

## **Clarksville Connected Utilities**

### **POLICY for GREASE INTERCEPTORS**

- A. Food Service Establishments, Manufacturing, and Process Facilities connected to the public sewer shall install a grease interceptor followed by a sampling/inspection manhole to collect, contain, and provide for proper removal/disposal of grease, oil, grit, broken glass, or other viscous or solid substances from the sanitary sewer.
  - 1. Exception: Grease interceptors shall not be required for private single-family residences or residential duplexes, unless the residence is being used as a mobile food service commissary, caterer, or other type of food service establishment.
  
- B. Food Service Establishments that must comply with this provision include, but are not limited to:
  - 1. Convenience stores with food preparation facilities,
  - 2. Restaurants, delis, cafes, fast food outlets, and cafeterias
  - 3. Food preparation industries (retail and wholesale),
  - 4. Meat distributors (retail and wholesale),
  - 5. Grocery stores with any of the following: meat cutting, food preparation, bakeries, deli, or food service areas.
  - 6. Bakeries (retail and/or wholesale)
  - 7. Caterers,
  - 8. Bars, taverns, cocktail lounges, nightclubs,
  - 9. Ice Cream, custard, or yogurt retail stores,
  - 10. Childcare facilities where the enrollment is greater than 15 children and meals are served,
  - 11. Hospitals, nursing homes, schools, colleges, university kitchens and cafeterias,
  - 12. Churches, Synagogues, Mosques, Temples, and/or Shelters where food service facilities are provided.

13. Any other food service establishment where the Arkansas Department of Health standards require the use of a three-compartment sink, and
  14. Other commercial facilities when, in the opinion of Clarksville Connected Utilities, a grease interceptor is necessary for the removal of grease, grit, oil, broken glass, or other viscous or solid substances which may be introduced into the drainage system in quantities that can affect line stoppage or hinder sewage disposal and to protect the sewage system.
- C. Grease interceptors, followed by a sampling/inspection manhole shall be located in the food service, manufacturing, or processing facility's sanitary building sewer where designated drainage fixtures may introduce grease, oil, grit, broken glass, or viscous or solid substances into the public sewer. Such drainage fixtures shall include, but not limited to, sinks, dishwashers, garbage disposals, automatic hood wash units, floor sinks, food drains in food preparation and storage areas, and any other fixture which is determined to be a potential source of grease. All other sanitary building drainage, i.e., restroom facilities and other similar fixtures, shall be connected downstream of the sampling/inspection manhole.
- D. Each Grease interceptor shall serve only one food service establishment. Multiple connections to a single grease interceptor are not permitted unless a conditional variance is approved by Clarksville Connected Utilities.
- E. All Gravity Grease interceptors (GGIs) shall be designed and installed under the following conditions:
1. Shall be designed using a single tank with two compartments. The first compartment shall contain two-thirds of the tank volume, and the second chamber shall contain the final third and shall be capable of separation and retention of grease and storage of settled solids.
  2. Excavation, backfilling, and compaction requirements shall be in accordance with The City of Clarksville's Engineering specifications. Each GGI shall be engineered to withstand the internal and external loads anticipated to be exerted on the interceptor.
  3. Shall be installed in a manner which provides easy access at all times for proper cleaning, maintenance, repairs, inspections, and replacements. If the GGI is going to be placed in a paved area, bollards must be constructed to prevent parking on top of the manhole lids.
  4. GGI shall be water and gas tight. Joint wrap shall be installed on all exterior joints to seal out ground and storm waters.
  5. GGI shall be vented in accordance with Arkansas State Plumbing Code.
  6. The date of manufacture and the name or trademark of the manufacturer shall be clearly marked on each pre-cast section of the GGI.

