



Requirements for Grease Interceptors Food Service Facilities

Gravity grease interceptors (GGIs) are required for *all* Food Service Facilities (FSFs) including, but not limited to, any restaurant, eatery, food caterer, cafeteria, grocery store, service station, convenience store, manufacturing facility, sandwich shop, or institution which cuts, cooks, bakes, prepares, serves or makes available for consumption any food products by any prescribed method, or which disposes of food related wastes. All Food Service Facilities shall install, operate, and maintain properly sized grease interceptors. Existing FSFs may be required to modify existing grease interceptors, install new or additional grease interceptors, and operate and maintain properly sized grease interceptors at the expense of the FSF Owner.

General Requirements

All new FSF construction, redevelopments, or retrofit applications that connect to the City of Decatur sewer collection system are required to install GGIs regardless of previous use. Grease interceptors shall be shown and detailed on plans for current or future intended use submitted for review and approval by Decatur Utilities (DU). Grease interceptors shall meet all applicable local plumbing codes, any applicable county and state health department requirements, shall be of a sufficient size to handle the grease loading, shall provide a maximum allowable oil and grease effluent concentration of 100 mg/l, and shall provide a minimum detention time of 30 minutes.

All fixtures associated with food production and preparation which may potentially contain grease laden waste and all drains which may potentially contain grease laden waste shall be connected to the grease interceptor. All domestic sanitary sewer waste shall be plumbed separately from grease laden waste lines and shall only be combined into a single discharge line beyond the outlet of the grease interceptor and required sample well.

Specific Requirements

Gravity grease interceptors shall be located outside, in-ground, and have a capacity of not less than 1,000 gallons. This is a minimum capacity requirement and design sizing calculations for all proposed GGIs must be submitted for review and approval. In many instances, a larger capacity GGI will be required.

The GGI shall be located in an area that can be easily accessed for maintenance, cleaning, and inspection and shall be installed as close to the source of FOG as possible. The interceptor shall not be located in an entrance, exit, drive-through, or under a menu board, sign, or structure. All interceptor covers/manholes must be secured by a bolt or locking mechanism or be constructed of round cast iron or similar construction rated for heavy road traffic with sufficient weight to prevent unauthorized access and withstand expected loads. If the interceptor is located in a drive or parking area, it must contain traffic-rated rings and covers and meet H-20 loadings. Manhole rings and covers shall not be covered or obscured by landscaping, pavement, or other obstructions. Gravity grease interceptors shall be required to have a minimum of two access manholes for cleaning and inspection.

A *sample well* shall be installed immediately downstream of the grease interceptor. No other connections to the sewer line are allowed between the grease interceptor and the sampling location. Sample wells shall conform to the following specifications:

- Sample wells shall have a minimum diameter of fifteen (15) inches.
- The sample well shall have a minimum of four (4) inches of fall between the inlet and outlet piping.
- The sample well and its cover must be secured by a bolt or locking mechanism or be constructed of round cast iron or similar construction rated for heavy road traffic with sufficient weight to prevent unauthorized access and withstand expected loads. The sample well and its cover shall

be of a load bearing capacity in the event that the sample well is installed in a location that may accept vehicular traffic. If the sample well is located in a drive or parking area, it must contain traffic-rated rings and covers and meet H-20 loadings.

- Sample well manhole rings and covers shall not be covered or obscured by landscaping, pavement, or other obstructions and shall not be installed in a location that will allow it to become obstructed by vehicles, dumpsters, or any other object at any time.
- Sample well shall be Park Environmental Equipment *Sample Well Basin SWB-2*, or equal.

Sizing Selection Criteria

The design engineer shall submit sizing calculations for gravity grease interceptors based on the drainage fixture unit (DFU) determination per the 2012 Uniform Plumbing Code (UPC), Table 702.1, Drainage Fixture Unit Values (DFU), Table 702.2(a), Maximum Drainage Fixture Units For a Trap and Trap Arm, and Table 702.2(b), Discharge Capacity in Gallons per Minute for Intermittent Flow Only, as applicable. The DFU rating for all appropriate fixtures discharging to the GGI shall be combined to determine the correctly sized GGI required per Table 1014.3.6, Gravity Grease Interceptor Sizing of the 2012 UPC.

Variance

In certain cases, the installation of the required size outdoor grease interceptor may be impractical due to limited space or other factors. A FSF may request a variance by submitting a proposed Alternative Grease Removal System. The General Manager, upon request, may review an Alternative Grease Removal System as proposed by the FSF for attaining fats, oils, and grease (FOG) protection for the sewer system. For an Alternative Grease Removal system to be considered, the FSF must first demonstrate that the proposed alternative system, its overall design, including size and location, will satisfy and result in compliance with the intent and discharge requirements of the City of Decatur Wastewater Ordinance. The design plans must be signed and sealed by an Alabama licensed professional engineer with experience in interceptor design. The proposed Alternative Grease Removal System must be approved by the DU's General Manager. If approved, the design professional must certify that the site plan and the Alternative Grease Removal System design meets the intent and discharge requirements of the City of Decatur Wastewater Ordinance. Sizing criteria to be used for Alternative Grease Removal Systems shall be discussed and approved by DU before submission of a proposed alternative system. DFU sizing criteria shall not be used for hydromechanical grease interceptor sizing.

