.
- If applicable, dishmachines must be operational and adequately sanitizing.
- All hand sinks and lavatories must be equipped with soap and paper towel dispensers.
- Permanent power and gas utilities must be supplied to the facility. Generators are not permitted during a final inspection.
- All plumbing must be operable. There must be no sewage backup.
- Fire authorities must inspect the facility and provide any necessary approvals.
- The hood must be balanced and ready for a smoke test by the Plan Checker. An air balance report may be required.

Additional Fees: The Plan Check service fee includes three construction inspections. If more than three inspections are needed, additional inspections will be billed at the hourly rate. Contact Plan Check for the latest fee schedule. Please note that all construction inspection requests must be scheduled at least 10 business days in advance of the desired date to best accommodate the request.

Expedited Services: Expedited construction inspections are available based on employee availability. Please contact Plan Check or visit our webpage to learn more about the expediting process and fees. Expedited construction inspections may be conducted during working hours, after-hours, on weekends or on holidays depending on employee availability.

Building Department Final and Health Permit: Typically, building departments will require a final construction approval from Environmental Health Plan Check prior to issuing their final building approval. Plan check will issue final construction approval but this does not equate to approval to operate. Proof of final approval or a Temporary Certificate of Occupancy (TCO) from the building official is necessary to obtain a copy of the health permit and the authorization for operational activities.

MENU AND OPERATIONS

SUBMITTING MENU FOR EVALUATION

Every new or remodeled food facility, especially those introducing menu changes, must submit a copy of the proposed menu with the plans for evaluation. The menu should have a complete list of all proposed foods and beverages served (prices are not necessary). The menu will be utilized to verify that the proposed equipment and preparation space can support the menu. Menu review is vital for safeguarding public health and ensures that the Critical Risk Factors identified by the Centers for Disease Control and Prevention (CDC) are effectively addressed during the plan review phase.

The five most common CDC risk factors that contribute to foodborne illnesses include:

- Improper holding temperatures
- Inadequate cooking
- Poor personal hygiene
- Contaminated equipment
- Food from an unsafe source

Our plan reviews and inspections aim to reduce the risks of foodborne illness diseases, protecting the health and safety of our community.

+ **WITH PLANS:** Provide a menu - list of all foods and beverages to be offered. See also Table 1.

CLARIFYING FOOD OPERATIONS

Certain food handling activities or processes may need more detail or information provided to ensure all requirements are met. Your plan checker may require an operational statement or standard operating procedure (SOP) to better understand your process and ensure the food facility is constructed to support these activities. If your project includes any specialty equipment or specialized food handling processes or is very limited on space, it is recommended to provide operational procedures at the time of initial plan submittal. This information helps us identify potential risks and offer tailored guidance to ensure your procedures align with food safety standards.

+ **WITH PLANS:** When unique or limited operations are proposed, provide an operational procedure. See also Table 1.

REFERRAL TO OTHER DEPARTMENTS

While assessing menus or operations, Plan Check may identify specific processes requiring review and approval by other departments and jurisdictions. Some of the specialized processes may include, but are not limited to:

- Reduced Oxygen Packaging
- Processes that require a Hazard Analysis Critical Control Point plan (HACCP) under Section 11419 in the California Retail Food Code, including:
  - Smoking foods for preservation.
  - Curing food.
  - Using food additives as a preservation method or changing the food to make it non-potentially hazardous.
  - Operations of molluscan shellfish life support tank for shellfish intended for human consumption.
  - Custom processing of animals for personal use as food and not for sale in a food facility.
  - Prepare food using any method the Enforcement Agency, Environmental Health, or California Department of Public Health determines requires a HACCP plan.
- Food processes that may include food manufacturing, packaging, labeling, canning, bottling, or warehousing of certain food products.
- Production of milk and dairy products or products that resemble milk and dairy for offsite consumption.
- Proposal of dispensing and/or portioning milk and dairy products for onsite and offsite consumption.

+ WITH PLANS: When special processes are proposed, provide an operational procedure. See also Table 1.

Depending on the proposed processes, final construction approval may be delayed until approvals from other agencies have been obtained.

SATELLITE FOOD SERVICE (SFS)

A satellite food service (SFS) is a remotely located food service operation that is conducted on the same property as, in reasonable proximity to, and in conjunction with and by, a fully enclosed permanent food facility. All SFS shall meet the following requirements:

1. All SFS must be operated within 200-feet travel distance of a restroom.
2. SFS located within a fully enclosed permanent food facility shall be temporary by nature.
3. All requirements for a permanent food facility apply to SFS.

Prepackaged SFS

Satellite food services that store or display prepackaged food in its original, hermetically sealed packaging must meet the following requirements:

1. Foods must be stored in a fully enclosed facility during hours of non-operation. If the satellite food service is not fully enclosed, provide a written statement of where the foods will be stored during those hours.
2. Prepackaged non-potentially hazardous foods with a total of 25 square feet or less of food display area would not require issuing a separate Health Permit.

Unpackaged SFS

Satellite food services that handle unpackaged foods must meet the following requirements:

1. Restrict all food handling to limited food preparation as defined in Cal Code Section 113818.
2. Provide a statement of written operations to Orange County Environmental Health for review and approval, detailing the following:
    a. The menu proposed, including drinks, to be served at the SFS.
    b. The proposed procedures and methods of food preparation and handling within the SFS and any activities within the permanent food facility intended to support satellite food service.
    c. Methods and frequency for cleaning utensils, equipment, structures, and refuse disposal.
    d. How foods and utensils will be transported between the permanent food facility and the SFS, and how contamination will be prevented during transport.
    e. How potentially hazardous foods will be held at the SFS in accordance with Section 113996 of CalCode.
    f. Provide handwashing and warewashing facilities at the SFS. In some cases, alternative warewashing facilities may be considered separate from the SFS with adequate operational support and reasoning.
    g. SFS must have overhead protection and be fully enclosed during non-operational hours. SFSs that are unenclosed during operation must comply with all open-air facility requirements.

+ WITH PLANS: When satellite food service (SFS) is proposed, provide an operational procedure. A Satellite Food Service Standard Operating Procedure (SFS-SOP) template is available upon request. See also Table 1.

FINISHES

Finishes for food contact surfaces, counter tops, food compartments, walls, ceilings, floors, and cove bases shall be materials and surfaces that are smooth, durable, non-absorbent, washable, and easily cleanable.

Physical Samples: It is highly recommended to provide finish samples to facilitate your plan review and avoid delays. Since plans are submitted electronically, once plans are submitted samples may be dropped off or mailed in prior to the anticipated review date (about 20 working days or less from the date plan service fees have been paid). Some finish materials may require a sample submission for evaluation and approval. For flooring, samples should feature the cove base and all proposed textures.

Samples must be clearly labeled with the facility's name and address, service request number (if applicable), and finish identifier (i.e. "restroom wall tile"). Samples that do not include this information may not be processed or entered into our database, as we cannot identify the facility to which they belong.

Samples may be brought in-person during business hours, or mailed/shipped to:

Environmental Health
Attn: Plan Check
1241 E. Dyer Road, Suite 120
Santa Ana, CA 92705

Finishes Not Specified: If a finish material is noted on the plans (i.e. "wall tile"), but the specific material has not yet been selected (i.e. the exact make and model of wall tile), please also note on the plans that finish samples will be submitted to Plan Check prior to installation for review and approval.

Finish Color: The California Retail Food Code no longer specifies that finishes must be "light in color or have a certain light reflective value." Plan Check does not evaluate finishes on color, only on cleanability, durability, and suitability for purpose.

FLOORS

Approved floor finishes and cove bases are required in all food and beverage areas, including but not limited to:

- Food and beverage handling areas
- Cooking areas
- Storage areas with unpackaged foods
- Warewashing areas
- Janitorial facilities
- Restrooms

- Self service areas, buffets, server and bussing stations with hard-plumbed fixtures and/or equipment, such as warming drawers and refrigeration with unpackaged foods.

- Refuse and recycling areas when provided within a food facility.

However, approved flooring and cove bases are not required in dining and sales areas or separated offices.

Approved Finishes Outside the Kitchen: Equipment located outside the kitchen, such as areas with hard-plumbed fixtures or equipment with unpackaged foods (i.e., customer self-service areas, buffets, server stations, bussing stations, etc.) and mop sinks shall have approved floor finishes that extends at least 2' in all directions.

Cleanable Floor Finishes: Cleanable flooring is held to a lower standard than approved flooring and does not have to be continuous or require a cove base. Cleanable flooring is required in restrooms exclusively used by consumers and prepackaged areas where unopened bottles, cans, cartons, and sacks of food are stored. Additionally, cleanable floor finishes are required at outdoor open-air barbecues and outdoor wood-burning ovens, extending a minimum of 5' on all open sides.

Approved Flooring Materials: Approved flooring must be continuous with an integrally coved base. It must also be durable, smooth, non-absorbent, and easy to clean. Commonly approved flooring finishes include sealed concrete, quarry tiles, ceramic tiles, troweled flooring systems, and commercial-grade sheet vinyl. However, some sheet vinyl may not be suitable for cooking areas. Anti-slip, nonskid floor finishes or materials are acceptable only in areas where safety is a concern, such as high-traffic zones.

- ❖ **What is the definition of smooth?** Smooth is defined as having an even or leveled surface with no roughness or projections that render it difficult to clean.

- ❖ **What is an easily cleanable material?** Easily cleanable flooring material is a surface where soil, food residue, or other organic or inorganic materials are removed using standard cleaning methods such as mopping and sweeping.

Approved Cove Base: Where necessary, the floor surface must be seamlessly coved at the junction between the floor and wall with a minimum radius of 3/8", extending up the wall at least 4". This 3/8" radius cove should extend up the walls and toe kicks of floor-mounted counters, cabinets, and equipment by at least 4". Depending on the proposed material, the cove base may need to be made from the same material as the floor finish. Commonly approved cove base finishes include continuous concrete, troweled epoxy, sheet vinyl extending up the wall, coved metal topset, metal cove-shaped profiles between the floor and wall, quarry cove base tiles and ceramic slim-foot topset cove base tiles.

Cove Bases that are Not Compatible with Flooring Types: For troweled-on flooring systems like epoxy, the cove base must be made of the same material. For example, top-set metal cove base will not be accepted over an epoxy flooring. For commercial-grade sheet vinyl and resilient flooring types, the cove base must be made of the same material. For example, top-set metal cove base will not be accepted over resilient flooring.

Special Flooring Materials: Special flooring materials like epoxy, vinyl, and resilient flooring will require:

1. Additional information on the plans (see details below under specific flooring type)
2. A sample submittal that includes any proposed texture and representative base cove, and
3. An inspection specifically for evaluating the installation of the special flooring prior to equipment installation.

Unapproved Flooring Finishes: Where approved finishes are required, carpet, rubber, wood, vinyl composite tile (VCT), and luxury vinyl planks are unacceptable.

Approved Installation: A Word of Caution! Some flooring types require specialized expertise and can be more challenging to install. Approval of the material on plans does not guarantee the installation will meet the required standards. All flooring installations will be evaluated during inspection to ensure proper installation and compliance. Installations that do not meet these requirements will need to be corrected or removed and reinstalled before the final inspection. Due to the difficulty of installation, samples are required for all sheet vinyl, resilient, and troweled-on flooring systems. The samples must include the integral cove base and any desired texture or non-slip agents for evaluation. Contact your plan checker for more details.

Requirements for Floor Finishes by Material

Sealed Concrete

1. All concrete floors must be patched to eliminate cracks and divots.
2. Self-coved concrete that extends up the wall is acceptable.
3. If tiles are to be installed at the floor-wall juncture as a coved base, they must either be keyed into the floor surface or an approved slim-foot topset tile must be installed to form a minimum 3/8" radius cove.
4. The concrete must be sealed with an approved penetrating sealer that is clear and resistant to grease, acid, and water. Contact your plan checker for a list of approved concrete sealers.
5. Pigmented sealers and epoxy paints are not permitted.
6. If the concrete is cracked or deteriorated and cannot be patched or repaired, alternative approved flooring must be installed.

→ **ON PLANS:** If sealed concrete floor is proposed, on the plan finish schedule, indicate the manufacturer/model of the sealer. In addition, clarify how the cove base will be formed (e.g., "3/8" radius tile cove"). See also Table 2.

+ **WITH PLANS**: If a slim-foot topset tile will be used, provide a physical sample. See also Table 1.

Quarry Tile and Ceramic Tile

1. The minimum thickness of the tiles must be ¼".
2. The tiles and grout must be sealed to ensure they are impervious and resistant to grease and acid.

3. The tile flooring in all areas, including beneath equipment and at coved bases, must be smooth at the junction between the floor and walls. Nonskid or textured tiles may only be installed in high-traffic areas. Depending on the type of nonskid or textured tile (such as diamond tread), a high-pressure cleaning system and floor drains may be required. Samples of nonskid or textured tiles must be submitted for evaluation to Plan Check.

→ **ON PLANS:** When quarry tiles are proposed, indicate the proposed texture of quarry tile on your finish schedule ("smooth" or "abrasive"). If abrasive quarry tile texture is proposed, note on your plans that the textured tiles will be applied in traffic areas only, and smooth texture applied in all other areas. For all tile types, on the finish schedule, indicate that the cove base will have a minimum 3/8" radius. See also Table 2.

+ **WITH PLANS**: If abrasive textured quarry tile such as diamond-tread or similar is proposed, a physical sample is required to be submitted. For any tiles other than smooth quarry tiles (i.e., ceramic or porcelain tiles), a physical sample of both the floor and cove base tile is required to be submitted. See also Table 1.

Troweled-on Flooring Systems

1. Epoxy paints are not acceptable. Paint-chip or vinyl-chip epoxy coatings are also not accepted outside of restrooms.

2. Special flooring material such as troweled-on epoxy will require additional evaluation. The information below under "Specific Requirements for Troweled-on Systems" should be clearly illustrated and documented on the plans. Please contact your designated plan checker for any further requirements. When proposed, an inspection designated for evaluating the installation of special flooring material must be completed before equipment installation.

3. Troweled-on epoxy flooring will require a sample submittal for evaluation and approval. The sample must include the cove base and all proposed textures.

4. Manufacturer's installation guidelines must be followed. Flooring installation will be assessed during inspection for proper installation and compliance. Out-of-compliance installation that does not meet the manufacturer's installation guidelines or these guidelines will require correction, removal, and reinstallation by final inspection.

Specific Requirements for Troweled-on Systems

1. The flooring must be self-coved/troweled up the walls at least 4" with a minimum 3/8" smooth radius cove. Epoxy installations utilizing a speed cove to form the cove base or assist in the formation of the cove are not acceptable. Epoxy that is rolled, brushed, or sprayed on is not acceptable. The cove base must be made of the same material as the floor for troweled-on flooring. For example, a metal top-set cove base is not accepted over epoxy flooring.

2. The minimum thickness is 3/16" on the floor and up the wall.

3. The flooring must be sealed to be impervious, grease and acid-resistant.

4. The flooring material must be installed beneath all equipment and equipment legs.

5. The flooring must be smooth in all areas, including below equipment, sinks, shelving, and on coved bases. Nonskid agents or broadcasts, such as sand, may be added only in traffic areas.

6. A high-pressure cleaning system with floor drains may also be required depending on the amount of nonskid agent or texture used in high-traffic areas.

7. A smooth transition between walls and coved base is required. A metal cap or equivalent is acceptable where the cove base meets the wall.

→ **ON PLANS**: When troweled-on flooring is proposed, indicate the following on the plans:

- Manufacturer/model of the flooring system listed on the finish schedule.
- Cove base to be formed of same material, to extend up the wall a minimum of 4", and to have a minimum 3/8" radius cove noted under finish details.
- The minimum thickness of flooring and base cove to be 3/16" noted under finish details.
- Texture applied in traffic areas only, all other areas to be completely smooth noted under finish details.
- Manufacturer/model of clamping floor drains and floor sinks listed on the equipment and/or plumbing schedule.