7. The top of the manhole casting located in the pavement, shoulder areas, and sidewalks shall be set flush to grade.
  8. The top of the manhole casting located outside these areas shall be placed 6 inches above grade prior to landscaping.
  9. The interceptor shall be filled with clean water prior to startup of the system.
- F. The GGI manufacturer and owner are fully responsible for their specific application. This includes the safe placement of same for foot/vehicular traffic and other appropriate safety precautions.
- G. All GGIs shall be routinely maintained to prevent the discharge of grease, oils, and settleable solids to public sewer.
- H. **Grease Recycling Container Requirements:** All food service facilities that use either a deep fat/oil fryer or grill shall have an outside grease recycling container for the proper management of these greases and shall be under contract with a recycler or rendering company to routinely service the container. The food service can submit an alternate plan on the method they will employ to properly manage their greases, which shall be subject to approval from Clarksville Connected Utilities. Collection of used oils/greases such as from fryers, should never be poured down the sanitary drain/sewer. Used oils/greases from deep fat/oil fryers or grills shall not be plumbed to the sanitary sewer system through the domestic waste line. The used oil should be collected and recycled. Used cooking oil is a valuable material that can be processed into products. Accounts may be arranged with reputable FOG or bio-diesel collectors to periodically pick up used oil.
- I. **Strip Mall Type Centers: New Construction Requirements:** All new strip mall centers containing two or more tenant spaces and designated for commercial enterprise use, shall provide a stub-out for a separate grease waste line for future installations of gravity grease interceptors (GGIs) and sampling/inspection manhole for any flex space contained within the strip center.
- J. **Trap control additives**, as defined by prohibited and biological additives, shall not be added, directly or indirectly to grease interceptor. The use of hot water (greater than 140°F) to emulsify grease and allow it to pass through a grease interceptor is also prohibited.
- K. **Grease Interceptor Sizing Criteria:** Clarksville Connected Utilities will size the grease interceptors based on the number of fixtures units (F.U.) shown on the plans. The maximum F.U. shall be a total of all fixtures connected to the grease interceptor. Common fixture unit values are shown in the following table:

Table 1: Typical list of fixtures with the appropriate fixture units (F.U.) that are associated with them.

<b>Kind of Fixture</b>	<b>Fixture Unit (F.U.)</b>
Floor drain (2")	2
Floor drain (3")	5
Floor drain (4")	6
Trench drains (2" pipe outlet)	3
Trench drains (3" pipe outlet)	5
Trench drains (4" pipe outlet)	6
Hub drain	3
Sink, Floor	1
Sink, Bar (1 compartment)	1
Sink, Bar (2 compartment)	2
Sink, Bar (3 compartment)	3
Sink, Wash (4 compartments)	4
Sink, Hand wash	1
Sink, Mop/Service	3
Can Wash	3
Grinder, Disposer, or Disposal	3
Constant Flow	2/GPM
Dishwashers	6

For those plumbing fixtures which do not have a specific assigned value in the table shown above and have a flow which is not constant, a value will be assigned by dividing the fixtures maximum flow in gallons per minute (GPM) by 7.5 and rounding the number up to the nearest whole number. For those fixtures which have a constant flow through the work day, the F.U. shall be computed by assigning two (2) fixture units for each gallon per minute of flow.

All garbage grinders or disposals shall be connected to the grease interceptor and are assigned a F.U. of three (3) each as shown in the above table. All garbage grinders or disposals attached to a grease interceptor shall have a solids interceptor in the discharge line between the garbage grinder and the grease interceptor. The solids interceptor is required by the Arkansas State plumbing Code.

Floor drains, hub drains, and trench drains of the same size are listed and counted as one fixture.

For plumbing fixtures (3-compartment sinks, dishwashers, etc.) that are indirectly connected to the grease waste line through a floor sink only the fixture units for the plumbing fixture will be counted. The fixture units for the floor sink in this instance will not be counted toward the total fixture unit value. For plumbing fixtures that are not listed in the table above (beverage dispensers, steam kettles, etc.) and discharge to a floor sink, the fixture units for the floor sink shall count toward the total fixture unit value for each floor sink that receives this type of discharge.

L. **Gravity Grease Interceptor (GGI) Minimum Sizing:**

Table 2: Gravity Grease Interceptor (GGI) minimum sizing

<b>GGI Size (gallons)</b>	<b>Fixture Unit Maximum</b>
1000	12 or less
1250	15
1500	19
2000	25
2500	27
3000	33
3500	38
4000	44
4500	50
5000	55
6000	76

To compute the minimum size of the gravity grease interceptor (GGI), take the total fixture unit value to be connected to the interceptor and multiply by 7.5 GPM to figure the maximum possible flow to the trap. Clarksville Connected requires a minimum of twelve (12) minutes of detention time for a properly operating GGI.