Required Submissions

At a minimum, the following information must be submitted directly to Decatur Utilities for review and approval.

- Design calculations for sizing verification of the proposed grease interceptor (*submit attached Gravity Grease Interceptor Sizing Calculation Sheet for proposed GGI sizing*)
- Sanitary and grease waste plumbing isometric drawings including piping, trap, and vent sizes
- Plan view of entire facility detailing location of grease interceptor, kitchen, and kitchen fixtures
- Detailed drawings of grease interceptor including plan and section views, manhole locations and sizes, and sample well location and details
- Manufacturer's specifications for interceptor, sample well and flow control device (if applicable)
- Proposed maintenance schedule for interceptor

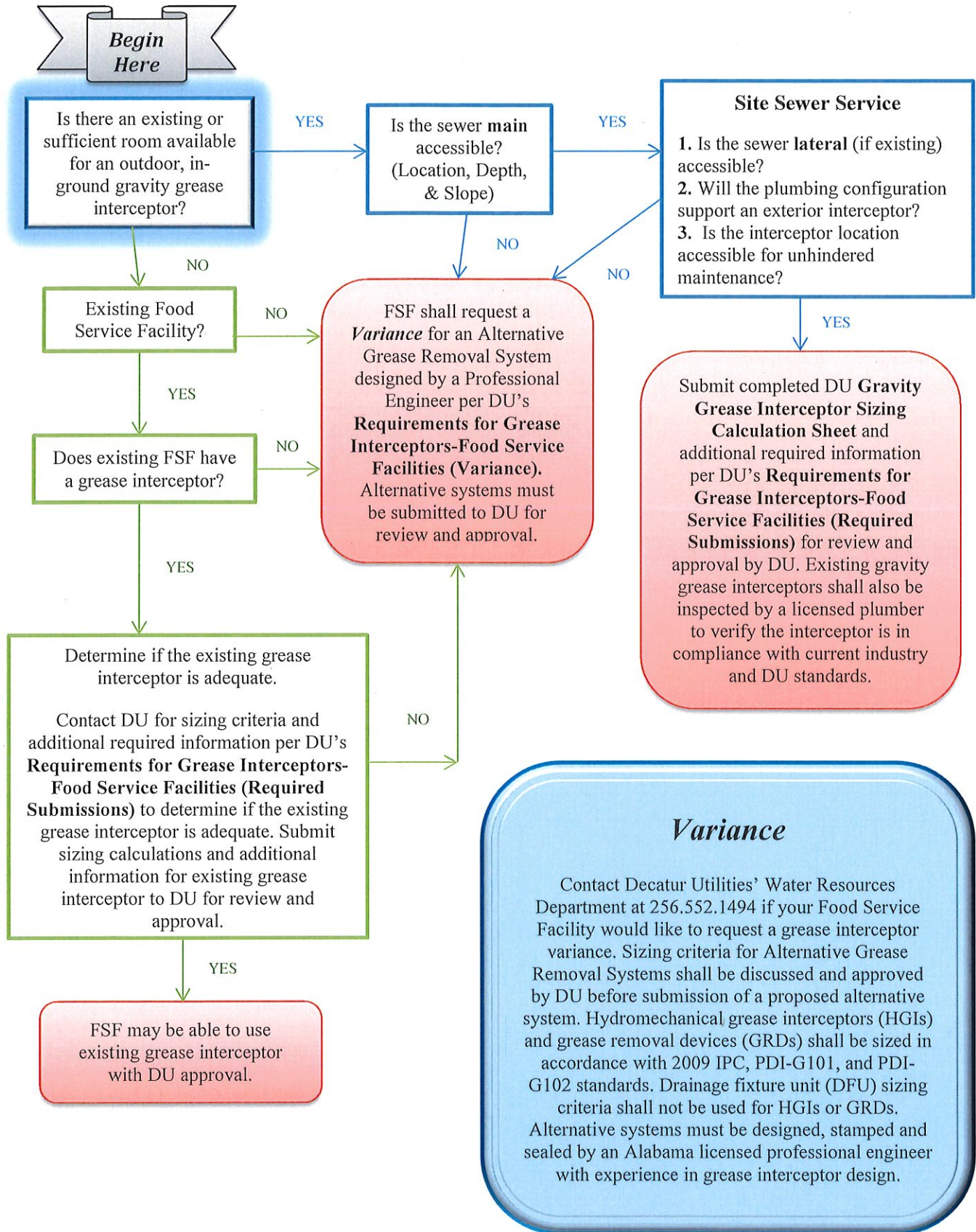
Questions?

