

GREASE INTERCEPTOR OPERATION

Grease interceptors are underground or in-ground grease collection devices that separate FOG (or grease), solids, and water based on the principle of Stoke's Law. Stoke's Law describes the rising or settling of a particle in a fluid (water in this case). Simply put, under non-turbulent conditions in an interceptor given enough time, particles that are lighter than water (grease) will rise to the surface and particles that are heavier than water (solids) will settle to the bottom. A typical conceptual interceptor design is illustrated in Figure 1.

The proper plumbing and placement of baffles will provide the non-turbulent conditions. The proper dimensions and volume of the interceptor will provide sufficient retention time to allow the particles to fully rise or settle before they pass-through to the outlet of the interceptor. Over time, the grease and solids layers thicken and will eventually fill the first chamber if they are not removed. If the grease and solids are not removed regularly, the interceptor no longer functions for its intended purpose, and grease will be carried into the sewer system. Emulsified or partially emulsified particles will rise or settle slower, which is why soaps and other emulsifiers may cause some grease or solids to pass-through an interceptor and collect downstream of the interceptor.

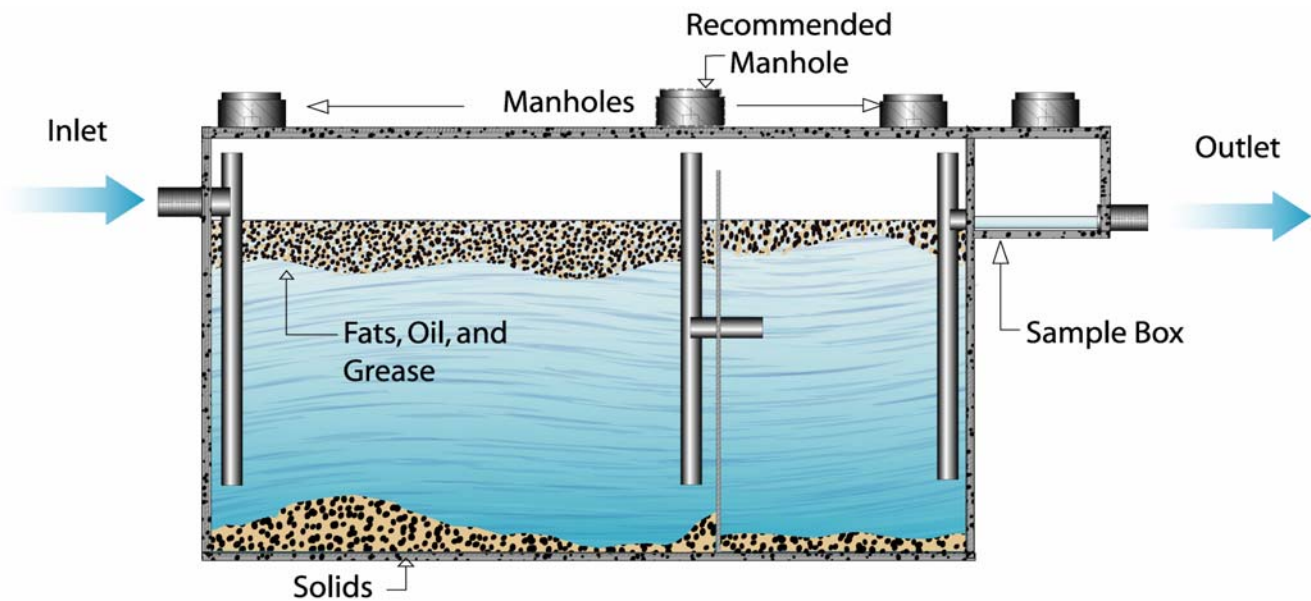


Figure 1: Typical Conceptual Grease Interceptor Design – Side View