When a GGI of the calculated size is not commercially available, Clarksville Connected Utilities may authorize a reduction only when the next smaller size is within 15% of the calculated size or the owner shall install the next larger GGI that is commercially available.

Where sufficient capacity to meet Clarksville Connected Utilities' minimal GGI size requirement cannot be achieved with a single interceptor, installation of GGIs connected in series will be allowed. However, the largest capacity GGI shall be installed upstream of the smaller GGI if two interceptors are of un-equal volume.

M. **Request for Gravity Grease Interceptor (GGI) Alternative Installation:** If one or more of the criteria listed in B. 1-12 are met, no consideration of a waiver for installation of a grease trap will be considered. However, a waiver requesting an alternative gravity grease interceptor installation may be considered only in extreme circumstances where installation of the specified GGI is impractical or impossible. Applicant may request a variance for the installation of a GGI with a minimum capacity of 1000 gallons due solely and specifically to space constraints and/or type of food operation more particularly described as follows:

1. Space Restraints – applicant may apply for a waiver to install an alternative hydromechanical grease interceptor (HGI) in such cases where the configuration of the store and outside wastewater piping does not allow for proper installation of a standard GGI. Applicants who meet the criteria may formally submit a request for variance to Clarksville Connected Utilities for consideration. Request shall be accompanied by supporting

documentation up to and including site layouts, plans, schematics, statement letters, etc. that clearly define the conflict.

2. Type of food operation – applicant may apply for a waiver to install an alternative HGI in such cases where the nature of the food service can be proven to introduce nominal amounts of grease to the wastewater system. Waivers will be considered only for food service establishments where the prepared product is a beverage and can include coffees, teas, health smoothies, etc. And where the product associated additives are clearly proven to be non or low fat. No other food products outside of these delivered and sold as prepackaged will be allowed in restaurants requesting such a waiver.
3. Waivers will not be considered for food service establishment that involve or have the potential to involve the handling, preparation, assembly, and/or cleanup of any foods containing notable levels of fats, oils, and/or grease, such as restaurants, sandwich shops, delis, bakeries, ice cream shops, caterers, cafeterias, etc.
4. Decisions regarding the approval or denial of the request for variance are made at the sole discretion of Clarksville Connected Utilities in keeping with established policies. These decisions are final and are not appealable to any party within or outside Clarksville Connected Utilities.
5. If the request for variance is granted and an alternative installation is approved, the applicant understands and agrees to in writing that if the approved unit is found to be of insufficient type and/or size to remove all fats, oils and grease in the waste stream due to incorrect or missing data in the application, change of food service type and/or any other reason, the approval shall be revoked and owner can and will be cited in violation of City Ordinance 10.04. and any amending ordinances thereafter and subject to fines and disconnection of water service until such time the issue is addressed and a proper grease interceptor is installed.
6. Any changes to the criteria upon which the approval was based at the time of approval or at any time thereafter must be submitted to Clarksville Connected Utilities for review. If it is determined that there is a material change that directly conflicts with the previous approval, such approval can be revoked and applicant can be required to install proper grease interceptor in order to continue operating.

## N. Hydromechanical Grease Interceptor (HGI) Minimum Sizing

Table 3: Hydromechanical Grease Interceptor (HGI) minimum sizing

<b>HGI Flow (gpm)</b>	<b>Fixture Unit Maximum</b>
15	3
25	5
35	7
50	10
65	13
75	15
95	19
100	20

To compute the minimum size of HGI. Take the total fixture unit value to be connected to the interceptor and multiply by 5 gpm to figure the maximum possible flow to the trap.

When an HGI of the calculated size is not commercially available, Clarksville Connected Utilities may authorize a reduction only when the next smaller size is within 15% of the calculated size, or the owner shall install the next larger HGI that is commercially available.

Where sufficient capacity to meet Clarksville Connected minimal HGI size requirement cannot be achieved with a single interceptor, installation of HGIs connected in parallel will be allowed.