

Mobile Food Preparation Vehicle Permitting and Inspection Information

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If you have any questions or comments regarding the information contained within, or if you need assistance interpreting these requirements, please contact:

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General

With the adoption of the 2018 International Fire Code by the fire departments and districts in the Grand Valley, there is now a requirement for Mobile Food Preparation Vehicles (i.e. Food Trucks) whose operation uses appliances that produce smoke or grease-laden vapors to receive an operational permit issued by their local fire department. The term “grease” refers to animal and vegetable fats and oils that are used to cook foods or that are a byproduct of cooking foods.

This operational permit requirement was instituted to ensure public safety in response to the increase in the popularity and number of mobile food service vehicles operating within our communities. There are unique fire and life safety concerns that mobile food service vehicles present. The inspection and permitting process is an effort to address some of these concerns.

Inspection Process

The areas that the operational permit inspection will focus on are the exhaust hoods, fire protection features, fuel supply piping, appliances, cooking oil storage and the fuel systems of the mobile food preparation vehicle. Remember, the vendor is accountable and shall be held to compliance with all applicable provisions of the 2018 International Fire Code.

Please bring any information you have regarding the ventilation hood, automatic fire extinguishing systems, appliances, LP-gas and methane alarms, cooking oil tanks and containers, or any other information concerning your mobile food preparation vehicle operation with you to the inspection. If your mobile food preparation vehicle has an existing automatic fire extinguishing system, please bring all the information and documents provided to you by the suppression contractor that installed or inspects the system. This information will be needed when verifying that the appropriate coverage is provided.

Inspections with Violations

If violations are found during the inspection, a re-inspection will be required to ensure the violations are corrected and the mobile food preparation vehicle is code compliant. Once the violations have been corrected, it will be the responsibility of the vendor to contact their local Fire Prevention Division or Bureau to schedule a re-inspection. Permits are only issued to mobile food preparation vehicles that have successfully passed their inspection.



Permitting

After the vendor has successfully passed the inspection, a Mobile Food Preparation Vehicle Operational Permit will be issued. The permit will be the signed carbon copy of the form filled out during the inspection. The permit shall be retained by the vendor for as long as the permit is valid, it shall be kept with the mobile food preparation vehicle and be readily available to present if asked. Failure to keep the permit with the mobile food preparation vehicle or to provide a required permit when asked could result in the issuance of a stop work order where all operations shall cease until the situation is corrected. If the permit is lost, a replacement may be issued by the local fire department's or district's Fire Prevention Division or Bureau at their discretion.

The following sections outline the items that the fire department's or district's Prevention Division or Bureau will be focused on during their inspection of the mobile food preparation vehicle.

Type I Commercial Hood and Automatic Fire Suppression Systems

The food service industry involves the use of cooking equipment that operates at high temperatures. The cooking equipment in addition to the grease-laden vapors that are produced from the cooking process can lead to a fire within the mobile unit and can cause severe damage and injures. The following are safety parameters that will be evaluated during the inspection and must be complied with in order to successfully pass:

- A Type I hood shall be installed at or above all commercial cooking appliances that produce grease-laden vapors. These hood systems shall be inspected every six months with maintenance records kept and maintained. Any grease accumulation that has developed will need to be cleaned regularly by a *qualified individual*.
- All Type I hoods shall be protected with an approved automatic fire-extinguishing system. This automatic fire-extinguishing system shall be inspected and tested for proper operation every six months by a licensed contractor. If an automatic fire-extinguishing system is required and is not in place, the vendor shall be required to contact a licensed fire sprinkler contractor and have one installed. All vendors who are being inspected that require an automatic fire-extinguishing system shall have a current inspection tag or record of a recent inspection.

Portable Fire Extinguishers

Portable fire extinguishers give occupants the means to suppress a fire in its incipient (beginning) phase. The capability of this type of early manual fire suppression can contribute to the protection of the occupants; especially if there are evacuation difficulties associated with the location or the specific hazards. Additionally, a fire that is extinguished in its incipient phase, may limit potential damage to the vehicle. To be effective though, personnel must be properly trained in the use of portable fire extinguishers and know what type of extinguisher to use.



- All Mobile Food Preparation Vehicles shall be equipped with at least one (1) 2A:10-BC rated fire extinguisher. Class A, B and C extinguishers are used for fires involving ordinary combustibles, flammable liquids and live electrical equipment and NOT for fires involving grease. This fire extinguisher needs to be fully charged and inspected by a licensed contractor annually.
- All Mobile Food Preparation Vehicles with commercial cooking operations producing grease-laden vapors, shall have an **additional** 1.5-gallon Class K portable fire extinguisher. All solid fuel cooking appliances (wood burning ovens) shall have either one (1) 2.5-gallon Class K or two (2) 1.5-gallon portable fire extinguishers. Class K fire extinguishers are

used for fires involving cooking media, such as fats, grease, and oils. This fire extinguisher shall be fully charged and inspected by a licensed contractor annually.

