

Section XXI

SAND, OIL AND GREASE INTERCEPTOR

This section includes guidelines for design and installing a sand, oil and grease interceptor.

A. SAND, OIL AND GREASE INTERCEPTOR

1. Provide precast concrete vault.
 - a. 4000 psi concrete.
2. See Detail XXII-1

B. CAPACITY DESIGN

1. Minimum interceptor size: 1500 gallons.
2. Size interceptor based on the following criteria:
 - a. Volume of throughput.
 - b. Solids retention capacity, in pounds, equal to twice the flow rate, in gallons per minute.
 - c. Retain 90% of the oil and grease.
 - d. Retain 100% of the sand.
 - e. Detention time based on peak flow to interceptor.
3. Restaurants:
 - a. Size of interceptor = (D) x (GL) x (SC) x (HR/2) x (LF) where:

D = Number of seats in dining area.

GL = Gallons of wastewater per meal, normally 5 gallons.

SC = Storage capacity factor; 1.7 minimum.

HR = Number of hours open.

LF = Loading factor.

- b. Loading factor:
 - 1) Recreational areas = 1.0.
 - 2) Main highways = 0.8.
 - 3) Other highways = 0.5.

4. Hospitals, nursing homes, and other commercial kitchens:

- a. Size of interceptor = $(M) \times (GL) \times (SC) \times (2.5) \times (LF)$ where:

M = Meals per day.

GL = Gallons of wastewater per meal, normally 4.5 gallons.

SC = Storage capacity factor; 1.7 minimum.

LF = Loading factor.

- b. Loading factor:
 - 1) Garbage disposal and dishwasher = 1.25.
 - 2) Without garbage disposal = 1.0.
 - 3) Without dishwasher = 0.75.
 - 4) Without dishwasher and garbage disposal = 0.5.

5. Minimum line size: 4".

C. LOCATING

- 1. Easily accessible for cleaning and solids removal.
 - a. Remove solids when approximately 75% of the interceptors capacity is reached.

D. MANHOLE FRAMES AND COVER

- 1. Provide gray iron castings, ASTM A48, Class 30 iron.
- 2. Machine all bearing surfaces.
- 3. Coat frames and covers with two shop coats of bitumastic paint.
- 4. Provide watertight covers, where indicated, conforming to above requirements and with frame tapped for four bolts, countersunk in cover.

revised March 15, 2000

- a. Provide rubber gasket between frame and cover.
5. Acceptable manufacturers: Sumter Machinery Company Model MC-18 and MF-11 or US Foundry Model 680.