See also Table 2.

+ WITH PLANS: Submit a physical sample of the troweled-on flooring with the integral cove base and representative proposed varying textures applied. See also Table 1.

Commercial Grade Sheet Vinyl

1. Special flooring material, such as commercial-grade sheet vinyl, will require additional evaluation. The information below under "Specific Requirements for Commercial Grade Sheet Vinyl" should be clearly illustrated and documented on the plans. Please contact your plan checker for any further requirements. When proposed, an inspection designated for evaluating the installation of special flooring material must be completed before equipment installation.

2. Sheet vinyl installation will require a sample submittal for evaluation and approval. The sample must include the cove base and all proposed textures.

3. Manufacturer's installation guidelines must be followed. Flooring installation will be assessed during inspection for proper installation and compliance. Out-of-compliance installation that does not meet the manufacturer's installation guidelines or these guidelines will require correction or removal and reinstallation by final inspection.

Specific Requirements for Commercial Grade Sheet Vinyl

1. The minimum thickness of the wear layer is 0.05" gauge, and the total thickness is 0.080". Thin sheet vinyl with foam backing or a no-wax finish is not accepted.

2. The sheet vinyl must be installed continuously up the wall at least 4” to form the cove base. It should be installed with a cove stick behind the 3/8” radius cove and a metal cap, or equivalent, at the top of the base. The cove base must be made of the same material as the floor for commercial-grade sheet vinyl flooring. For example, a metal top-set cove base is not accepted over sheet vinyl flooring.

3. If installed in areas equipped with a floor drain or floor sink, the sheet vinyl must be mechanically fastened to the floor in place with a surface membrane clamping plumbing fixture such as clamping floor drains and floor sinks. Be sure to indicate the make and model of clamping floor drain or floor sink on your plans.

4. Sheet vinyl installation should occur only in environments that meet temperature guidelines specified by the manufacturer. If the manufacturer's guidelines do not provide a specific temperature range, sheet vinyl is prohibited in refrigeration units or under cooking equipment.

→ **ON PLANS**: When sheet vinyl flooring is proposed, indicate the following on the plans:

- Manufacturer/model of the flooring system listed on the finish schedule.
- Cove base to be formed of same material, to extend up the wall a minimum of 4”, and to have a minimum 3/8” radius cove noted on the finish details.
- Cove stick to be provided behind cove per manufacturer specifications noted on the finish details.
- Texture applied in traffic areas only, all other areas to be completely smooth noted on the finish details.
- Manufacturer/model of clamping floor drains and floor sinks listed on the equipment schedule.

See also Table 2.

\+ **WITH PLANS**: Submit a physical sample of the proposed sheet vinyl. See also Table 1.

Resilient Flooring

1. Special flooring material, such as resilient flooring, would require additional evaluation and information submitted on plans. Please contact your designated plan checker for any further requirements. When proposed, an inspection designated for evaluating the installation of special flooring material must be completed before equipment installation.

2. Resilient flooring installation will require a sample submittal for evaluation and approval. The sample must include the cove base and all proposed textures.

3. Manufacturer's installation guidelines must be followed. Flooring installation will be assessed during inspection for proper installation and compliance. Out-of-compliance installation that does not meet the manufacturer's installation guidelines or these guidelines will require correction or removal and reinstallation by final inspection.

4. A smooth transition between walls and coved base is required. A metal cap or equivalent is acceptable where the cove base meets the wall.

Specific Requirements for Resilient Flooring

1. Where floor drains are proposed, resilient flooring must be mechanically fastened to the floor with a surface membrane clamping plumbing fixture. Steel collars and "speed flex" are not accepted in lieu of clamping plumbing fixtures.
2. Indicate the make and model of clamping floor drain or floor sink on your plans.
3. The resilient flooring must be installed continuously up the wall at least 4" to form the cove base. It may not be installed with a cove stick or speed cove behind the 3/8" radius cove. The radius cove cannot be formed with a sealant or epoxy material. The cove base must be made of the same material as the floor for resilient flooring. For example, a metal top-set cove base is not accepted over resilient flooring.
4. All seams and corners must be smooth without jagged or sharp edges.
5. The finish texture must be smooth and easily cleanable without using specialized tools and chemicals.

→ **ON PLANS**: When resilient flooring is proposed, indicate the following on the plans:

- Manufacturer/model of the flooring system listed on the finish schedule.
- Cove base to be formed of same material, to have a minimum 3/8" radius cove, and to extend up the wall a minimum 4", noted on the finish details.
- Texture applied in traffic areas only, all other areas to be completely smooth noted on the finish details.
- Manufacturer/model of clamping floor drains and floor sinks listed on the equipment and/or plumbing schedule.

See also Table 2.

+ **WITH PLANS**: Submit a physical sample of the resilient flooring, that has the integral cove base and representative proposed texture applied. See also Table 1.

WALLS

Approved wall finishes are required in all food and beverage areas, including, but not limited to:

- Food and beverage handling areas
- Cooking areas
- Storage areas with unpackaged foods
- Warewashing areas
- Janitorial facilities
- Restrooms
- Self service areas, buffets, server and bussing stations with hard-plumbed fixtures and/or equipment, such as warming drawers and refrigeration with unpackaged foods.

- Refuse and recycling areas when provided within a food facility.

Approved wall finishes are not required in dining and sales areas, offices, dressing/locker areas, above the countertops to the ceiling of alcoholic beverage bars where beverages are immediately served to consumers, and in rooms where food is stored only in unopened bottles, cans, cartons, or sacks.

Approved Finishes Outside the Kitchen: Equipment located outside the kitchen, such as areas with hard-plumbed fixtures or equipment with unpackaged foods (i.e., customer self-service areas, buffets, server stations, bussing stations, etc.) and mop sinks shall have approved wall finishes that extends at least 2' in all directions.

Customer Restrooms: Approved wall finishes are not required in restrooms exclusively used by customers. However, walls must be nonabsorbent and washable up to the ceiling.

Approved Wall Materials: Wall surfaces in all areas of a food facility, except as listed above, shall be durable, smooth, nonabsorbent, and easily cleanable. Typical approved wall finishes include gypsum board with gloss or semi-gloss enamel paint, fiberglass reinforced plastic (FRP), ceramic tiles, and stainless steel. Exposed brick, concrete block, rough concrete, rough plaster, or textured gypsum board are unacceptable. Any proposed material other than painted gypsum board or FRP will require a sample submittal for evaluation and approval.

- ❖ **What is the definition of smooth?** Smooth is defined as having an even or leveled surface with no roughness or projections that render it difficult to clean.
- ❖ **What is an easily cleanable material?** An easily cleanable wall is a surface where soil, food residue, or other organic or inorganic materials are effectively removed by standard cleaning methods such as wiping down. Wall finishes requiring specialized cleaning processes, chemicals, or tools are not easily cleanable.

Walls Behind Dishmachines, Sinks, and Hand Sprays: The wall surfaces behind wet areas, such as sinks (excluding hand sinks and dump sinks), dishmachines (both under-counter and in-line), and hand spray units, must be covered with water-resistant materials. Acceptable finishes include fiberglass reinforced panels (FRP), tile, stainless steel, or equivalent options. The approved wall covering must extend at least 4' above the backsplash and cover the walls behind the sink or dishmachines and any accompanying drainboards.

Walls and Janitorial Sinks: The wall surfaces behind and adjacent to the janitorial sink shall be covered with water-resistant material such as FRP, tile, stainless steel, or the equivalent. The approved wall cover must extend at least 6' from the finished floor and two feet on both sides of the janitorial sink. The janitorial sink's water-resistant material does not need to extend beyond the janitorial sink if the sink is located within an approved cabinet or an alcove with water-resistant wall finishes.

Walls and Restrooms: The wall surface in restrooms shall be covered with water-resistant material such as FRP, stainless steel, tile, or equivalent, extending up the wall at least 4' from the finished floor. Above 4' in the restrooms, walls must be cleanable but not necessarily water-resistant.

Walls and Cooking Lines: The wall finishes behind the cookline equipment must be stainless steel, tile, or an equivalent approved heat-resistant wall finish.

Wall Attachments: Wall attachments, such as shelving, shall be easily cleanable. Exposed piping, conduit, duct work, and/or beams shall be concealed appropriately inside the wall or boxed in flush to the wall with approved finishes. Wall-mounted storage cabinets in areas where open food is handled must be flush to the ceiling. Wall attachments that are not easily cleanable, such as decorative signs, TV/monitor mounts, and fixtures with intricate structures, are not accepted in areas where approved wall finishes are required**.**

→ **ON PLANS:** On the plan finish schedule, indicate the proposed wall finish type in all areas. For walls behind sinks and other wet areas, indicate the type of water-resistant wall finish on the finish schedule. For walls behind cooking equipment, indicate the heat-resistant wall finish on the finish schedule. If painted walls are proposed, provide the finish level of the paint (e.g. "gloss", or "semi-gloss") on the finish schedule. See also Table 2.

+ **WITH PLANS**: Submit physical samples of the proposed wall tiles. See also Table 1.

CEILINGS

An approved ceiling is required in all areas of a food facility, including, but not limited to:

- Food and beverage handling areas
- Cooking areas
- Storage areas with unpackaged foods
- Warewashing areas
- Janitorial facilities
- Restrooms
- Self service areas, buffets, server and bussing stations with hard-plumbed fixtures and/or equipment, such as warming drawers and refrigeration with unpackaged foods; approved ceiling must extend to the edge of the equipment or counter.
- Refuse and recycling areas when provided within a food facility.

Ceiling finishes that meet approval standards are not required in restrooms designated exclusively for customer use. However, the ceiling must be washable. Additionally, approved ceiling finishes are not required in dining and sales areas, offices, dressing and locker areas, alcoholic beverage bars where drinks are served immediately to customers, and in rooms where hermetically sealed food in its original packaging is stored.

Approved Finishes Outside the Kitchen:

Equipment located outside the kitchen area, such as areas with hard-plumbed fixtures or equipment with unpackaged foods (i.e., customer self-service areas, buffets, server stations, bussing stations, etc.) and mop sinks shall have approved ceiling finishes that extend to the edge of the equipment or the edge of the counter, whichever is further.

Approved Ceiling Materials: Ceiling surfaces in all areas of a food facility, except as listed above, shall be durable, smooth, nonabsorbent, and easily cleanable. Typical approved ceiling finishes include gypsum board with gloss or semi-gloss enamel paint or vinyl-faced ceiling tiles. Exposed brick, concrete block, rough concrete, rough plaster, textured gypsum board or acoustic ceiling tile is unacceptable. Other than the painted gypsum board, any proposed material will require a sample submittal for evaluation and approval. Include any proposed ceiling tile make and model on the finish schedule.

- **What is the definition of smooth**? Smooth is defined as having an even or leveled surface with no roughness or projections that render it difficult to clean.
- **What is an easily cleanable material?** An easily cleanable ceiling is a surface where soil, food residue, or other organic or inorganic materials is effectively removed by standard cleaning methods such as wiping down. Ceiling finishes requiring specialized cleaning processes, chemicals, or tools are not easily cleanable.

Ceiling Attachments: Attachments to ceilings, such as light fixtures and vent covers, shall be easily cleanable. Light bulbs shall be shielded, coated, or shatter-resistant in areas with non-prepackaged ready-to-eat food, clean equipment, utensils, linens, or unwrapped single-use articles. Some easily cleanable track lighting may be acceptable if installed flush to the ceiling. However, suspended track lighting and pendant lighting that are not easily cleanable, such as chandeliers, fixtures with excessive horizontal surfaces, or fixtures with intricate structures, are unacceptable in areas where an approved ceiling is required. Exposed piping, conduit, duct work, and/or beams shall be concealed appropriately above the ceiling or boxed-in flush to the ceiling with approved finishes.

Ceilings Over Permanent Outdoor Bars or Satellite Food Service Areas: A permanent overhead protection must be installed that extends at least 12" horizontally beyond all food, beverages, condiments, equipment, food contact surfaces, work areas, storage areas, and any other areas or equipment associated with the outdoor beverage bar. This overhead protection should be solid, durable, water-tight, nonabsorbent, and easy to clean.

Ceilings Over Non-Permanent Outdoor Bar or Satellite Food Service (SFS): A non-permanent outdoor bar or temporary food service area must have approved overhead protection that extends at least 12" beyond all food, beverages, condiments, equipment, food contact surfaces, work areas, storage areas, and any other associated areas or equipment. The overhead protection should be smooth, durable, rigid, and easily cleanable.

→ **ON PLANS:** On the plan finish schedule, indicate all proposed ceiling finishes in all areas. For suspended ceiling systems, list the manufacturer and model of ceiling tile on the finish schedule. If painted ceilings are proposed, provide the finish level of the paint (e.g. "gloss", or "semi-gloss") on the finish schedule. See also Table 2.

+ **WITH PLANS**: Submit a physical sample of the proposed ceiling tile, including decorative ceiling tiles. See also Table 1.

UTENSIL WASHING FACILITIES

WAREWASHING SINKS

All food facilities in which food is prepared or multiservice utensils and equipment are used shall provide an approved warewashing sink**.** This includes facilities that strictly dispense beer or pour wine without any back-of-house space or a kitchen that is equipped with an approved warewashing sink.

Areas inside the food facility, such as liquor, juice, and espresso bars that are not continuous with the kitchen and have multi-use utensils that require frequent washing and rinsing, must be equipped with an approved bar sink. This does not include pouring beer and wine, whether continuous or non-continuous with the kitchen. See Figure 2 below.

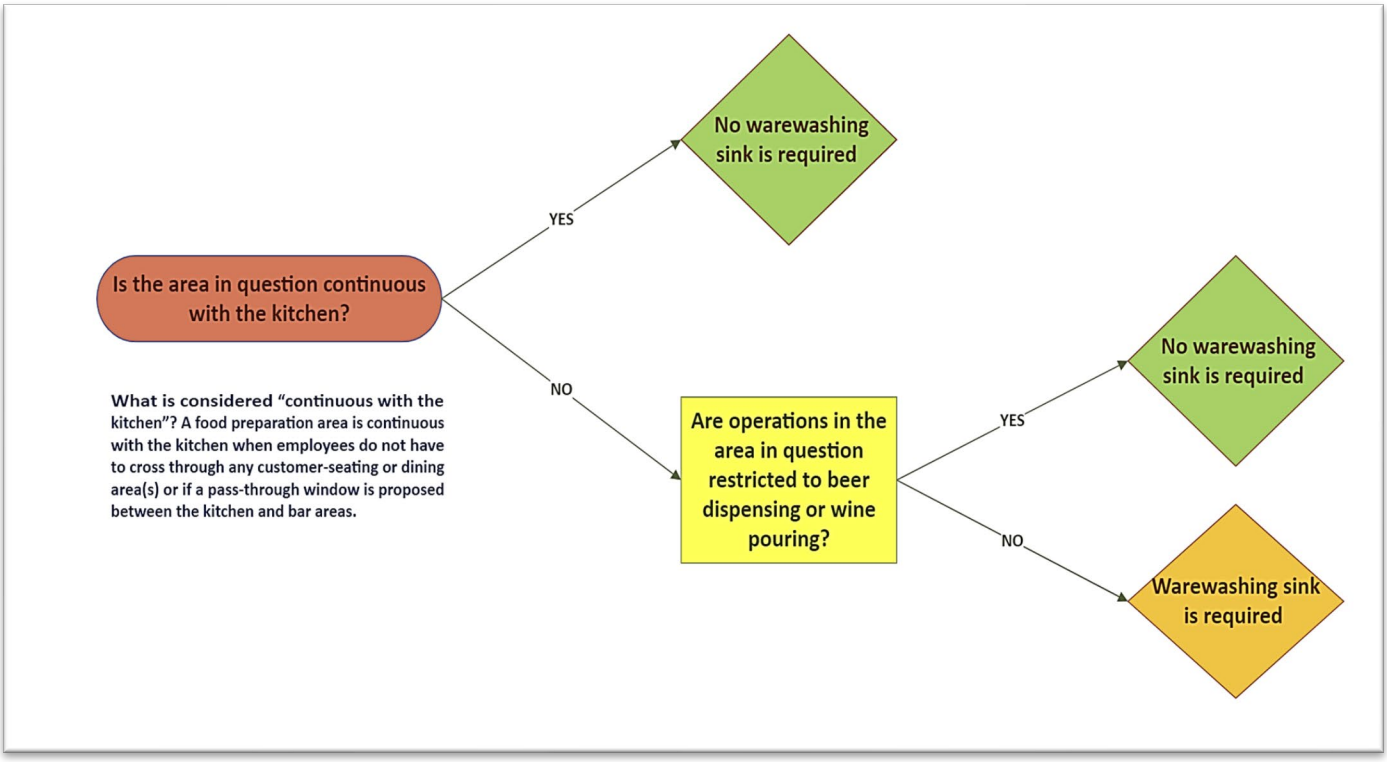


Figure 2

- **What is considered "continuous with the kitchen"?** A food preparation area is continuous with the kitchen when employees do not have to cross through any customer-seating or dining area(s) or if a pass-through window is proposed between the kitchen and bar areas.