Appliances and Cooking Oil Storage

The food service industry involves the use of cooking appliance as well as the use and storage of cooking oils. It is imperative that gas fired appliances use the correct connections to the piping system as well as be limited in the distance they can be moved. These requirements are to reduce the possibility of fire and life safety problems concerning gas leaks and fires. Cooking oil stored in mobile food preparation vehicles can present a hazard if stored in too large of volume, in incorrect containers, or if not secured in an appropriate manner.

- Gas cooking appliances within mobile food preparation vehicles shall be secured in place and connected to fuel-supply piping with the appropriate connectors and with the installation being configured in accordance with the manufacturer's installation instructions. Movement of appliances shall be limited by restraining devices installed in accordance with the connector and appliance manufacturers' instructions.
- Cooking oil storage tanks and containers within mobile food preparations vehicles shall be constructed of the appropriate materials and used in accordance with their listing and manufacturer's instructions. Tanks shall be suitable for the working pressures, temperatures and structural stresses to be encountered by the components. Normal and emergency venting shall be provided for all cooking oil storage tanks.

Liquid Propane (LPG) Gas System and Compressed Natural Gas Systems (CNG)

LP-gas and CNG systems are necessary for a Mobile Food Preparation business to operate. These systems and their components can be safely utilized if they are properly protected, stored, mounted, piped, and utilized within the safe parameters of the fire code.

- All Mobile Food Preparation Vehicles that use either LP-gas or CNG systems shall be mounted and operated in an appropriate manner. All system piping, including valves and fittings shall be adequately protected to prevent tampering, impact damage, and damage from vibrations. Maximum allowable quantities of either LP-gas or CNG shall not be exceeded. For LP-gas, the maximum allowable quantity is 200 pounds of gas. For CNG, the maximum allowable aggregate volume is 1,300 pounds of water capacity. All containers shall be made of the proper construction materials.
- Gas leaks can result in explosions and subsequent fires when the gas finds an ignition source. There have been numerous instances of this occurring in Mobile Food Preparation Vehicles. Alarm devices for LP-gas and Methane gas are required and need to be and installed according to the manufacturer's recommendations. All devices shall be permanently installed, listed, and approved. LP-gas alarms shall be listed to UL 1484. Installation of these devices can provide some early detection of these flammable gases. In

no way do these devices substitute for proper maintenance of all tanks, piping, tubing, pressure regulators, and valves.

***** It is the responsibility of the vendor to ensure that they are in compliance with ALL requirements of the 2018 International Fire Code and any applicable standards. The items listed above are there to explain some of the most pertinent items that will be looked at during the permitting and inspection process. It is not intended to be an all-inclusive list. *****

Applicable References and Standards

2018 International Fire Code: Chapter 3 – General Requirements Section 319

319.1 General. Mobile food preparation vehicles that are equipped with appliances that produce smoke or grease laden vapors shall comply with this section.

319.2 Permit Required. Permits shall be required as set forth in section 105.6.

319.3 Exhaust Hood. Cooking equipment that produces grease-laden vapors shall be provided with a kitchen exhaust hood in accordance with Section 607.

607.1 General. Commercial kitchen exhaust hoods shall comply with the requirements of the International Mechanical Code.

607.2 Where Required. A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease laden vapors.

607.3 Operation and Maintenance. Commercial cooking systems shall be operated and maintained in accordance with Sections 607.3.1 through 607.3.4.

607.3.1 Ventilation Systems. The ventilation system in connection with hoods shall be operated as the required rate of air movement, and grease filters listed and labeled in accordance with UL 1046 shall be in place where equipment under a kitchen grease hood is used.

607.3.2 Grease Extractors. Where grease-extractors are installed, they shall be operated when the commercial-type cooking equipment is used.

607.3.3 Cleaning. Hoods, grease-removal devices, fans, ducts, and other appurtenances shall be cleaned at intervals as required by Sections 607.3.3.1 through 607.3.3.3.

607.3.3.1 Inspection. Hoods, grease-removal devices, fans, ducts, and other appurtenances, shall be inspected every six months as specified in Table 607.3.3.1 [located in the 2018 International Fire Code] and as

approved by the fire code official. Inspections shall be completed by qualified individuals.