For questions regarding DU's grease interceptor requirements, please contact:

Billy Strobel/ Water Resources Engineer
256.552.1494
bstrobel@decaturutilities.com

Decatur Utilities
1002 Central Parkway SW
Decatur, AL 35601

Grease Interceptor Approval Process





Gravity Grease Interceptor Sizing Calculation Sheet

Name of Project: _____ Date: _____
 Project Address: _____ Contact Number: _____
 Contact Name: _____ Contact E-mail: _____

Step 1: Determine the total number of Drainage Fixture Units (DFUs) for the Food Service Facility. If the fixture is known, use "Fixture" column to determine DFU value. If the fixture is not known or listed, use the "Other Contributors" column to determine DFU value based on trap size or flow, as applicable. Total all DFUs to determine the "Total Drainage Fixture Unit Value" for the facility.

Drainage Fixture Unit Values (DFU)							
Qty	Fixture	DFU	Total	Qty	Other Contributors	DFU	Total
	Commercial Sink with Food Waste	3			1¼ inch trap & trap arm	1	
	Kitchen Sink	2			1½ inch trap & trap arm	3	
	Bar Sink	2			2 inch trap & trap arm	4	
	Wash Sink	2			3 inch trap & trap arm	6	
	Service or Mop Sink	3			4 inch trap & trap arm	8	
	Food Waste Grinder	3			Flow of 1.0 to 7.5 gpm	1	
	Dishwasher (domestic)	2			Flow of 7.6 to 15 gpm	2	
	Floor Drain	2			Flow of 15.1 to 30 gpm	4	
	Drinking Fountain or Water Cooler	0.5			Flow of 30.1 to 50 gpm	6	

Total Drainage Fixture Unit Value: _____

Drainage Fixture Unit Values (DFUs) are derived from the 2012 Uniform Plumbing Code, Tables 702.1, 702.2(a), and 702.2(b).

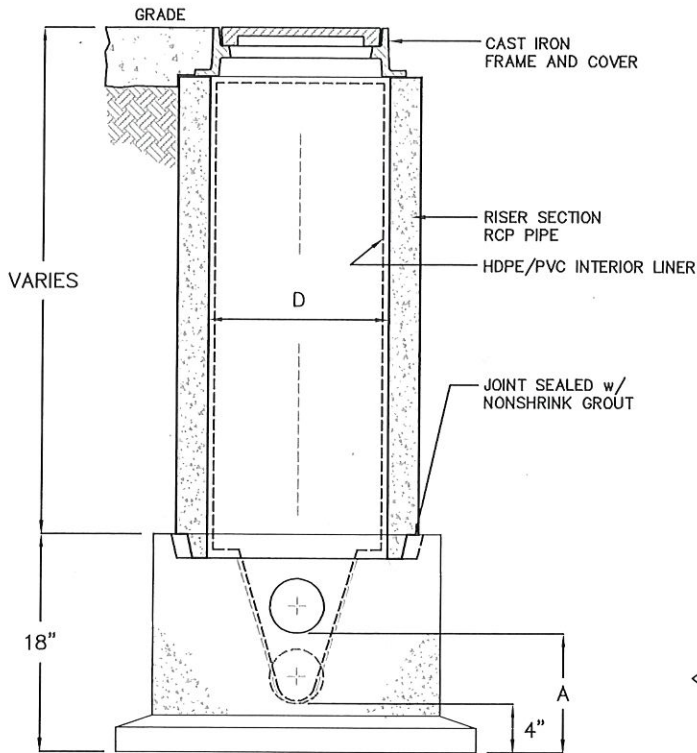
Step 2: Select the appropriately sized gravity grease interceptor based on the Total Drainage Fixture Unit Value determined in Step 1. Round up to next size available grease interceptor size (e.g. 45 DFUs would require a 1,250 gallon interceptor). The minimum required exterior gravity grease interceptor size is 1,000 gallons.