Characteristics of an Approved Warewashing Sink

1. The warewashing sink must be sanitation listed by an American National Standards Institute (ANSI) accredited agency, such as NSF or equivalent.

2. An approved warewashing sink has at least three compartments with dual, integral metal drainboards for manually washing, rinsing, and sanitizing equipment and utensils.

3. Compartments shall be a minimum of 18” wide x 18" long x 12” deep, or 16" wide x 20" long x 12” deep. Smaller compartments can be accepted in liquor bars (see information on bar sinks below). However, sink compartments shall be large enough to accommodate immersion of the largest equipment and utensils.

4. Integral drainboards must be at least equal to the area of the largest compartment.

5. Sinks that use heating for manual sanitization must have a sanitizing compartment large enough to completely immerse the largest utensil.

6. Warewashing sinks shall drain indirectly to a floor sink unless draining according to Universal Plumbing Code Section 704.3.

7. Warewashing sinks shall attach to adjacent walls with integral backsplashes. Warewashing sink drainboards that terminate against a wall must have a 2” gap between the drainboard and the wall or an 8” integral stainless steel side return or equivalent.

8. Non-conventional designs of warewashing sinks are subject to evaluation on a case-by-case basis.

9. Warewashing sinks shall be equipped with hot and cold running water of at least 120°F.

10. Warewashing sinks shall be equipped with a faucet that can reach all compartments.

Please note that this Agency does not require garbage disposals. If provided, garbage disposal installation will require an additional compartment or drainboard space for the disposal cone.

→ **ON PLANS:** Provide the manufacturer/model of the proposed utensil washing sink on the equipment schedule and ensure the sink dimensions are correct on the floor plan. If the utensil washing sink is proposed to be custom-fabricated, indicate the name of the ANSI/NSF fabricator or that an ANSI/NSF fabricator will be chosen prior to construction on the equipment schedule. In addition, if the utensil washing sink is custom-fabricated, indicate the sink compartment and drainboard dimensions on the equipment schedule and the floor plan. See also Table 2.

+ **WITH PLANS**: Provide manufacturer specifications or shop drawings of the warewashing sink. See also Table 1.

Characteristics of an Approved Bar Warewashing Sink

1. The bar warewashing sink must be sanitation listed by an ANSI-accredited agency, such as NSF or equivalent.

2. Standard bar sinks are required to have a minimum of three compartments with dual, integral drainboards. A fourth compartment is recommended for dumping liquid waste and would eliminate the need for a separate dump sink. Each bar sink compartment should have minimum dimensions of 10” wide x 14” long x 10” deep for each compartment, or the sink compartments must be large enough to accommodate the largest utensil, typically a blender.

3. The bar sink must include dual, integrally installed stainless steel drain boards that are 18” or 12” long.
4. Warewashing sinks shall attach to adjacent walls with integral backsplashes. Drainboards that terminate against a wall must have a 2” gap between the drainboard and the wall or an 8” integral stainless steel side return or equivalent.
5. The sink must drain indirectly to a floor sink unless following Universal Plumbing Code Section 704.3.
6. Bar warewashing sinks shall be equipped with hot and cold running water of at least 120°F.
7. Bar warewashing sinks shall be equipped with a faucet that can reach all compartments.

→ **ON PLANS:** Provide the manufacturer/model of proposed bar warewashing sink on the equipment schedule and ensure the sink compartment and drainboard dimensions are correct on the floor plan. If the bar warewashing sink is custom-fabricated, indicate the name of the ANSI/NSF fabricator or that an ANSI/NSF fabricator will be chosen prior to construction on the equipment schedule. In addition, if the bar warewashing sink is custom-fabricated, indicate the sink compartment and drainboard dimensions on the equipment schedule and the floor plan. See also Table 2.

+ **WITH PLANS**: Provide manufacturer specifications or shop drawings of the warewashing sink. See also Table 1.

EXISTING TWO-COMPARTMENT SINKS

A two-compartment sink installed on or before January 1, 1996, that has been in continual use will be accepted even upon replacement if installing a three-compartment sink is not readily achievable and where other approved sanitation methods are used.

1. When a food facility undergoes a remodel, and the scope includes the utensil washing area, the two-compartment sink shall be upgraded to a three-compartment sink.
2. When the food facility undergoes a remodel, but the utensil washing area is not part of the scope of work, the two-compartment sink shall be upgraded to a three-compartment sink where readily achievable.

→ **ON PLANS:** If the existing two-compartment sink is to remain, indicate “existing” on the equipment schedule and note the bowl dimensions on the floor plan. See also Table 2.

DISHMACHINES

All dishmachines must be sanitation-listed by an ANSI-accredited agency, such as NSF or an equivalent organization. Dishmachines shall be installed in conjunction with a three-compartment sink and not as a replacement for one.

Installation of Dishmachines: Dishmachines shall be mounted on 6" cleanable legs to clean the floor underneath. Undercounter dishmachines may also be installed on movable caster wheels with flexible plumbing attachments.

Drainage of Dishmachines: Dishmachines shall drain indirectly to a floor sink. To accept newly installed dishmachines without a floor sink, a scrap tray and floor drain upstream with no connections in between must be provided.

Pre-Rinse Sinks for Dishmachines: A pre-rinse sink is typically located next to or is part of the dishmachines drainboards. These sinks must meet the following requirements:

1. If the pre-rinse sink is not an integral part of the dishmachine drainboards, the sink must have its own integral drainboard and should be clearly labeled for dish rinsing and pre-soaking to prevent confusion with a food preparation sink.
2. The pre-rinse sink is not for complete warewashing and does not replace a three-compartment utensil washing sink. The facility must also have a separate three-compartment utensil washing sink.
3. The pre-rinse sink must drain indirectly to a floor sink through an approved air gap.
4. The pre-rinse sink must be equipped with hot and cold running water of at least 120°F.

Drainboard Requirements for Inline and Under-Counter Dishmachines

Dishmachines shall have two metal drainboards that are sanitation listed by an ANSI-accredited agency, such as NSF or equivalent. The dishmachine's drainboard installation and features shall be compliant with the following:

Sizes: The drainboards shall be an adequate size to accommodate a dish rack (typically 20" wide x 20" long).

Installation: One drainboard shall be attached at the entry point for soiled equipment and utensils, and one shall be attached at the exit point for cleaned and sanitized equipment and utensils. Drainboards that terminate against a wall shall have a 2" gap between the drainboard and wall, or an 8" integral stainless steel side return or equivalent.

Drainage: The soiled drainboard must drain away from the dishmachine, while the clean drainboard can drain towards it.

Sharing with Warewashing Sink: Dishmachines, undercounter and inline, can use the three-compartment sink's drainboards instead of dedicated drainboards for the dishmachine when installed adjacent to the three-compartment sink and if the sink's drainboards are large enough to accommodate a dish rack.

Drainboard Requirements for Pot and Pan Dishmachines

Dishmachines with a pass-through function shall be equipped with integral metal drainboards. Pot and pan dishmachines that are front-loading or incompatible with drainboards shall be fitted with approved alternative equipment that provides adequate and suitable space for soiled and clean equipment and utensils.

Ventilation Requirements for Dishmachines

High-temperature Dishmachines: Type II exhaust hoods are required above in-line high-temperature dishmachines. An exhaust hood may not be needed when the dishmachine is ventless and listed under Underwriters Laboratories (UL) UL 921 or with the local building department's approval. Undercounter high-temperature dishmachines typically do not require mechanical exhaust.

High and Low Temperature Dishmachines: An in-line dishmachine that operates at either low or high temperatures will be treated as a high-temperature dishmachine regardless of use and will require a Type II hood.

→ **ON PLANS:**

- Provide the manufacturer/model of dish machine on the equipment schedule.
- Show the dish machine and drain boards on the floor plan.
- For under-counter dish machines, provide an elevation drawing showing how the dish machine will be properly mounted/elevated up off the floor.
- For in-line units, indicate where the dirty side drainboard will be draining to the floor plan and/or the plumbing floor plan.
- If a booster heater is to be provided for the dish machine, list the booster heater and its energy input on the equipment schedule.

See also Table 2.

+ **WITH PLANS**: Provide manufacturer specifications of the dish machine, and if applicable, booster heater. See also Table 1.

IN-PLACE MANUAL CLEANING

Equipment that cannot be broken down for easy cleaning in the utensil sink, such as band saws, slicers, floor-mounted kettles, or mixers, must be provided with in-place manual cleaning facilities.

Minimum Requirements for In-Place Manual Cleaning

1. Hot (minimum 120°F) and cold water dispensed from a mixing faucet.
2. Hoses must be food-grade and equipped with a backflow prevention device. Hose reels or similar facilities will be required to maintain the hoses off the floor; however, these facilities may not be installed above food, equipment, utensils, single-use articles, storage, and food preparation areas.
3. Wastewater must be drained by indirect connection to an approved sewer line (i.e., trench drain).

Splashguard Requirements: Splashguards may be required to prevent cross-contamination between in-place manually cleaned equipment and other equipment, such as food preparation tables. Floor-mounted equipment that requires in-place manual cleaning may require a 6' high partition.

Equipment With Integral Clean-in-Place Systems: Sanitation-listed equipment manufactured with an integral clean-in-place system must be installed per the manufacturer's requirements. This equipment typically requires a potable water connection, a backflow prevention device, and indirect drainage to a floor sink.

→ **ON PLANS:** For in-place manually cleaned equipment items, show the location of the hose bib and trench drain on the floor plan and plumbing floor plan. Show any required partitions on the floor plan and indicate how the partitions are installed with the overall height. See also Table 2.

SINKS

FOOD PREPARATION SINKS

Food facilities that wash, rinse, soak, thaw, or similarly prepare foods are required to have a designated food preparation sink.

Location and Quantity: Food preparation sinks must be located within the food preparation area and always be accessible. Additional food preparation sinks may be required after evaluating the menu and food handling operations.

Installation:

1. When installed adjacent to walls, food preparation sinks shall have a minimum 2" clearance between the end wall and the sink or must be equipped with an 8" integral stainless steel side return or equivalent.

2. When installed within 24" of a handwashing sink or a warewashing sink not equipped with an integral splashguard, the food preparation sink must have a minimum 6" high splashguard extending to the edge of the sink. Non-integral splashguards must have a minimum 2" clearance on each side. Tapered splashguards will not be accepted if the minimum height is under 6". Splashguard requirements can also be found in Table 3.

Faucets at Food Preparation Sinks: Pre-rinse faucets or hand sprays alone will not be accepted at food preparation sinks. An approved faucet spout that is able to dispense/reach water into each sink compartment must be provided at the food preparation sinks. You may provide a faucet spout along with the hand spray/spray nozzle.

Characteristics of an Approved Food Preparation Sink

1. Sanitation listed by an ANSI-accredited agency, such as NSF or equivalent.

2. The bowl dimensions shall be at least 18" wide x 18" long x 12" deep.

3. The sink must have at least one integral 18" wide x 18" long drainboard or an adjacent 18" wide x 18" long sanitation-listed table. The tables must be free of any surface-mounted equipment.

4. The sink must be indirectly drained into a floor sink.

5. Fill stations or other food preparation equipment, such as potato cutters, can be mounted on the food preparation sink if the sanitation listing, overall integrity, and sink use are maintained.

→ **ON PLANS:** Provide the manufacturer/model of proposed food preparation sink on the equipment schedule and ensure the sink dimensions are correct on the floor plan. If the food preparation sink is custom-fabricated, indicate the name of the ANSI/NSF fabricator or that an ANSI/NSF fabricator will be chosen prior to construction on the equipment schedule. In addition, if the food preparation sink is custom-fabricated, indicate the sink compartment and drainboard dimensions on the equipment schedule and the floor plan. See also Table 2.

+ **WITH PLANS**: Provide manufacturer specifications or shop drawings of the food preparation sink. See also Table 1.

HAND SINKS

Location and Quantity: Handwashing facilities are required within or adjacent to toilet rooms, food preparation areas, and warewashing areas. Handwashing facilities shall be conveniently and centrally located, easily accessible, and unobstructed. Generally, the accepted practice is to install the handwashing sink within the line of sight and within 15' of all food handling and warewashing. The number of handwashing facilities required within or adjacent to toilet rooms shall be per local building and plumbing codes.

Characteristics of an Approved Handwashing Sink

1. Except for lavatories, hand sinks shall be sanitation-listed by an ANSI-accredited agency, such as NSF or equivalent.
2. Except in restrooms, the minimum required dimensions for a hand sink are 8" wide x 8" long x 5" deep and must include a 6" high integral backsplash.
3. The hand sink must be permanently plumbed and supplied with adequate water at a minimum temperature of 100°F and cold running water under pressure.
4. It shall provide warm water under pressure for at least 15 seconds, delivered through a mixing valve or combination faucet.
5. If the faucet's water temperature is not readily adjustable at the faucet, it must be maintained at a minimum of 100°F but not exceed 108°F.
6. If an automatic handwashing facility is used, it must be installed and operated according to the manufacturer's instructions.
7. Each handwashing facility must have permanent soap and paper towel dispensers at or near the sink. Air-drying devices may be installed in restrooms as an alternative to paper towel dispensers.
8. A sign or poster instructing food employees to wash their hands must be displayed at every handwashing sink.

→ **ON PLANS:** Provide the manufacturer/model of proposed handwashing sink on the equipment schedule and show the handwashing sink location on the floor plan. If the handwashing sink does not have integral splash guards, note splash guards on the equipment schedule (along with their material and dimensions if custom-fabricated) and indicate the splashguard location on the floor plan. See also Table 2.

+ **WITH PLANS**: Provide manufacturer specifications of the hand sinks and if applicable, manufacturer specifications of all splash guards. See also Table 1.

JANITORIAL SINKS

Also known as service sinks, mop sinks, or utility sinks, janitorial sinks are required in all establishments that serve food and beverages. If a janitorial sink is not currently present or available in a common-use area, it must be installed during remodeling. The janitorial/mop sink must be compliant when part of a remodel.

Location: The janitorial sink must be in a separate room or separated from the rest of the food facility equipment by a solid partition or wall at least 6' high from the finished floor. Janitorial sinks are not allowed in restrooms of newly constructed facilities. Janitor sinks located inside the kitchen must be NSF-listed or equivalent.

Size: A minimum 24" wide x 24" long mop sink basin is required unless floor mats are washed in the sink. In general, a minimum 24" wide x 36" long sink basin is necessary in that case.

Height: It is highly recommended that a floor-mounted janitorial sink basin be used; however, free-standing janitorial sinks will be accepted where the rim does not exceed 30" above the finished floor.

Mop Rack: A mop rack is required so that mops can be placed in a position after being used to air-dry without soiling walls, equipment, or supplies.

Storage area for cleaning equipment and supplies: A room, area, or cabinet separated from any food preparation or storage area or warewashing or storage area shall be provided for the storage of cleaning equipment and supplies.