607.3.3.2 Grease Accumulation. If during the inspection it is found that hoods, grease-removal devices, fans, ducts, or other appurtenances have an accumulation of grease such components shall be cleaned in accordance with ANSI/IKECA C10.

607.3.3.3 Records. Records for inspections shall state the individual and company performing the inspection, a description of the inspection, and when the inspection took place. Records for cleaning shall state the individual and company performing the cleaning and when the cleaning took place. Such records shall be completed after each inspection or cleaning and maintained.

607.3.3.3.1 Tags. When a commercial kitchen hood or duct system is inspected, a tag containing the service provider name, address, telephone number, and date of service shall be provided in a conspicuous location. Prior tags shall be covered or removed.

319.4 Fire Protection. Fire protection shall be provided in accordance with Sections 319.4.1 and 319.4.2

319.4.1 Fire Protection for Cooking Equipment. Cooking equipment shall be protected by automatic fire extinguishing systems in accordance with Section 904.12.

904.12 Commercial Cooking Systems. The automatic fire-extinguishing system for commercial cooking systems shall be of a type recognized for protection of commercial cooking equipment and exhaust system of the type and arrangement protected. Pre-engineered automatic dry and wet-chemical extinguishing systems shall be tested in accordance with UL 300 and listed and labeled for the intended application. Other types of automatic fire-extinguishing systems shall be listed and labeled for specific use as protection for commercial cooking operations.



904.12.1 Manual System Operation. A manual actuation device shall be located at or near a means of egress from the cooking area not less than 10 feet and not more than 20 feet from the kitchen exhaust system.

904.12.2 System Interconnection. The actuation of the fire extinguishing system shall automatically shut down the fuel or electrical power supply of the cooking equipment. The fuel and electrical supply reset shall be manual.

904.12.5.2 Extinguishing System Service. Automatic fire-extinguishing systems shall be serviced not less frequently than every six months and after activation of the system. Inspection shall be by qualified individuals.

904.12.5.3 Fusible Link and Sprinkler Head Replacement. Fusible links and automatic sprinkler heads shall be replaced annually, and other protection devices shall be serviced or replaced in accordance with the manufacturer's instructions.

319.4.2 Fire Extinguishers. Portable fire extinguishers shall be provided in accordance with section 906.4.

906.4.1 Portable Fire Extinguishers for Solid Fuel Cooking Appliances. Solid fuel cooking appliances shall have a minimum, 2.5-gallon or two 1.5-gallon Class K extinguisher.

906.4.2 Class K Portable Extinguisher for Deep Fat Fryers. Commercial cooking appliances shall have a minimum 1.5-gallon Class K extinguisher.

906.3.1 Class A Fire Hazards. One, 2A:10-B:C fire extinguisher is needed [Tables 906.3(1) and 906.3(2)].

906.3.2 Class B Fire Hazards. One, 2A:10-B:C fire extinguisher is needed [Tables 906.3(1) and 906.3(2)].

906.3.3 Class C Fire Hazards. One, 2A:10-B:C fire extinguisher is needed [Tables 906.3(1) and 906.3(2)].

319.5 Appliance Connection to Fuel Supply Piping. Gas cooking appliances shall be secured in place and connected to fuel-supply piping with an appliance connector complying with ANSI Z21.69/CSA 6.26. The connector installation shall be configured in accordance with the manufacturer's installation instructions. Movement of appliances shall be limited by restraining devices installed in accordance with the connector and appliance manufacturers' instructions.

319.6 Cooking Oil Storage Containers. Cooking oil storage containers within mobile food preparation vehicles shall have a maximum aggregate volume not more than 120 gallons (454 L) and shall be stored in such a way as not to be toppled or damaged during transport.

319.7 Cooking Oil Storage Tanks. Cooking oil storage tanks within mobile food preparation vehicles shall comply with Sections 319.7.1 through 319.7.5.2.

319.7.1 Metallic Storage Tanks. Metallic cooking oil storage tanks shall be listed in accordance with UL 80 or UL 142, and shall be installed in accordance with the tank manufacturer's instructions.

319.7.2 Nonmetallic Storage Tanks. Nonmetallic cooking oil storage tanks shall be installed in accordance with the tank manufacturer's instructions and shall comply with both of the following:

1. Tanks shall be listed for use with cooking oil, including maximum temperature to which the tank will be exposed during use.
2. Tank capacity shall not exceed 200 gallons (275 L) per tank.

319.7.3 Cooking Oil Storage System Components. Metallic and nonmetallic cooking oil storage system components shall include, but are not limited to, piping, connections, fittings, valves, tubing, hose, pumps, vents, and other related components used for the transfer of cooking oil.