Gravity Grease Interceptor Sizing	
DFUs	Interceptor Sizing (gallons)
35	1,000
90	1,250
172	1,500
216	2,000
307	2,500
342	3,000
428	4,000
576	5,000
720	7,500
2112	10,000
2640	15,000

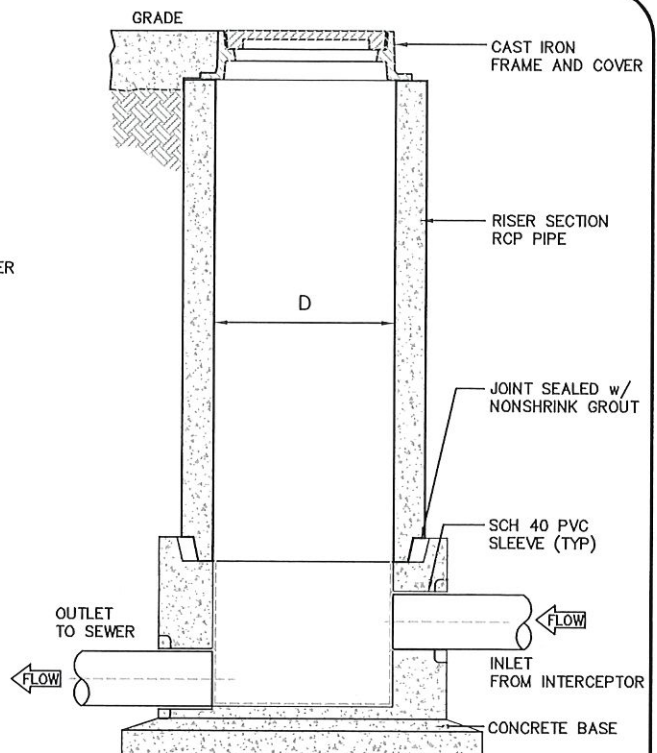
Minimum Required Gravity Grease Interceptor Size: 1,000 gallons

Proposed Gravity Grease Interceptor Size: _____ gallons

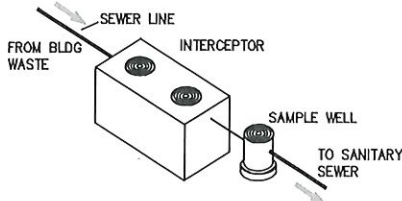
Gravity Grease Interceptor Sizing derived from the 2012 Uniform Plumbing Code, Table 1014.3.6 and is based on a 30-minute retention time.



FRONT VIEW



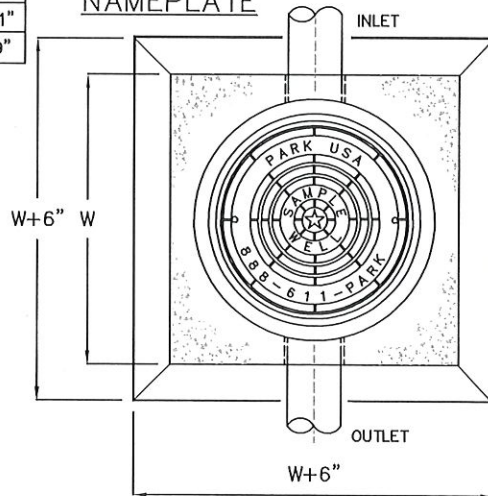
SIDE VIEW



MODEL	DIAMETER "D"	IN & OUT PIPE SIZE	WIDTH "W"	"A"
SWB-154	15"	4"	24"	11"
SWB-156	15"	6"	24"	9"
SWB-184	18"	4"	28"	11"
SWB-186	18"	6"	28"	9"
SWB-244	24"	4"	34"	11"
SWB-246	24"	6"	34"	9"



NAMEPLATE



PLAN VIEW

NOTES

1. SAMPLING WELL MUST BE INSTALLED UNDER A SEPARATE PLUMBING PERMIT.
2. USE 15" T&G R.C.P. FOR INSTALLATION FOR INSTALLATION 6'-0" DEEP AND LESS.
3. USE 24" T&G R.C.P. FOR INSTALLATION GREATER THAN 6'-0" DEEP. (STD RING AND M.H. COVER REQUIRED)
4. SAMPLING WELL MUST BE SET IN A CIRCULAR OR SQUARE CONCRETE PAD (1'-0" GREATER THAN OUTSIDE DIAMETER OF PIPE.)
5. INSIDE INSTALLATION NOT PERMITTED, WHERE OUTSIDE INSTALLATION IS POSSIBLE.
6. INSTALLATION INSIDE BLDG MUST BE POURED IN PLACE (15"MIN) NO CONCRETE PIPE IS PERMITTED, (AIR-TIGHT COVER REQUIRED.)
7. LAWN INSTALLATION MUST BE 4" ABOVE FINISHED GRADE.
8. DRIVE & SIDEWALK INSTALLATION MUST BE BROUGHT TO FINISHED GRADE
9. TO BE INSTALLED ON PRIVATE PROPERTY, IN AN ACCESSIBLE LOCATION TO CITY PERSONNEL.

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SPECIFICATIONS

CONCRETE : Class I/II concrete with of design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.

C.I. CASTINGS: Cast iron frames and grates are manufactured of grey cast iron conforming to ASTM A48-76 Class 30, Heavy-Duty AASHTO H-20



SAMPLE WELL BASIN

PM	DRN	CHK	DWG. NO.	REV.
DATE	06/15		SWB-2	A

SWG-2