Chemical Rack: A designated chemical rack shall be provided at the mop sink area. Note that all wall-mounted shelving must be NSF-listed or equivalent if located inside the kitchen. Generally, a minimum of 2' of shelving is provided for this purpose.

Backflow Prevention Device: The janitorial sink's faucet shall be equipped with an integral atmospheric vacuum breaker at the faucet fixture.

→ **ON PLANS:** Provide the manufacture/model of proposed janitorial sink on the equipment schedule and ensure the janitorial sink dimensions are correct on the floor plan. See also Table 2.

+ **WITH PLANS**: Provide manufacturer specifications or shop drawings of the janitorial sink. See also Table 1.

Finish Requirements Around Janitorial Sinks

Required Finishes for Janitorial Sinks Areas: Approved finishes (floor, cove base, walls, ceiling) are required in the janitorial sink area, including common-use mop sinks. For janitorial sinks installed in a cabinet, an approved cove base is required on the exterior sides and front of the cabinet unless it hinders the cabinet doors from opening or closing. Floor-mounted janitorial sinks require an approved cove base around the exposed perimeter of the sink. When located outside the kitchen area, the janitorial sink shall have approved floor finishes and cove base that extends at least 2' in all directions.

Water-Resistant Wall Material Extension Requirements: Water-resistant wall materials, such as fiber-reinforced plastic (FRP), stainless steel, tile, or equivalent, must be at the janitorial sink and extend at least 2' beyond both the left and right sides of the janitorial sink unless dual minimum 6' high water-resistant partitions are installed.

Height Requirement for Water-Resistant Wall Material: Water-resistant wall material (FRP, stainless steel, tile, or equivalent) must extend at least 6' up the wall as measured above the floor finish.

Wall Finish Extension to Ceiling in Food Handling Areas: Approved wall finishes must extend from the top of the water-resistant wall material to the ceiling when the janitorial sink is in an area where open food is being handled.

Approved Ceiling Requirements for Janitorial Sinks: An approved ceiling is required above the janitorial sink unless the ceiling is higher than 14' above the floor finish.

→ **ON PLANS:** Provide the floor, cove base, wall, and ceiling finishes at the janitorial sink on the finish schedule. See also Table 2.

DUMP SINKS

A dump sink should be installed in beverage preparation areas, such as alcoholic beverage bars and coffee houses, to dispose of large amounts of liquid waste.

1. Dump sinks shall be sanitation-listed by an ANSI-accredited agency such as NSF or equivalent.
2. They must be equipped with dual splashguards, as specified in the splashguard section of this guideline and also Table 3.
3. They must be indirectly plumbed to a floor sink.
4. They must have hot and cold running water at a temperature of 120°F.
5. Dump sinks must be clearly distinguished from others, such as hand sinks, to prevent improper usage.

→ **ON PLANS:** Provide the manufacturer/model of the proposed dump sink on the equipment schedule and show the dump sink on the floor plan. If the dump sink is custom-fabricated, indicate the name of the ANSI/NSF fabricator or that an ANSI/NSF fabricator will be chosen prior to construction on the equipment schedule. See also Table 2.

\+ **WITH PLANS**: Provide manufacturer specifications or shop drawings of the dump sink. See also Table 1.

WATER FILL STATIONS

1. Must be listed to NSF-61 standard.
2. Must be indirectly plumbed to an approved floor sink with a legal air gap, where applicable.

3. Must be manufactured or fabricated from an approved material that facilitates its cleaning and prevents any standing water.

If the fill station is equipped with a water filter or reverse osmosis system to treat the water, a backflow preventer shall be installed between the water treatment system and potable water supply to protect the potable water against contamination.

→ **ON PLANS:** Provide the manufacturer/model of the proposed water filler on the equipment schedule and show the water filler on the floor plan. If filtration is provided for the water filler, note the manufacturer/model of proposed water filter on the equipment schedule, along with any backflow prevention device. Show the location of any proposed filter on the floor plan. See also Table 2.

+ **WITH PLANS**: Provide manufacturer specifications of the water fill device. See also Table 1.

DIPPER WELLS

A cold running water dipper well may be installed for scoops or other reusable serving utensils that are used with moist foods, such as ice cream or mashed potatoes. The dipper well shall be drained by means of an indirect connection to a floor sink. Consult with your plan checker for alternative methods for storing scoops or other reusable serving utensils.

→ **ON PLANS:** Provide the manufacturer/model of the dipper well on the equipment schedule and show the dipper well on the floor plan. See also Table 2.

+ **WITH PLANS**: Provide manufacturer specifications of the dipper well. See also Table 1.

WATER FILTERING DEVICES

Water filtering devices must be NSF-listed or equivalent for drinking water treatment and shall not be located

EQUIPMENT

above any food or utensil handling equipment.

→ **ON PLANS:** Provide the manufacturer/model of water filters on the equipment schedule and show the location on the floor plan. See also Table 2.

+ **WITH PLANS**: Provide manufacturer specifications of any water filtering device. See also Table 1.

EQUIPMENT SPECIFICATION

Sanitation Listed: All new and replacement food-related or utensil-related equipment shall be certified or classified for sanitation by an American National Standards Institute (ANSI) accredited certification program. Examples of these accredited sanitation-listing programs include NSF, UL, Intertek ETL, CSA, etc.

Intended for Commercial Usage: All utensils, display cases, windows, counters, shelves, tables, refrigeration units, sinks, dishmachines, and other equipment or utensils used in the preparation, sale, service, and display of food shall be intended for commercial usage in a food facility. They shall be made of nontoxic, corrosion-resistant, nonabsorbent materials and constructed, installed, and maintained to be easily cleaned.

- **What does commercial mean, and how is that different from sanitation listing?** This type of equipment is built to withstand heavy usage and is made from more durable materials than residential equipment. It's intended for high volumes of work and continuous operation, ensuring efficiency and reliability in a demanding environment.

  On the other hand, sanitation listing pertains to equipment that meets specific health and safety standards, particularly concerning the cleanliness and hygiene requirements necessary for food handling. While commercial equipment is built for durability and efficiency, not all commercial equipment is sanitation listed. This means that while it may be heavy-duty and suitable for a professional kitchen, it may not have undergone the same rigorous evaluation for sanitation and safety standards.

  For more detailed guidance on this topic, refer to the "Field Assessment for Specialist or Unique Equipment" section.

Cleanability and Vermin Proofing: Equipment shall be designed and manufactured to prevent the harborage of vermin and the accumulation of dirt and debris and to permit the inspection, maintenance, servicing, and cleaning of the equipment and its components.

Electrical Appliances: All new and replacement electrical appliances shall meet applicable Underwriters Laboratories (UL) standards for electrical equipment, as determined by an ANSI-accredited certification program.

Field Assessment for Specialized or Unique Equipment: If an applicable sanitation certification is unavailable, unique or specialized equipment may be evaluated for approval by our Agency. However, unique or special equipment that comes into direct contact with food must undergo field evaluation and certification for compliance with sanitation standards by an accredited third-party program, such as NSF, Intertek ETL, CSA Group, IAPMO, etc. A copy of the field evaluation report must be submitted to our Agency for approval before the final inspection.

Custom-made Equipment: Custom-made equipment must be manufactured by a sanitation-listed fabricator certified by an accredited agency for that specific custom-made equipment. If the fabricator is undetermined at the time of plan submission, provide a note on the plans indicating that all custom-made equipment will be fabricated by a sanitation-listed fabricator. All fabricated items must be accurately shown in plan elevations,

and once fabricated they must match the approved plan. Fabricator certification or cut sheets must be provided to your plan checker by final inspection.

Specification Sheets: To facilitate plan review, submit manufacturer specification sheets (also known as "cut sheets" or "spec sheets") for all equipment at the time of plan submittal. Please note that, under certain circumstances, additional supporting documents, such as proof of certification by an ANSI-accredited agency, may be requested. Accredited agencies have online directories that can be searched to obtain a copy of the certification for the unit in question. Alternatively, the manufacturer of the unit or the certifying agency may be contacted directly to obtain a copy of that information. Specification sheets play a vital role in the equipment review process. They provide Plan Checkers with a comprehensive understanding of installation and ventilation requirements, water consumption, and other distinctive features specific to the proposed equipment. This detailed information ensures that all aspects are thoroughly evaluated and addressed.

Durable Material: Utensils made of plastics and composites must remain intact when used without degradation or change in shape, structure, or function through standard operating, storage, and sanitation practices. Copper or copper alloys are not to be used in contact with food that has a pH below 6.0, such as vinegar, fruit juice, or wine, or for a fitting between a backflow preventer and a carbonator.

Fasteners: Fasteners shall be easily cleanable and not used on a food contact surface.

→ **ON PLANS:** Provide the manufacturer/model of all equipment on the equipment schedule. Ensure equipment labels on the floor plan match the equipment schedule. If an equipment item is proposed to be field ANSI/NSF listed for sanitation, on the equipment schedule, indicate that this specific equipment will have a field listing by the time of inspection. See also Table 2.

+ **WITH PLANS**: Provide manufacturer specifications with all proposed equipment. See also Table 1.

EQUIPMENT INSTALLATION

Joints and Seams: Construction joints and seams in a food or splash zone shall be tightly fitted and sealed so as to be easily cleanable. Joints and seams in a nonfood zone shall be closed. Silicone sealant or equivalent waterproof compounds shall be acceptable, provided that the gap is smaller than ¼" and applied smoothly to prevent the entrance of liquid waste or vermin. Welded joints and seams in a nonfood zone shall be deburred. Space around pipes, conduits, or hoses that extend through cabinets, floors, or outer walls, accesses to cabinet voids, between non-portable equipment, and around wall-mounted equipment shall be sealed. The closure shall be smooth and easily cleanable.

Installation to Facilitate Cleaning: Equipment must be installed to facilitate cleaning. This means one of the following:

- Equipment shall be spaced at least 6" from adjoining equipment, floors, walls, cabinets, and ceilings.
- Equipment not spaced 6" apart shall be easily movable if counter-mounted (less than 100 pounds) or on lockable casters if floor-mounted.

- Equipment that is not spaced 6” apart nor is easily moveable shall be sealed or flashed together to remove any seams, cracks, or joints where liquids, grease, debris, or vermin can accumulate.

Approved Methods of Installation on the Floor

Legs: Equipment may be raised with at least 6” of clearance from the floor using easily cleanable solid legs.

Casters: Equipment can be proposed as easily movable. Easily movable means mounted on casters or rollers to be moved by one person or provided with a mechanical means to tilt or move safely. When using commercial casters, the equipment must have no utility connection, a utility connection that disconnects quickly, or a flexible utility connection line of sufficient length to allow the equipment to be moved for cleaning of the equipment and adjacent areas**.**

Curb-Mounted: Equipment that is fixed because it is not easily movable may be sealed to the top of a 4” concrete or solid curb. The curb must have an integral coved base around all exposed sides.

Fixed: Equipment that is fixed because it is not easily movable shall be sealed to the floor with an approved integral coved base attached to the sides of the equipment that connects to the floor. Fixed equipment shall also be installed so that it is spaced with at least 6” of clearance to allow access for cleaning along the sides, behind, and above the equipment. Otherwise, fixed equipment must be sealed to adjacent surfaces.

Counter-Mounted Equipment: Counter-mounted equipment that is not easily movable (over 100 pounds or with utility connections) shall be installed to allow cleaning of the equipment and areas underneath and around it. The equipment must be sealed to the counter or elevated on legs, providing at least a 4” clearance between the counter and the equipment. All counter-mounted equipment must be separated by at least 6” or flashed together to facilitate cleaning.

Cash Vaults: Cash vaults and safes must be properly installed according to the methods above, unless completely segregated in a non-food area, such as an office.

EQUIPMENT ELEVATION

Elevation drawings will enable the Plan Checker to conduct an accurate plan review and are strongly recommended for the entire facility. Elevation drawings are required at the Plan Checker’s request, and, for all custom-fabricated items. When required, elevations must show all equipment properly mounted/elevated and that the finishes of the millwork/cabinets are called out on the plan. All equipment, including shelving, must be supported by 6” high, easily cleanable legs, commercial casters, or completely sealed in position on a 4” high curb with a coved base.

→ **ON PLANS:** Indicate how all equipment, including floor-mounted equipment are to be installed on the equipment schedule (e.g., “4” caster wheels”, “6” legs”, “4” curb”). Elevations are strongly recommended. See also Table 2.

SNEEZE PROTECTION

Adequate sneeze protection is required where unpackaged food or food-related items are displayed or prepared. Displays of unpackaged foods such as buffets, salad bars, and prep areas shall be shielded to intercept a direct line between the customer's mouth and the food displayed or dispensed from approved self-service containers. Sneeze guards must meet the following appliable requirements:

1. The sneeze guard shall be permanent and non-removable and made of tempered glass or equivalent material.
2. The sneeze guard shall intercept a direct line between the customer's mouth and the displayed food. Assume the customer's mouth is 54"– 60" above the finished floor on the customer's side.
3. Food displayed should be protected from all sides. When installed, end returns shall extend at least 18" towards the employee side or, as required.
4. When a vertical sneeze guard is installed, it shall extend to a height of 60" above the finished floor on the customer's side.
5. Unless installed completely sealed to the counter, there shall be a 1" –1 1/2" gap between the top of the counter (when installed 34" – 36" above the floor) to the bottom of the sneeze guard to facilitate cleaning.
6. Gaps between posts or in slanted sneeze guards cannot exceed 3/4".
7. Countertops in areas where unpackaged food or food-related items are displayed or prepared, such as bars, must be designed to intercept a line at 54" and 60" above finished floors as measured from the customer's side. A drawn cross-sectional detail of the countertop, along with the largest piece of equipment (in width or height) located on the employee's side, must be submitted for evaluation. For liquor bars, a 30" wide countertop will be accepted as adequate sneeze protection and a cross-section will not be required.

For additional information on sneeze protection, please visit NSF Standard-2 online.

→ **ON PLANS:** Show the outline and dimensions of any proposed sneeze guards on the floor plan. Provide details showing the configuration of the sneeze guard and overall height, in both front-facing elevations and cross sections. Provide the details of the sneeze guard on the equipment schedule, and if custom, indicate the materials used. If the sneeze guard is pre-made, indicate the manufacturer/model of sneeze guard on the equipment schedule. See also Table 2.

+ **WITH PLANS**: Provide manufacturer specifications for any pre-made sneeze guards. See also Table 1.

SPLASHGUARDS

Splashguards are required when different types of sinks are located within 24" of one another or adjacent to a food-contact surface, food preparation area, or storage area. Follow the guidelines provided in Table 3 in the Appendix to verify when splashguards are required.

→ **ON PLANS:** Note any splash guards on the equipment schedule and show the splashguard location on the floor plan. If the splash guards are custom-made, indicate the materials and dimensions, and clarify how the splash guards will be installed. See also Table 2.

REFRIGERATION AND WALK-IN UNITS

Sanitation Listing: All refrigeration units and walk-in unit components and shelving must conform to applicable NSF standards or equivalent.

Sufficient Refrigeration: Based on the proposed menu and operations, sufficient refrigeration units conveniently located for all types of operations (preparation, holding, cooling, serving) shall be provided.

Temperature Measuring Devices: A thermometer shall be provided for each refrigeration unit. The thermometer shall be located to indicate the air temperature in the warmest part of the unit and shall be affixed to be readily visible. Temperature measuring devices shall be easily readable and have a numerical scale, printed record, or digital readout in increments no greater than 2°F or over the intended range of use.

Flashed to Ceilings and Adjacent Structures: Walk-in units shall be completely flashed to the building's walls and ceiling, except in strictly prepackaged food facilities. A walk-in unit, such as at a grocery store, with a side that opens to an area of the facility that is handling unpackaged food, shall be flashed to the ceiling. However, the walk-in unit's side that opens to the warehouse area does not need to meet this requirement.