319.7.4 Design Criteria. The design, fabrication, and assembly of system components shall be suitable for the working pressures, temperatures and structural stresses to be encountered by the components.

319.7.5 Tank Venting. Normal and emergency venting shall be provided for cooking oil storage tanks.

319.7.5.1 Normal Vents. Normal vents shall be located above the maximum normal liquid line, and shall have a minimum effective area not smaller than the largest filling or withdrawal connection. Normal vents are not required to vent to the exterior.

319.7.5.2 Emergency Vents. Emergency relief vents shall be located above the maximum normal liquid line, and shall be in the form of a device or devices that will relieve excessive internal pressure caused by an exposure fire. For nonmetallic tanks, the emergency relief vent shall be allowed to be in the form of construction. Emergency vents are not required to discharge to the exterior.

319.8 LP-Gas Systems. Where LP-gas systems provide fuel for cooking appliances, such systems shall comply with Chapter 61 and Sections 319.8.1 through 319.8.5.

319.8.1 Maximum Aggregate Volume. A maximum aggregate capacity of LP-gas containers transported on the vehicle and used to fuel cooking appliances only shall not exceed 200 pounds' capacity.

319.8.2 Protection of Container. LP-gas containers installed on the vehicle shall be securely mounted and restrained to prevent movement.

319.8.3 LP-gas Container Construction. LP-gas containers shall be manufactured in compliance with the requirements of NFPA 58.

319.8.4 Protection of System Piping. LP-gas system piping, including valves, and fittings, shall be adequately protected to prevent tampering, impact damage, and damage from vibrations.

319.8.5 LP-gas Alarms. A listed LP-gas alarm shall be installed within the vehicle in the vicinity of LP-gas system components, in accordance with the manufacturer's instructions.

319.9 CNG Systems. Where CNG systems provide fuel for cooking appliances, such systems shall comply with Sections 319.9.1 through 319.9.4.

319.9.1 CNG Containers Supplying Only Cooking Fuel. CNG containers installed solely to provide fuel for cooking purposes shall be in accordance with sections 319.9.1.1 through 319.9.1.3.

319.9.1.1 Maximum Aggregate Volume. The maximum aggregate capacity of CNG containers transported on the vehicle shall not exceed 1,300 pounds water capacity.

319.9.1.2 Protection of Containers. CNG containers shall be securely mounted and restrained to prevent movement. Containers shall not be installed in locations subject to a direct vehicle impact.

319.9.1.3 CNG Container Construction. CNG containers shall be in a NGV-2 cylinder.

319.9.2 CNG Containers Supplying Transportation and Cooking Fuel. Where CNG containers and systems are used to supply fuel for cooking purposes in addition to being used for transportation fuel, the installation shall be in accordance with NFPA 52.

319.9.3 Protection of System Piping. CNG system piping including valves and fittings, shall be adequately protected to prevent tampering, impact damage and damage from vibrations.

319.9.4 Methane Alarms. A listed methane gas alarm shall be installed within the vehicle in accordance with manufacture recommendations.

319.10 Maintenance. Maintenance of systems on mobile food preparation vehicles shall be in accordance with sections 319.10.1 through 319.10.3.

319.10.1 Exhaust System. The exhaust system, including hood, grease-removal devices, fans, ducts, and other appurtenances, shall be inspected and cleaned in accordance with section 607.

607.1 General. Commercial kitchen exhaust hoods shall comply with the requirements of the International Mechanical Code.

607.2 Where Required. A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease-laden vapors.

607.3 Operation and Maintenance. Commercial cooking systems shall be operated and maintained in accordance with Sections 607.3.1 through 607.3.4.

607.3.1 Ventilation Systems. The ventilation system in connection with hoods shall be operated as the required rate of air movement, and grease filters listed and labeled in accordance with UL 1046 shall be in place where equipment under a kitchen grease hood is used.

607.3.2 Grease Extractors. Where grease extractors are installed, they shall be operated when the commercial-type cooking equipment is used.

607.3.3 Cleaning. Hoods, grease-removal devices, fans, ducts and other appurtenances shall be cleaned at intervals as required by Sections 607.3.3.1 through 607.3.3.3.

607.3.3.1 Inspection. Hoods, grease-removal devices, fans, ducts, and other appurtenances, shall be inspected every six months as specified in Table 607.3.3.1 and as approved by the fire code official. Inspections shall be completed by qualified individuals.