Shelving Within Walk-in Units: All shelves in walk-in refrigeration units must be supported by 6" high, easily cleanable legs or cantilevered off the wall. In all cases, the shelving must be constructed and installed so that it is easily cleaned. Castors may be used on small, easily movable dollies, speed racks, or other similar mobile units. Wooden shelving is not acceptable.

Aisle Clearances: 30" aisle clearance is required within the walk-in units.

Condensate Drainage: For walk-in units with condensate drains, the drain lines must be mounted ½" off the walls (on both the interior and exterior of the walk-in) to allow for cleaning. Condensate drains must terminate indirectly to a floor sink with a 1" minimum air gap.

SPECIFIC REQUIREMENTS FOR WALK-IN UNITS

Walk-in Units that Strictly Open to the Exterior of a Food Facility with No Interior Door: These walk-in refrigeration units would only be approved with hermetically sealed products in their original containers, such as kegs, case-lot items, and whole uncut produce and may require separate satellite food service health permit. Depending on the food operations, this cannot be the only storage refrigeration proposed by the facility. When these units are proposed, specification sheets or documentation confirming that the walk-in unit was designed by the manufacturer for external access must be provided.

Walk-in Units that are Strictly Open to the Interior of a Food Facility: This type is approved for packaged and unpackaged food items.

Walk-in Units with Doors Opening to the Interior and Exterior of Food Facilities: Walk-in units that feature multiple doors for both prepackaged and unpackaged food items and that open to the exterior (for receiving goods, etc.) as well as to the interior are generally accepted in well-controlled environments such as schools, jails, and hospitals. However, acceptance will be determined case-by-case if these units are proposed for use in other settings.

When these units are proposed, specification sheets or documentation confirming that the walk-in unit was designed by the manufacturer for external access must be provided. A "well-controlled environment" refers to having active managerial control with established processes and procedures, ensuring that operations are effective at ensuring food safety.

Finish Requirements for Walk-in Units

1. Where unpackaged food is being held, walk-in units shall have approved floors and a coved base. The coved base shall have a minimum 3/8" radius and be continuous from the floor up the wall at least 4" high. When proposing a top-set coved base, a sample will be required prior to installation.

2. Floors shall be smooth and easily cleanable. Textured floors can be accepted if a floor drain is provided within the exterior swing of the walk-in unit door and a pressure washing system is readily available.

3. Diamond treaded walls and doors are not accepted without a floor drain provided within the exterior swing of the walk-in unit door and a pressure washing system.

4. When used, fasteners must be easily cleanable. Fasteners that connect the walls to the floor of the walk-in unit shall be concealed in a curb or otherwise covered to render them easily cleanable.

→ **ON PLANS:** Provide the manufacturer/model of all refrigeration on the equipment schedule and show the refrigeration on the floor plan. Ensure the floor plan labels match the equipment schedule. If walk-in units will be custom-fabricated, indicate the fabricator name or that an NSF/ANSI fabricator will be chosen prior to installation on the equipment schedule. For walk-in units, provide elevation drawings showing the units flashed to the facility walls and ceilings. See also Table 2.

+ **WITH PLANS**: Provide manufacturer specifications of all refrigeration. See also Table 1.

AISLE CLEARANCE

A minimum of 30" of clearance is required for equipment accessibility unless otherwise specified by regulatory jurisdictions (i.e. fire department, OSHA, city officials, etc.).

STORAGE

DRY FOOD STORAGE

Adequate Storage: Adequate and appropriate space must be provided for the storage of food, equipment, utensils, laundered linens, and single-use items. The floor space for backup dry food storage generally should be a space equal to 25% of the food preparation area(s).These items should be stored in a clean, dry location, protected from splash, dust, vermin, and any forms of contamination or adulteration. Additionally, they must be kept at least 6" off the floor. Storage of these items is strictly prohibited in locker rooms, restrooms, refuse rooms, mechanical rooms, beneath sewer lines or leaking water lines, under open stairwells, and in areas that are exposed to other sources of contamination.

Facility Space Limitation: A Word of Caution! Very small facilities typically take multiple rounds of plan review and discussion. Stand-alone food facilities proposed with an overall footprint of less than 600 square feet typically cannot accommodate the required shelving, mandated sinks, restrooms, sufficient food preparation and equipment space. Regardless of a facility's size, all minimum requirements must still be met.

Shelving Materials

1. Shelving materials must be appropriate for their intended use. All shelving racks must be sanitation-listed in unpackaged food facilities and constructed from smooth, easily cleanable, durable, and non-absorbent materials. Additionally, they should be properly mounted off the floor.

2. Wooden cabinetry and millwork shelving must be sealed to ensure they are smooth and free of crevices, chips, inclusions, pits, and open seams. Fiber-reinforced plastic (FRP) and laminate are generally accepted finishes for millwork, however, properly sanded and finished wood with a durable, water-resistant paint may also be acceptable.

3. Wall-mounted shelving units must be NSF-listed for food storage. Wall-mounted shelving support bracings, such as wall-anchored structures with height adjustment slots or similar types, are not permitted.

4. Sanitation-listed high-density storage units are acceptable. Top-track mounted high-density storage units are typically approved. The tracks must be adequately spaced from the walls to facilitate cleaning.

5. Shelving units in a strictly prepackaged dry food facility and the sales or customer area do not need to be sanitation listed.

Accessible Storage

1. In a food facility, it is important that at least 50% of the minimum required shelving be easily accessible and usable, meaning located within or contiguous to the food preparation area, and at or below 5'9" in overall height. The other half of the shelving can be situated in an approved remote location.

2. Shelving in remote locations should be part of the same property or facility, must be within a reasonable walking distance, and be under the control of the facility operator. Access to remote storage areas should not require walking through another business. Additionally, remote shelving areas may necessitate a separate annual health permit.

3. When proposing shelving, accessibility must be prioritized. This includes maintaining a minimum aisle clearance of 30" on at least one side of the shelving unit. If the shelving depth exceeds 36", it must be accessible from both sides to ensure ease of use and for cleaning and maintenance.

4. Shelving racks that are installed at a height greater than 5'9" above the finished floor are classified as remote shelving and are not considered accessible. It is important to know that building departments require special permitting and inspection for any shelving racks installed above this height, as detailed in California Building Code Section 105.2-13. If necessary, approval from the building department for any storage higher than 5'9" must be obtained during plan review process and prior to final inspection. Otherwise, shelving over 5'9" will not be included in the overall shelving calculations.

5. To comply with safety regulations, items should not be stored within 18" of any fire sprinkler, per the National Fire Protection Association (NFPA) Standard 13.

Understanding Running Feet of Shelving and Required Storage Capacity

A running foot of shelving refers to a single shelf that is 18" deep x 12" long, and with at least 12" of spacing between shelves. When assessing running feet of shelving, the following are taken into consideration:

1. Shelving that has a depth greater than 18" will be counted as additional shelving based on the extra depth provided. For example, a shelf that is 24" deep x 12" long will be counted as 1.33 running feet. Conversely, shelving that is less than 18" deep will be counted as less than a full running foot. For instance, a shelf that is 14" deep x 12" long will be counted as 0.78 of a running foot.

2. Dunnage racks can account for up to 25% of the minimum shelving requirement and are considered to provide 3 running feet of storage for every foot of dunnage shelving due to the stacking of items like flour or potatoes. For example, a dunnage rack that is 4 feet long is equivalent to 12 running feet of storage shelving.

Minimum Storage Required: Please refer to **Table 4** in the Appendix for storage requirements of unpackaged food operations.

Areas Excluded from Storage Calculation: Storage within the areas listed below is not included in the minimum dry storage calculation:

1. Shelving racks installed above warewashing sinks and dishmachine drainboards, as these are designated for utensil drying.

2. Shelving in the cook's line under the hood canopies and shelving positioned under and above gas-powered cooking equipment are classified as working shelving.

3. Shelving located beneath exposed plumbing pipes or extensive electrical conduits, such as directly under sinks and point-of-sale units, as these areas can be contaminated by leaking pipes and are not easily cleanable.

4. Shelving in offices, restrooms, walk-in coolers or freezers, locker rooms, trash areas, dining areas, customer display areas, and non-permanent outdoor sheds. However, liquor can be stored in the office.

SPECIAL STORAGE REQUIREMENTS

1. Liquor bars require additional designated storage, see **Table 4** in the Appendix for storage amounts.

2. A separate area must be provided to store poisonous or toxic materials, such as cleaning chemicals, so they cannot contaminate food, equipment, utensils, linens, or single-use articles. Typically, a shelf is provided at the janitorial sink for this purpose.

3. Cleaners and sanitizers used in the warewashing process may be stored in the warewashing area in a manner to prevent contamination of food, equipment, clean utensils, linens, and single-use articles.

4. Solid-fuel-burning appliances will require suitable space for the storage of wood, charcoal or other forms of solid fuel.

5. Facilities with live seafood holding tanks will require additional storage designated for the care and maintenance of tanks.

→ **ON PLANS:** Provide the manufacturer/model of all shelving on the equipment schedule and show the location of shelving on the floor plan. For wall-mounted shelving, indicate the mounting heights on the floor plan if not shown in elevation. See also Table 2.

+ **WITH PLANS**: Provide manufacturer specifications of all shelving. See also Table 1.

VENTILATION

MECHANICAL VENTILATION

1. Equipment that requires ventilation (Type I or Type II) shall meet the standards as listed under the "Mechanical Exhaust Ventilation Systems for Retail Food Facilities" published by the California Conference of Directors of Environmental Health. Additionally, any ventilation system's construction shall meet all applicable mechanical, building and electrical codes.

2. All canopy-type hoods shall be flashed to the ceiling and adjacent walls. Alternative types of hoods shall be properly sealed using approved material at penetrations.

3. If stainless steel side panels are proposed to regulate the exhausted air within hood canopies, they shall be mounted 6" above the floor or installed on 6" legs.

4. Existing Type I or Type II hoods that are not intended to be used by the current operator must either be removed or capped. When capping is proposed, an approved, smooth, durable, easily cleanable, and non-combustible material, such as galvanized steel, must be used. The capping must be securely fastened to the existing canopy, with all seams properly sealed to prevent the accumulation of debris and dust, ensuring that the integrity and sanitation standards of the hood canopy are maintained. Capped hoods may not be put back into use without prior approval from this Agency.

Countertop cooking equipment, such as rethermalizers and induction cookers, will be evaluated for ventilation requirements based on factors such as the menu, operational practices, and specific use cases. Acceptance will be determined on a case-by-case basis.

Type I Hood Requirements

1. Type I mechanical ventilation is required above cooking equipment used with raw animal products. All cooking that generates oil and grease will be evaluated for Type I hood requirements.

2. The duty level, cubic feet per minute (CFM), and hood temperature for the hood shall be the duty level of the appliance that has the highest (heaviest) duty level of appliances installed underneath the hood.

3. Non-canopy hoods are not permitted to be installed with equipment that is proposed to use solid fuels such as charcoal, briquettes, and mesquite.

4. Type I hoods for use over charcoal and other solid fuel equipment shall be provided with separate exhaust systems (e.g., separate exhaust duct and exhaust fan).

5. Type I non-UL-listed hoods: Non-UL-listed hoods are evaluated as "custom" hoods for the purpose of evaluating exhaust requirements. When different types of cooking equipment are installed under a common hood, the entire hood shall be designed using the formula that produces the highest flow rate. The formula used to calculate the required flow rate is:

- ❖ **Exhaust CFM** = AIRFLOW x Length of the hood *(Refer to California Mechanical Code (CMC) Section 508.10.1 for the minimum exhaust CFM for custom hoods)*.

6. Canopy hoods shall overhang or extend a horizontal distance of at least 6" beyond the outer edge of the cooking surfaces on all open sides. This distance is to be measured from the inside lip of the hood.

7. Air balance reports generated by certified technicians will be required for all new and existing hoods when the scope of remodeling includes modifications to the cooking equipment beneath them. A copy of the air balance report must be submitted to the designated Plan Checker prior to the final inspection for evaluation.

8. The vertical distance between the lower lip of the hood and the cooking surface shall not exceed 4'.

9. Grease filters are required for listed and unlisted type I hoods. Grease filters within downdraft appliances and recirculating systems shall be installed per manufacturer's instructions.

Type II Hood Requirements

1. Type II hoods are required over equipment that generates steam, vapors, heat, or odors. A Type II hood is not approved for use with cooking operations that generate oil and grease.

2. Three methods are available to comply with requirements for equipment that generates steam, heat, and products of combustion where grease or smoke is not present:

   - Unlisted Type II hoods built per CMC Section 508.
   - Listed Type II hoods.
   - Dishmachines with a self-contained condensing system (UL 921).

MAKE-UP AIR

To provide an efficient air exchange system, the following factors should be taken into consideration when evaluating a make-up air system:

1. The number and location of return air registers should provide a uniform distribution of make-up air throughout the facility, taking into consideration cross drafts, room configurations, and required air flows.

2. Properly designed registers and diffusers will help slow down the air velocity and evenly distribute the make-up air.

3. The make-up air registers should be positioned to prevent short-circuiting of the air supplied for the exhaust system.

   - ❖ **What is short-circuiting of air supply?** Short-circuiting of air supply happens when the air from the supply duct goes directly to the return or exhaust grilles without mixing properly in the room. This can cause problems such as uneven temperatures, poor indoor air quality, and lower system efficiency.

4. Windows and doors shall not be used for the purpose of providing make-up air.

5. The exhaust and make-up air systems shall be connected by an electrical interlocking hardwired connector so that one system cannot be operated when the other system is off.

6. UL-listed hoods have a minimum requirement of 80% of exhausted air provided as dedicated make-up air. Non-UL-listed hoods must provide at least 100% of exhausted air as make-up air.

RESTROOM VENTILATION

Toilet rooms shall be vented to the outside air utilizing an openable, screened window, an air shaft, or a light-switch-activated exhaust fan, consistent with the requirements of local building codes.

EXEMPTIONS FROM PROVIDING MECHANICAL EXHAUST VENTILATION

1. A cooking appliance that is in accordance with UL 710B for reduced emissions, where the grease discharge does not exceed 2.9 E-09 ounces per cubic inch (oz/in^3) when operated with a total airflow of 500 cubic feet per minute (cfm).

2. Recirculating systems listed in accordance with UL 710B and installed in accordance with CMC Section 516.0.

3. Dishmachines connected to a Type II duct system and exhausted directly to the outdoors.

4. Dishmachines with a self-contained condensing system listed in accordance with UL 921 and installed in a space where the HVAC system has been engineered to accommodate the latent and sensible heat load emitted from such appliances.

5. Documentation from an approved third-party testing laboratory, such as UL, must be submitted for review to ensure compliance with the exemptions listed above.

→ **ON PLANS:**

- Show the outline of any hood canopies, to scale, on the floor plan.
- Indicate the manufacturer/model of ventilation hoods on the equipment schedule.
- Provide elevation drawings showing cooking equipment mounted under the hood and that the hood is flashed to the facility walls and ceilings.
- Provide mechanical sheets (mechanical floor plan) and hood drawings with details on CFM of exhaust and make up air.

See also Table 2.

UTILITIES (PLUMBING, ELECTRICAL, GAS)

PLUMBING

Water Heaters

Water Supply: An adequate, protected, pressurized, and approved supply of potable hot and cold water must be always provided.

Hot Water Temperature: Hot water must be supplied at a minimum temperature of 120°F, as measured from the faucet to all sinks. Warm water, measuring between 100°F and 108°F, must be provided at handwashing sinks if the water temperature is not readily adjustable at the faucet.

Sizing of Water Heaters: Water heaters must be appropriately sized to ensure enough hot water is always available to meet the facility's peak-hour demand. Please refer to the California Conference of Directors of Environmental Health (CCDEH) Guidelines for Sizing Water Heaters for detailed criteria. For hot water demand calculations, a tap water temperature of 70°F will be used. The temperature rise is determined based on the fixture requiring the highest water temperature, but it must be at a minimum of 50°F.

Booster Heaters: All booster heaters must be sized according to CCDEH guidelines.

Point-of-Use Water Heaters: Point-of-use electric tankless water heaters are only approved for lavatories. All other fixtures shall be connected to the main water heater.

Food Facilities Offering Prepackaged Foods: A food facility that handles and sells only prepackaged foods shall provide a water heater with a minimum storage capacity of 10 gallons if supplied with one hand sink (lavatory) and one janitorial sink. If the facility has more than a single handwashing sink and janitorial sink, the water heater must be sized using the storage water heater guidelines.

Water Pressure: Water under pressure must be supplied to all fixtures, equipment, and non-food equipment that require water. The pressure must be adequate to meet all needs as specified by the Uniform Plumbing Code and the manufacturer's specifications for equipment and fixtures.

Shared Water Heaters: Each food facility must have its designated water heater. However, food facilities within the same building, such as hotels, grocery stores, and ghost kitchens, can share a common water heater.

Efficiency Ratings: Gas and electric thermal efficiency ratings must adhere to CCDEH guidelines for sizing water heaters.

Recirculation Pumps: Where fixtures are located more than 60’ from the water heater, a recirculation pump must be installed to ensure that water reaches the fixture at a temperature of at least 120°F. When sizing water heaters, thermal efficiency fluctuations due to recirculation pumps should be considered.

Drainage: All water heaters must indirectly drain to an approved floor sink, or into a janitorial sink. With the building department’s consent, drainage to landscape areas can be approved.

Tankless Water Heaters: For tankless water heaters, 120°F shall be provided to all fixtures simultaneously.

Installation Requirements for Water Heaters

Approved Installation: The water heater must be installed in an approved manner, elevated off the floor on an approved platform with at least 6" cleanable legs or on a minimum 4" concrete curb with an approved cove base.

Installation at Janitorial Sink: The water heater may be installed above the janitorial sink if it meets Uniform Building Code structural requirements (as determined by the building department).

Public Access Restriction: The water heater may not be in public areas. If it is in a public access area, it must be separated from the public by a locked door or cabinet.

Restricted Areas: The Uniform Building Code prohibits the installation of gas water heaters in restrooms or change rooms. Water heaters proposed in the ceiling or on the roof can be approved if documentation or pictures of the water heater's label can be provided to your Plan Checker by the final inspection.

Food Handling Areas: The water heater may not be installed above any food handling or storage areas.

Sealing of Penetrations: Water heater penetrations and ducts must be completely sealed using approved materials. Foam material is not acceptable in food-handling areas.

→ **ON PLANS:**

- Show the location of the water heater(s) on the floor plan.
- Provide the manufacturer/model of any proposed tankless water heater(s) on the equipment schedule.
- Provide the manufacturer/model and energy input rating (BTU or KW total) of any proposed storage water heater on the equipment schedule.
- The water heater(s) should be listed on the plumbing pages and shown on the plumbing floor plan.
- If a storage water heater is proposed in the kitchen, provide details on how the water heater will be mounted/elevated up off the floor on a platform or curb on the equipment schedule and show the installation on the elevation.
- If tankless water heaters are proposed in the kitchen, provide elevations showing their proposed location.
- Provide the hot and cold-water supply plumbing plan, and if provided, any recirculation pumps.

See also Table 2.

\+ **WITH PLANS**: Provide manufacturer specifications of the water heater. See also Table 1.

Pipe Type and Installation

Plumbing lines concealed underground and in walls are under the jurisdiction of the building department and are not inspected or verified by Plan Check. The requirements listed below are for exposed lines.

Drain Line Placement: Drain lines must be at least 6” off the floor and ½” away from walls and not cross any aisle, traffic area, or door opening.

Drain Line Termination Requirements: Flexible pipes shall be minimized and terminated with rigid polyvinyl chloride (PVC) or copper pipe.

Restrictions on Drain Line Elevation: Floor-mounted Unistrut shall not be utilized to elevate pipes above the floor. Pipes can be mounted directly on the floor only when necessary, and in such cases, all mounting hardware must be cleanable.

Pipe Penetrations: Where pipelines enter a wall, ceiling, or floor, the opening around the line shall be tightly sealed. Escutcheon plates or equivalent materials are highly recommended. Otherwise, the material used to seal around the line must be smooth, durable, and easily cleanable. Uneven expansion material, such as foam, will not be accepted.

Floor Sinks

Equipment Drainage

All equipment with outlet drains for condensate waste, cleaning, or defrosting must be indirectly plumbed to a floor sink using rigid piping. While flexible piping may be used, it must connect to a rigid pipe that terminates at the floor sink. Equipment that generates waste cannot be drained by rolling it to a floor sink. Additionally, floor drains or funnel drains are not acceptable substitutes for floor sinks.

Installation Requirements for Floor Sinks

Accessibility and Total Run: Floor sinks should be easily accessible from the walkway without crawling into tight spaces, under equipment, or moving equipment to reach it. The total run of the drain line from the equipment to the floor sink cannot exceed 15’, except for walk-in units, which can have a longer run if the drainage slope is maintained. Floor sinks shall not be in walkways or any other location that renders it a tripping hazard.

Floor sinks and Equipment on Caster Wheels or Legs: Floor sinks under equipment installed on 6” legs or caster wheels shall be in line with the front face of the equipment. Meaning, the floor sink shall not extend out from under the equipment and shall not be recessed under the equipment to not be visible. Caster wheels smaller than 4” on equipment requiring indirect drainage will not be accepted.

- **Exception**: A floor sink installed at the accessible side edge of the equipment or sink will also be accepted if it continues to be visible and accessible from the walkway. Because it is not in a walkway, the floor sink can be half-exposed under these circumstances.

- **Exception**: For floor sinks that are easily visible, accessible, and installed under equipment that is mounted high off the floor, for example, 3-compartment sink, food preparation sink, or drainboards with legs longer than the standard 6" round legs, the floor sink can be centered under the equipment as long as there is no undershelf blocking view of the floor sink.

Floor Sinks and Curb-mounted Equipment or Millwork: Floor sinks under equipment installed on a 4" curb or millwork, e.g., storage cabinets, display refrigerators, etc., must be half-exposed as measured from the front edge of the curb. A properly coved protective enclosure around the backside of half-exposed floor sinks will be required (also known as a "back-dam enclosure"). The floor sink must also be located to ensure that the condensate or waste has a minimum ¼ inch-per-foot slope for the drainage plumbing.

Floor sink installation: Floor sinks shall be installed flush with the floor.

Grates: Provide easily removable (without using tools) safety grates on exposed floor sinks. Equipment legs or caster wheels may not be installed on floor sink grates.

→ **ON PLANS:**

- Indicate to where all equipment will drain indirectly on the plumbing waste and vent and/or floor plan.
- Show all floor sinks on the floor plan and plumbing waste and vent page, and ensure the location is consistent on all plan pages.
- For floor sinks under curb-mounted equipment, on the plans provide a properly coved protective enclosure around the backside of half-exposed floor sinks. A sample detail of the enclosure is available in the Details section of this guide.

See also Table 2.

Floor Sink Elimination

Removal of Non-compliant Floor Sinks: Floor sinks that do not meet installation requirements, for example, creating tripping hazards, lack of accessibility, or being in walkways, *and* are not used for indirect waste discharge, must be removed from the plans and during final inspections. Floor sinks that are compliant but currently unused *and* which the operator wishes to keep for future use may be allowed on a case-by-case basis.

Approval for Floor Sink Removal: Operators and contractors must obtain approval from the building department before removing any floor sink.

Requirements for Floor Sink Removal and Capping: When floor sinks are removed, they must be capped and filled with concrete. If the demolished floor sink is situated in a food service or food storage area, the filled and exposed portion of the floor sink surface must be smooth and consistent with the rest of the area.

Drainage Into Other Receptacles

Water Heater and Air Conditioning Drainage: Water heaters and air conditioning units can drain into a janitorial sink with a proper air gap from the rim.

Existing Walk-in Units and Mop Sink Conditions: Existing walk-in units that drain into a mop sink will be accepted as an existing condition if only the walk-in unit is being remodeled.

Floor Sink Requirements for Walk-in Units: A floor sink should be provided for the walk-in units of existing facilities undergoing extensive remodels and all new facilities.

EVAC and Acorn Systems Approval: EVAC and Acorn systems are approved in grocery stores and large facilities (wholesale and processing plants). Sump pumps or evaporator pumps will not be accepted. Details and locations of the EVAC or Acorn system must be provided during plan review.

Walk-in Units and Condensate Drainage Approval: With building department approval, walk-in units (indoor and outdoor), water heaters, and other similar equipment that generates condensate can drain into landscaping.

Condensate Drainage to Floor Sinks: Condensate going into any other sink that is an existing condition will be evaluated on a case-by-case basis, but generally, all equipment that generates condensate shall be routed indirectly to floor sinks.

Floor Drain Requirements

Location Requirement for Floor Drains: Floor drains are required on heavily textured floors, curbed cleaning facilities, areas where pressure spray methods for cleaning equipment are used, liquor bars, in front of dishmachines (conveyor, in-line, and pot washers), in toilet rooms containing two or more water closets or a combination of one water closet and one urinal, and three-compartment sinks that the city requires to be directly plumbed.

Slope Requirement for Floor Surfaces: Floor surfaces shall be sloped 1:50 to the floor drains.

Floor Drain Strainer Requirement: Floor drains shall be equipped with strainers.

Dishmachines with a Downstream Floor Drain: Dishmachines may be connected directly to the sewer immediately downstream from a floor drain. **Exemption**: Warewashing sinks that were directly plumbed and in use on January 1, 1996, may continue to be used.

Trench Drains Requirements

Required Locations: Trench drains are required in wet areas, for example, meat departments and seafood departments, outside walk-in units with textured finishes, in front of large water-consuming equipment (flight-type dishwashers, tilting skillets, braising pans, and large ice machines), and in front of wash-in-place equipment that cannot be disassembled. Trench drains outside walk-in units with textured finishes must be within the door's swing.

Size and Design Specifications: The trench drain's size and dimensions must be designed for the equipment or area it is intended to service, and where applicable, (tilting skillets, braising pans) following the manufacturer's instructions.

Condensate Disposal into Approved Floor Sinks: Any condensate generated from equipment shall be disposed of into an approved floor sink. A trench drain is not a substitute for an indirect waste receptacle.

Grease Interceptors and Traps

Plan Check does not require grease traps or interceptors. If one is required by the building department, it must meet the general requirements.

Underground Grease Interceptors: Underground or in-ground grease interceptors shall be located outside the building whenever possible, and are prohibited in food preparation, storage, and employee restroom areas.

Above Ground Grease Traps: Grease traps proposed above ground, typically installed under the sinks, are approved contingent upon the following requirements:

1. The grease trap device is serviced strictly during non-operational hours. An operational letter detailing the servicing days and times must be submitted along with the plans. A sample letter can be provided upon request.

2. Detailed plans or specifications of the grease trap device are submitted for review and approval to this Agency.

3. The grease trap device shall be installed on easily cleanable 6" high legs or on a 4" high, continuously coved curb and shall be constructed of durable and easily cleanable material.

4. The grease trap device shall be installed to allow adequate space behind, around and over the unit for cleaning. Otherwise, the device shall be sealed to surrounding surfaces with approved materials. Provide details of the installation along with an elevation drawing.

5. Approved finishes are required around the grease trap device to prevent the accumulation of grease, grime, residue, and debris. The floor shall be continuous in design, extending up the wall of the grease trap or curb at least 4" high and forming a minimum 3/8" radius coved base as an integral unit.

6. All conduits, plumbing, etc., not concealed within walls, must be installed at least 6" off the floor and ½" away from walls. All exposed flex conduits are to be "seal-tight" or equivalent.

→ **ON PLANS:**

- When a grease removal device is placed outdoors, show or indicate the location of the grease removal device on the facility site plan.
- When a grease removal device is placed indoors:
    - Show the device on the floor plan and plumbing floor plan.
    - Provide elevations showing how the unit will be mounted up off the ground.
    - Indicate to which floor sink the unit will be draining on the plumbing waste and vent page.

See also Table 2.

+ WITH PLANS: When a grease removal device is placed indoors, provide manufacturer specifications. See also Table 1.

Backflow Prevention Devices

1. When required by applicable plumbing codes, the potable water supply must be protected with backflow or back-siphoning protection devices.

2. An approved backflow prevention device shall be properly installed upstream of any potential hazard between the potable water system and a source of contamination (e.g., all threaded water outlets, mop sinks, sprayers, dishwashers, etc.).

3. An air gap used as a backflow prevention method between the water supply inlet and the flood level rim of any plumbing fixture, equipment, or non-food equipment must be at least twice the diameter of the water supply inlet and may not be less than 1".

4. All backflow prevention devices shall be installed so that they can be easily serviced and maintained.

→ **ON PLANS:** When required, indicate the presence and type of backflow device to be used on the floor plan and/or plumbing plan. See also Table 2.

Common Equipment and Their Required Backflow Prevention Devices

Potable water supply to beverage dispensers, carbonated beverage dispensers, or coffee machines shall be protected by an air gap or vented backflow prevention device in accordance with ASSE 1022. For carbonated beverage dispensers, piping material installed downstream of the backflow preventer shall not be affected by carbon dioxide gas (like copper).

- Reduced Pressure Backflow Preventer is typically approved for carbonated beverage dispensers.
- Vented Dual Check Valves is typically approved for non-carbonated beverage dispensers and espresso machines.
- Pressure Vacuum Breaker is typically approved for rethermalizers.
- Atmospheric Vacuum Breaker is typically approved with warewashing sinks and mop sinks.

ELECTRICAL

1. All new and replacement electrical appliances shall meet applicable UL standards for electrical equipment, as determined by an ANSI-accredited certification program.

1. Permanent electrical power shall always be supplied to operate the approved exhaust, lighting, electric water heaters and refrigeration units, and any other accessories and appliances that may be installed in a food facility.

2. Equipment may not be placed within 3' from the electrical panel.

3. Conduits of all types shall be installed within walls as practicable. When otherwise installed, they shall be mounted or enclosed to facilitate cleaning.

4. All electrical cords must be elevated off the floor to facilitate cleaning and visual inspection.

→ **ON PLANS:** Provide electrical sheets and indicate the location of any electrical panels and transformers on the floor plan. See also Table 2.

Lighting

Lighting Requirements: All light fixtures in areas where food is handled, stored, and equipment is cleaned must be approved. Fixtures should be equipped with approved safety covers, and light bulbs must be shielded, coated, or shatter-resistant to prevent contamination from breakage. Adequate natural or artificial lighting should be provided to ensure visibility while these areas are in use. Certain lighting types, such as suspended track or pendant lighting that are not easily cleanable, are not acceptable where cleanability is required.

Table 5, presented in the Appendix, delineates the minimum lighting requirements mandated for various areas within a food facility.

Lights in Exhaust Hoods: Approved vapor-proof light fixtures shall be installed inside exhaust hoods. Approved cold-tolerant ballasts and vapor-proof fixtures shall be installed inside walk-in units. Install lighting fixtures so that the lighting will not be obstructed by food stored on shelving.

→ **ON PLANS:** Provide a reflective ceiling plan showing the location of all lighting and identifying all lighting types. See also Table 2.

\+ **WITH PLANS**: For any pendant-type lighting proposed over food or beverage service areas, provide manufacturer or design specifications. See also Table 1.

GAS

Gas lines must be concealed in walls, floors and ceilings, if possible. Otherwise, gas lines must be installed 6" off the floor and away from walls to facilitate cleaning. Exposed overhead gas lines must be enclosed flush to the ceiling.

RESTROOMS AND LOCKERS

EMPLOYEE AND ONSITE CONSUMER RESTROOMS

Employee Restrooms: Clean toilet rooms in good repair shall be provided, conveniently located, and accessible for use by employees during all hours of operation. The number of toilet facilities required shall be in accordance with applicable local building and plumbing ordinances. Toilet tissue shall be provided in a permanently installed dispenser at each toilet. Handwashing facilities shall be provided within or adjacent to toilet rooms.