607.3.3.2 Grease Accumulation. If during the inspection it is found that hoods, grease removal devices, fans, ducts, or other appurtenances have an accumulation of grease such components shall be cleaned in accordance with ANSI/KECA C10.

607.3.3.3 Records. Records for inspections shall state the individual and company performing the inspection, a description of the inspection and when the inspection took place. Records for cleaning shall state the individual and company performing the cleaning and when the cleaning took place. Such records shall be completed after each inspection or cleaning and maintained.

607.3.3.3.1 Tags. When a commercial kitchen hood or duct system is inspected, a tag containing the service provider name, address, telephone number, and date of service shall be provided in a conspicuous location. Prior tags shall be covered or removed.

319.10.2 Fire Protection Systems and Devices. Fire protection systems and devices shall be maintained in accordance with Section 901.6.

901.6 Inspection Testing and Maintenance. Fire detection and alarm systems, emergency alarm systems, gas detection systems, fire-extinguishing systems, mechanical smoke exhaust systems, and smoke and heat vents shall be maintained in an operative condition at all times, and shall be replaced or repaired where defective.

904.5.1 System Test. Systems shall be inspected and tested for proper operation at six-month intervals. Tests shall include a check of the detection system, alarms and releasing devices, including manual stations

and other associated equipment, Extinguishing system units shall be weighed and the required amount of agent verified, Stored pressure-type units shall be checked for the required pressure. The cartridge of cartridge-operated units shall be weighed and replaced at intervals indicated by the manufacturer.

319.10.3 Fuel Gas Systems. LP-gas containers installed on the vehicle and fuel-gas piping systems shall be inspected annually by an approved inspection agency or a company that is registered with the U.S Department of Transportation to requalify LP-gas cylinders, to ensure that system components are free from damage, suitable for the intended service, and are not subject to leaking. CNG containers shall be inspected every three years in a qualified service facility. CNG containers shall not be used past their expiration date as listed on the manufacture's container label.

Definitions

Appliance: an instrument or device designed for a particular use or function.

Approved: Acceptable to the *fire code official*.

Appurtenance: An accessory or a subordinate part that enables the primary device to perform or improves its intended function.

Automatic Fire-Extinguishing System: An *approved* system of devices and equipment which automatically detects a fire and discharges an approved fire-extinguishing agent onto or in the area of a fire.

Authority Having Jurisdiction (AHJ): An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

Commercial Cooking Appliance: Appliances used in a commercial food service establishment for heating or cooking food, and which produce grease vapors, steam, fumes, smoke or odors that are required to be removed through a local exhaust ventilation system. Such appliances include deep fat fryers, upright broilers, griddles, broilers, steam-jacketed kettles, hot-top ranges, under-fired broilers (charbroilers), ovens, barbecues, rotisseries, and similar appliances. For the purpose of this definition, a food service establishment shall include any building, or a portion thereof used for the preparation and serving of food.

Ducts (or Duct System): A continuous passageway for the transmission of air and vapors that, in addition to the containment components themselves, might include duct fittings, dampers, plenums, and/or other items or air-handling equipment.

Fire Code Official: The fire chief or other designated authority charged with the administration and enforcement of the code, or a duly authorized representative.

Hood: An air-intake device used to capture by entrapment, impingement, adhesion or similar means, grease and similar contaminants before they enter a duct system.

Type I: A kitchen hood for collecting and removing grease vapors and smoke.

Type II: A general kitchen hood for collecting and removing steam vapor, heat, odors and products of combustion.

Listed: Equipment, materials, products or services included in a list published by an organization acceptable to the *fire code official* and concerned with evaluation of products or services that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services and whose listing states either that the equipment, material, product or service meets identified standards or has been tested and found suitable for a specified purpose.

Grease: Animal and vegetable fats and oils that are used to cook foods or that are a byproduct of cooking foods.

Grease Removal Devices: A system of components designed and intended to process vapors, gases, and/or air as it is drawn through such devices by collecting the airborne grease particles and concentrating them for further action at some future time, leaving the exiting air with a lower amount of combustible matter.

Mobile Food Preparation Vehicle: Vehicles that contain cooking equipment that produce smoke or grease-laden vapors for the purpose of preparing and serving food to the public. Vehicles intended for private recreation shall not be considered mobile food preparation vehicles.

Jurisdiction: The governmental unit that has adopted the International Fire Code.

Qualified: A competent and capable person who has met the requirements and training for a given field acceptable to the AHJ.

Shall: indicates a mandatory requirement.

Wet-Chemical Extinguishing Agent: A solution of water and potassium-carbonate-based chemical, potassium-acetate-based chemical or a combination thereof, forming an extinguishing agent.