Onsite Consumer Restrooms: A permanent food facility shall provide clean toilet facilities in good repair for consumers, guests, or invitees when there is onsite consumption of food or when the food facility was constructed after July 1, 1984, and has more than 20,000 square feet of floor space. Food facilities with more than 20,000 square feet of floor space shall provide at least one separate toilet facility for men and one separate toilet facility for women. Handwashing facilities shall be provided within or adjacent to toilet rooms.

Non-employee Access: Toilet facilities that are provided for use by consumers, guests, or invitees shall be in a location where consumers, guests, and invitees do not pass through food preparation, food storage, or utensil washing areas to reach the toilet facilities.

Common-use Toilet Facilities: Common-use toilet facilities are approved within amusement parks, stadiums, arenas, food courts, fairgrounds, and similar premises. The common-use toilet facilities must be accessible for employee use during hours of operation and be located within 200' in travel distance of each food facility. Approved finishes are required for common-use toilet facilities. If common-use restrooms are provided and maintained by onsite property management, a letter from the management company confirming that permission to use those restrooms must be provided. Ask your Plan Checker for a sample letter.

Ventilation: Toilet rooms shall be vented to the outside air by means of an openable, screened window (not less than 16 mesh screening), an air shaft, or a light-switch-activated exhaust fan, consistent with the requirements of local building codes.

Fully Enclosed: Toilet rooms in stand-alone food facilities shall be separated by well-fitted, self-closing doors that prevent the passage of flies, dust, or odors. Toilet room doors shall be kept closed except during cleaning and maintenance operations.

Exemptions

1. A permanent food facility that was constructed before January 1, 2004, has been in continuous operation since then, and that provides space for the consumption of food on the premises shall either provide clean toilet facilities in good repair for consumers, guests, or invitees on property used in connection with, or in, the food facility or prominently post a sign within the food facility in a public area stating that public toilet facilities are not provided.

2. For the purposes of this section, continuous operation is when a facility has been open for business, operating as a food facility, with no interruption in operation beyond necessary closure for repairs. Food

facilities that undergo substantial remodel will be required to provide accessible customer restrooms for on-site dining. Substantial remodel means but is not limited to change in structural floor plan, major plumbing changes, installation of a walk-in unit, and/or addition of exhaust hoods.

Employee Change Rooms and Locker Requirements

1. Lockers, dressing rooms, dressing areas, and employee break areas where employees eat and drink shall be provided and located in a designated room or area where food, equipment, linens, and single-use articles are protected from contamination. The designated area must be physically separated from toilets, food storage, and food preparation areas.

2. Dressing rooms or dressing areas shall be provided if employees regularly change their clothes in the facility. Clothing change rooms/areas must always be accessible to employees and may not be utilized as an office or for other food-related activities. Water heaters and other appurtenances will not be accepted in the change room. Exhaust and make-up ventilation shall be provided for each change room.

3. Lockers or other suitable facilities shall be provided and used for the orderly storage of employee clothing and personal possessions. At least one locker shall be provided for each employee during their shift. Lockers must be at least 12" wide x 12" deep x 12" tall and sufficiently sized to store large items such as jackets and large purses or backpacks. Lockers must be installed on 6" high, easily cleanable legs, cantilevered off the wall 6" above the floor, or on a minimum 4" high continuously coved curb or platform. L-angle legs are not acceptable. Lockers in general should be placed indoors but may be accepted in an outdoor location if there is overhead protection, they are on the same premises as the food facility, and under the control of the food facility operator.

→ **ON PLANS:** Show the location of the employee lockers on the floor plan, and list the locker manufactuerr and model on the equipment schedule. If restrooms are not provided within the facility, show the location of the designated restrooms on a facility site plan with a path-of-travel dimensioned in feet from the facility door to the furthest restroom door. See also Table 2.

+ WITH PLANS: Provide manufacturer specifications for the lockers. For common-use restrooms, provide a written agreement from the property management for use of the restrooms. See also Table 1.

FACILITY ENCLOSURE AND VERMIN EXCLUSION

FACILITY ENCLOSURE

1. Each permanent food facility shall be fully enclosed in a building consisting of permanent floors, walls, and an overhead structure that exclude vermin and contaminants.

2. Exterior doors or windows that do not self-close shall not open into an open food preparation area or open food service areas. All exterior windows that open into food preparation and storage areas, warewashing areas, and utensil storage areas shall be equipped with 16-mesh-per-inch (or smaller) screen material to prevent the entrance of flying insects if capable of being left open.

3. Open-air bars shall be enclosed during hours of non-operation with durable windows and doors that are fully vermin-proof and are made of durable material to withstand inclement weather and prevent vermin entry.

4. The windows and doors used to enclose open-air bars should be permanently attached, easily closable and openable. Some approved examples include roll-up doors and windows, garage doors and nana walls.

5. Samples of the proposed material might be requested based on the submitted proposal.

→ **ON PLANS:** Provide a window and door schedule and include the details of the windows and doors. See also Table 2.

Open-Air Operations

Open-air means an area that is not fully enclosed. Any opening to the outside other than an approved pass-through window that meets all requirements of Cal Code Section 114259.2 or a self-closing, tight-fitting standard door will render an area open-air. Food services within open-air environments must comply with the following:

Food Compartment: All food preparation shall be conducted within a food compartment and be restricted to limited food preparation as defined in Cal Code Section 113818. A food compartment means an enclosed space including, but not limited to, an air pot, blender, bulk dispensing system, covered chafing dish, and covered ice bin, with all the following characteristics:

1. The space is defined by a physical barrier from the outside environment that completely encloses all food, food-contact surfaces, and the handling of non-prepackaged food.

2. All access openings are equipped with tight-fitting closures, or one or more alternative barriers that effectively protect the food from contamination, facilitate safe food handling, while minimizing exposure to the environment.

3. It is constructed from materials that are non-toxic, smooth, easily cleanable, and durable and is constructed to facilitate the cleaning of the interior and exterior of the compartment.

Permitted Dispensing: A food compartment is not required when adding ingredients to a beverage or dispensing into a serving container when the beverage is prepared for immediate service in response to an individual consumer order. Some examples include, mixing alcohol drinks, and adding milk or other ingredients to a coffee beverage.

Warewashing: A three-compartment sink and dishmachine may be installed within an open-air operation for cleaning and sanitizing multi-use utensils designated for the open-air operation only.

Food Storage: There shall be no exposed food or beverage stored within an open-air operation. All food and beverage shall be stored within an approved container with a tight-fitting lid or food compartment.

Hours of Non-operation: During non-operating hours and periods of inclement weather, food, food contact surfaces, and utensils shall be stored within any of the following:

1. A fully enclosed satellite food service operation.
2. A fully enclosed permanent food facility.
3. Approved food compartments where food, food contact surfaces, and utensils are always protected from contamination, exposure to elements, ingress of vermin, and temperature abuse.

Windows and Doors Material: Open-air bars shall be enclosed during non-operating hours with durable windows and doors that are fully vermin-proof and are made of durable material to withstand inclement weather and prevent vermin-entry.

Windows and Doors Installation: The windows and doors used to enclose open-air bars must be permanently attached, easily closable and openable. Some approved examples include roll-up doors and windows, garage doors and nana walls. Samples of the proposed material may be requested based on the submitted proposal.

All other structural and food handling requirements for a food facility also apply to open-air environments.

→ **ON PLANS:** When open-air food or beverage service is intended, provide clear details on the plans (i.e., elevations, notes) of how the area will be enclosed during hours of non-operation. See also Table 2.

+ WITH PLANS: When open-air food or beverage service is intended, provide a written operational statement of how foods and beverages will be protected from contamination during preparation, storage, and service. See also Table 1.

VERMIN EXCLUSION

1. A food facility shall always be constructed, equipped, maintained, and operated as to prevent the entrance and harborage of animals, birds, and vermin, including, but not limited to rodents and insects.
2. Delivery doors shall be equipped with an air curtain device. Refer to section on air curtains below.
3. Pass-through windows shall comply with Section 114259.2 of the California Retail Food Code. Refer to the pass-through window section of this guide for further information.

4. Insect control devices, design and installation:

    a. Insect control devices that are used to electrocute or stun flying insects shall be designed to retain the insect within the device.

    b. Insect control devices shall be installed so that the devices are not located over a food or utensil handling area and dead insects and insect fragments are prevented from being impelled onto or falling on non-prepackaged food, clean equipment, utensils, linen, and unwrapped single-use articles.

5. Exterior doors shall be self-closing.

6. There shall be no gaps in the exterior doors. Gaps in the exterior doors that are greater than 1/4" shall be sealed using durable and rodent-proof weather-stripping material.

7. Doors, such as Eliason doors, that separate any food preparation or food storage area from an open-air dining room, open-air bar, or warehouse area with roll-up doors shall be self-closing and fully vermin-proof.

8. All gaps, cracks, crevices, plumbing, or conduit intrusions shall be sealed using approved material to prevent the entrance and harborage of vermin.

PASS-THROUGH WINDOWS

1. Pass-through window service openings shall be limited to 216 square inches without an air curtain device, and up to 432 square inches, with an air curtain device.

2. Multiple service openings shall not be closer than 18".

3. Each opening shall be provided with a solid or screened window and equipped with a self-closing device. Screening shall be at least 16 mesh per square inch.

4. Recessed ceiling-mounted air curtains that are installed on the interior of the facility have limited effectiveness at excluding flying insects and debris and may not be accepted. Exterior-mounted air curtains (both recessed and non-recessed) are accepted.

5. The counter surface of the service openings shall be smooth and easily cleanable.

6. An automatic door may not be utilized as a substitute for a pass-through window. If an automatic door is proposed, a pass-through window is also required in facilities with drive-through service.

→ **ON PLANS:** Provide elevation details showing all dimensions of the pass-through window opening. See also Table 2.

+ **WITH PLANS**: Provide manufacturer specifications of the pass-through window. See also Table 1.

Modification of Service Openings

1. Existing pass-through windows that exceed 432 square inches may be modified with a permanent (welded) restriction panel or permanently installed (with the screw heads permanently covered to prevent removal) restriction bumpers to reduce the window opening to a maximum of 432 square inches.

2. For new facilities, the pass-through window must be manufactured to have a maximum service opening of 432 square inches. After-market modifications or manufacturer options to reduce the window opening dimensions to comply with Cal Code (such as restriction panels, electronic restrictions, and bumpers) are not accepted. Note that pass-thru windows, such as bi-parting windows, that can be pushed manually to exceed 432 square inches will not be accepted.

AIR CURTAINS

1. Overhead air curtain devices must be provided over delivery or receiving doors. The air curtain shall turn on automatically when the door is opened.

2. An air curtain installed inside the building shall produce a downward and outward airflow not less than 3" thick at the nozzle with an air velocity of not less than 1600 FPM (feet per minute) across the entire opening at a point 3' above the floor.

3. An air curtain installed outside the building shall produce air at the same velocity (1600 FPM) directed straight down across the entire door opening.

Air Curtains at Pass-through Windows

2. Air curtains shall be installed over pass-through windows with a service opening that exceeds 216 square inches.

3. Recessed ceiling-mounted air curtains that are installed over pass-through windows on the interior of the facility will require an airflow test to demonstrate air velocity of a minimum of 600 feet per second at the third of the opening height as measured from the employee side closest to the windowsill. Additionally, the unit shall be installed per the manufacturer's instructions.

Air Curtain Placement

1. Open-air facilities without a back door: The air curtain should go over the door leading into the back-of-house area.

2. Open-air facilities with a back door: The air curtain should be installed over the receiving door.

3. Facilities with a single entrance: An air curtain will be required over the door, and a switch to activate is acceptable. When double doors or sliding doors are proposed as a single entrance, the air curtain must extend over the entire opening.

Requirements for Grocery Stores or Large Facilities with Receiving Areas

1. If rollup doors are proposed in the warehouse area (exterior to the warehouse), an air curtain will be required either above the rollup door or above all doors leading from the warehouse to the preparation area(s).

2. When sealed truck bays are proposed: No air curtains will be required on interior doors leading into the preparation area(s) or at the truck bay.

→ **ON PLANS:** Show the location of all air curtain devices on the floor plan and/or the reflective ceiling plan. Indicate the air curtain manufacturer/model on the equipment schedule. See also Table 2.

+ **WITH PLANS**: Provide manufacturer specifications of air curtain devices. See also Table 1.

TRASH ENCLOSURE

When Located Indoors

1. All refuse, recyclables, and returnables shall be kept in nonabsorbent, durable, cleanable, leakproof, and rodentproof containers and shall be contained to minimize odor and insect development by covering with close-fitting lids or placement in a disposable bag that is impervious to moisture and then sealed.

2. Storage areas, enclosures, and receptacles for refuse and returnables shall be maintained in a good repair.

3. If located within the food facility, a storage area for refuse, recyclables, and returnables shall meet the requirements for floors, walls, ceilings, and vermin exclusion as specified in this part.

4. When located indoors, trash storage area(s) must have water resistant walls, smooth and easily cleanable ceilings, non-absorbent floors and non-absorbent 3/8" radius coved base. The floors must be sloped 1/4 inch-per-foot to a floor drain.

When Located Outdoors

If provided, an outdoor storage area or enclosure used for refuse, recyclables, and returnables shall be constructed of nonabsorbent material such as concrete or asphalt and shall be easily cleanable, durable, and sloped to drain.

→ **ON PLANS:** For trash enclosures inside the facility, provide all floor, cove base, wall, and ceiling finishes on the finish schedule and show the floor drain(s) on the floor plan and/or plumbing sheets. For trash enclosures outside the facility, provide their location on the facility site plan. See also Table 2.

Appendix

Figure 1: Plan Check Process

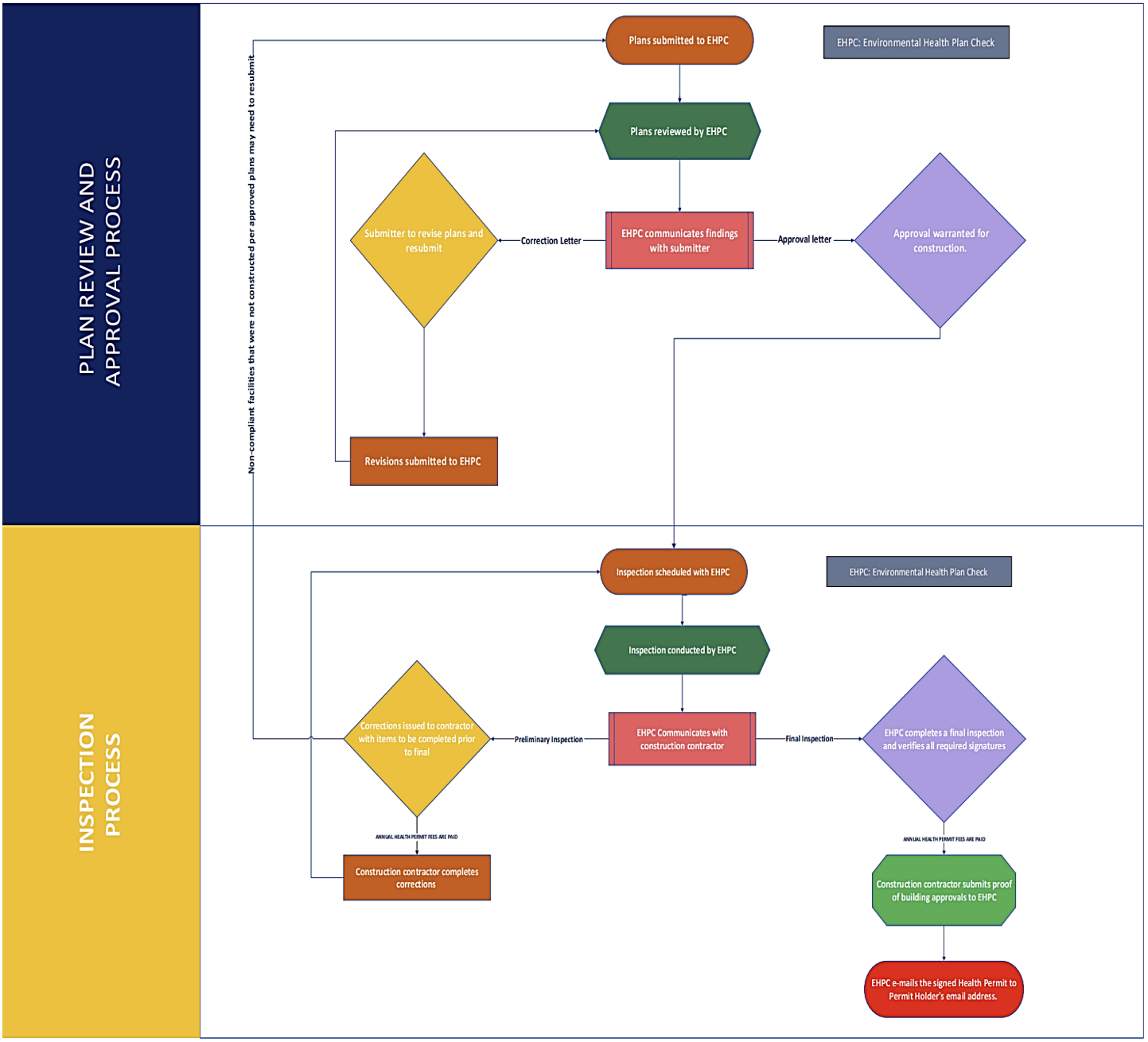


Figure 2: Workflow for Warewashing Sink Requirements

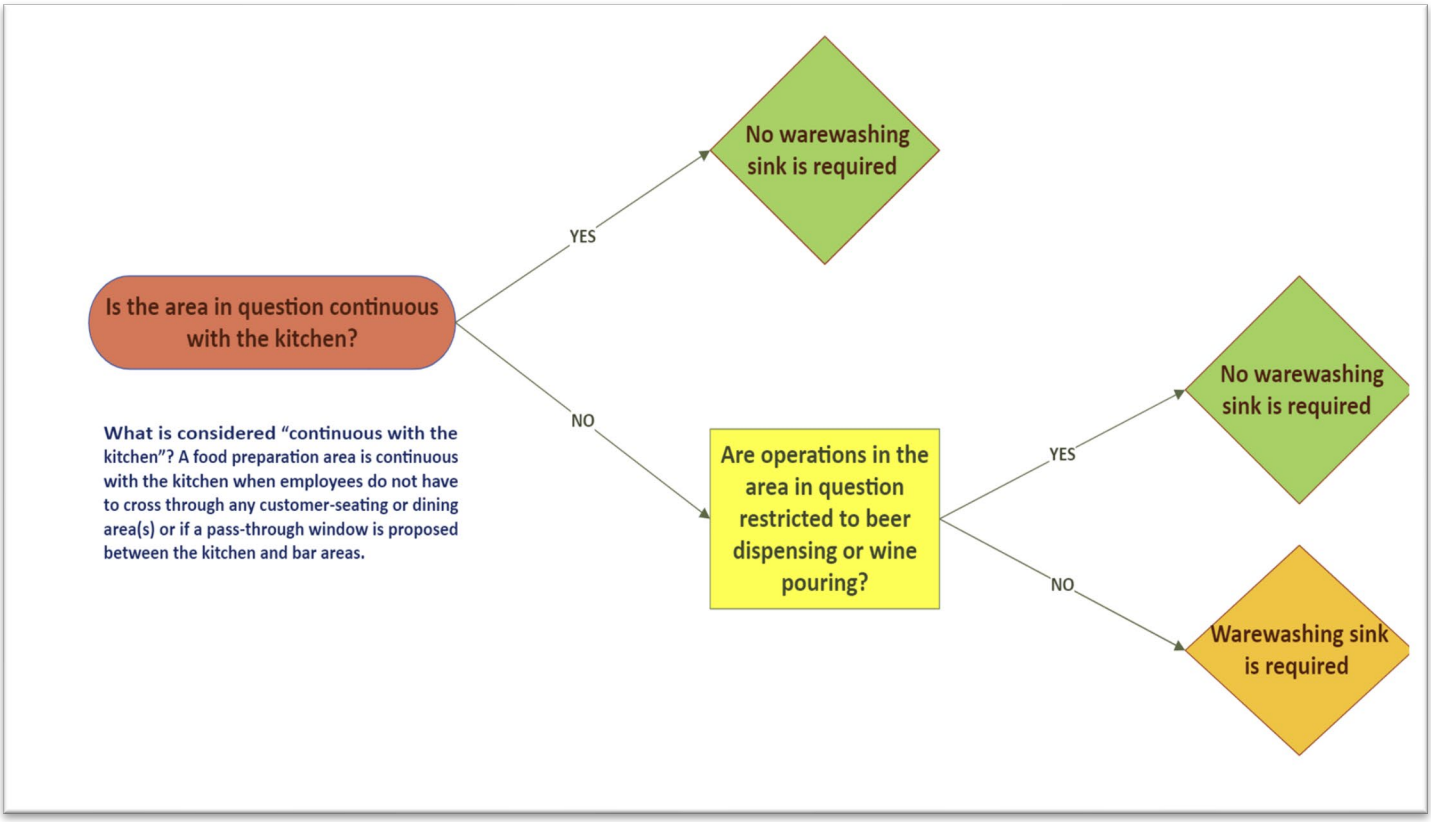


Table 1: Plan Check Submittal Checklist

Plan Submittal Checklist
☐ **Application**: A plan check application, also known as a service request (SR) application, must be submitted. All information on the application must be accurate, and the correct contact person information must be provided.
☐ **Menu**: Submit a complete menu detailing all food and beverage items that will be provided at this facility. For further information, see the Menu and Operations section of this document.
☐ **Fees**: Plan Check requires full payment of Plan Check service fees to review submitted plans. Plan review fees are separate from the Health Permit fees.
☐ **Specification Sheets:** All equipment must be submitted with specification ("spec" or "cut") sheets, technical data sheets, and/or other relevant equipment manufacturer information.
☐ **Finish Samples**: Physical samples for proposed finishes must be submitted when requested by the Plan Checker. However, to avoid delays, it is recommended that finish samples be submitted with the initial plan submittal. Each physical sample submitted must be clearly labeled with the facility's name, service request number (if applicable), and address. Samples that do not include this information may not be processed or entered our database, as we will be unable to identify the facility to which they belong.
☐ **Standard Operating Procedures (SOP):** Your Plan Checker may ask for detailed explanations of your operations - such as how food is prepared, cooled, and maintained using proper holding practices and where food will be stored. If your project includes any specialty equipment or specialized food handling processes or is very limited on space, it is recommended to provide operational procedures during the initial plan submittal. See the Menu and Operations section of this document for further information.
☐ **Plans**: Electronic plans must be uploaded. For further information on Electronic Plan Submission (EPS), visit our Plan Check webpage. See below for specific information required on the plans.

Table 2: Information that Should be Documented on Plans

Information Documented on the Plans
☐ All plans must be drawn to scale (1/4 inch = 1 foot, 1/2 inch = 1 foot, or equivalent). The plans must include the facility's name and address on all sheets, and the information must be consistent on all sheets.
☐ **Site Plan**: An overall site plan showing the facility's location, restrooms, trash enclosure, and any other relevant areas outside the food facility (for example, remote storage areas).
☐ Demolition floor plan (for remodels).
☐ Proposed Equipment floor plan.
☐ Equipment schedule listing the proposed make and model of all equipment. For remodels, the schedule shall also differentiate between existing and new equipment.
☐ Finish schedules completed by area. The schedule shall include the proposed floors, walls, ceiling, and coved base finishes in all areas other than the customer waiting and dining areas.
☐ Elevation drawings of food service areas.
☐ Dry storage and liquor storage.
☐ Lockers or change rooms.
☐ **Electrical Plan**: Provide an electrical/lighting plan showing the location of the electrical panel and proposed lights.
☐ **Mechanical Sheets:** Mechanical sheets showing exhaust hood drawings, including elevations, exhausted and makeup air in cubic feet per minute (CFM), and restroom ventilation must be provided.
☐ **Reflected Ceiling Plan:** The plan must show the ceiling as reflected. All ceiling attachments and structures, along with proposed finishes, must be shown.
☐ **Plumbing Sheets:** Provide a "Water Supply Plan" showing hot and cold water provided to all fixtures, along with "Waste and Vent" plans showing sewer, waste drains, floor sinks, floor drains, and grease traps or interceptors. The plumbing sheets must also include information on the water heater, its location, and input energy.
☐ **Window and Door Schedule:** Provide a schedule that calls out all proposed doors and windows in the facility.

Table 3: Splashguard Requirements

	DUMP SINK	WAREWASHING SINK	FOOD PREPARATION SINK	JANITORIAL SINK	FOOD CONTACT SURFACES OR STORAGE
HANDWASHING SINK	6” high splashguard extending to the edge of the handwashing sink.	6” high splashguard extending to the edge of the warewashing sink.	6” high splashguard extending to the edge of the prep sink.	At least a 6’ high partition extending to the edge of the handwashing sink.	6” high splashguard extending to the edge of the handwashing sink.
WAREWASHING SINK	6” high splashguard extending to the edge of the warewashing sink.	Depending on the direction of manual warewashing, if the two sinks have opposite directions, a 6” high splashguard to the edge of the sink would be required.	6” high splashguard extending to the edge of the warewashing sink.	At least a 6’ high partition extends to the janitorial sink's edge as measured above finished floors.	6” high splashguard extending to the edge of the warewashing sink. **This can be waived if the storage is on the clean side of the warewashing sink.*
FOOD PREPARATION SINK	6” high splashguard extending to the edge of the food preparation sink.	-	Depending on the operations, a 6” high splashguard might be required between two food preparation sinks.	At least 6’ high partition extending to the edge of the janitorial sink as measured above finished floors.	6” high splashguard extending to the edge of the food preparation sink.
DUMP SINK	-	-	6” high splashguard extending to the edge of the prep sink.	At least 6” high splashguard extending to the edge of the dump sink.	6” high splashguard extending to the edge of the dump sink.
JANITORIAL SINK	-	-	At least a 6’ high partition extending to the edge of the janitorial sink.		At least a 6’ high partition extending to the edge of the janitorial sink.

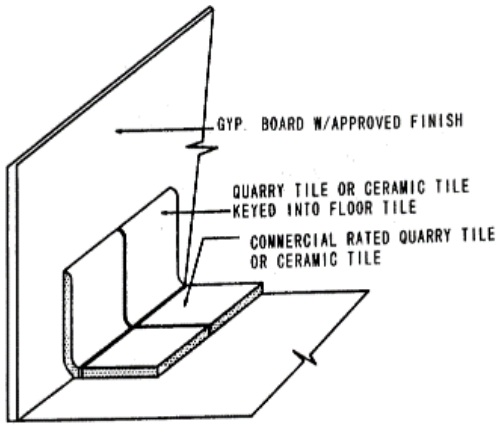
Table 4: Storage Requirements and Calculations

Storage Requirements for Unpackaged Food Facilities			
Facility Type	**Minimum Running Feet**	**Calculation Formula**	**Notes**
Prepackaged/Minimal Preparation	48 running feet		*Example*: Small footprint, one-step open food handling such as See's Candy.
Facilities Other than Grocery Stores ***Prep area does not include warewash areas, walk-in units, walkways, or storage.***			
Food facilities with no liquor bars	Based on the largest calculated value using the formulas	1. 96 running feet 2. (Number of seats/100) x (96) 3. (Square footage of prep area/400) x (96)	
Food facilities with liquor bars	Based on the largest calculated value using the formulas	1. 120 running feet 2. [(Number of seats/100) x (96)] +24 running feet 3. [(Square footage of prep area/400) x (96)] + 24 running feet	
Grocery Stores ***The total storage requirements for a grocery store with all subcategories below is the sum of all minimum running feet.***			
Restaurants within a grocery store	96 running feet per restaurant		*Example:* Minimum storage for a Mendocino Farms in a Whole Foods.
Retail within the grocery store	96 running feet		Storage for packaged merchandise located on the sales floor.
Other departments	48 running feet per department		Seafood, meat, deli, produce, bakery.

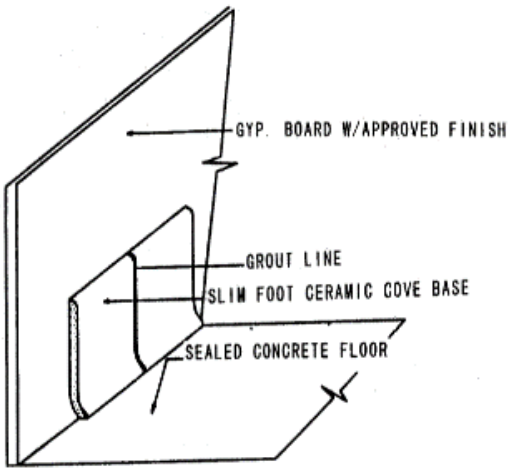
Table 5: Light Requirements in Food Facilities

	Light Requirements in a Food Facility	
	Areas	
At Least 10-foot Candles	• Dry food storge areas. • Areas of alcoholic beverage preparation or cleaning. • Inside equipment, such as reach-in or under-counter refrigeration.	
At Least 20-foot Candles	• Consumer self-service areas • Where fresh produce or prepackaged foods are sold • Server stations where food is prepared • Areas of handwashing	• Areas of warewashing • Areas of equipment and utensil storage • In toilet rooms • In all areas and rooms during periods and cleaning
At Least 50-foot Candles	• Where employees work with food or utensils. • Where employee safety is a factor, such as using knives, slicers, and grinders.	

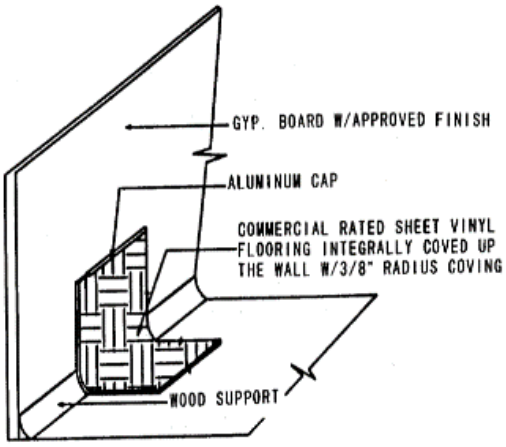
QUARRY TILE INSTALLATION



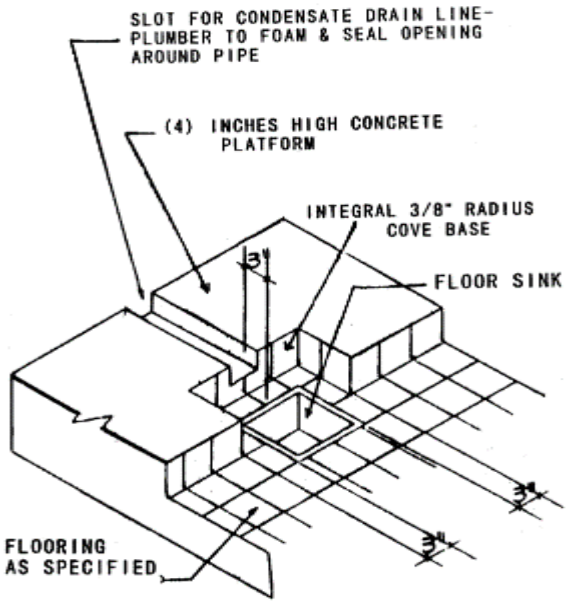
SLIM FOOT TOP SET TILE INSTALLATION



COMMERCIAL SHEET VINYL INSTALLATION



FLOOR SINK INSTALLATION UNDER CURB-MOUNTED EQUIPMENT



HALF EXPOSED FLOOR SINK BELOW CURB MOUNTED EQUIP.

End of Document

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