

# City of *Thomasville*

## ENGINEERING

### SAND/OIL WATER SEPARATORS

Oil/water separators are to be used in all facilities that wash or service vehicles. Also included, but not limited to: planes, heavy equipment, trains, garages, fueling stations, businesses using pressure washers, petroleum handling facilities, etc.

Note:

1. Some of the above facilities may require an Industrial Discharge Permit.
2. A sump catch basin may be required depending on type of facility.

#### WHAT SHOULD NOT GO THROUGH AN OIL/WATER SEPARATOR?

- Antifreeze, degreasers, and detergents. They will emulsify oil into small droplets, preventing the oil from floating to the surface.
- Fuels, alcohols, or solvents. They not only can emulsify the oil, but their vapors can pose a threat to line workers at the pump stations or treatment plant.
- Concentrated amounts of oily products. They can overload the baffles or plates and pass through to the sewer.
- Any emulsifiers. The smaller capacity of coalescing units may have more turbulent flows. This “flushing” action, combined with a concentration of any emulsifier, can wash off the residual oils clinging to plates and release large amounts of emulsified oils to the sewer.
- ANY metal finishing, plating, or metal recovery water. Oil/water separators are not designed to treat heavy metal-bearing wastewater. This type of discharge will require chemical treatment or special equipment for acceptable discharge. Examples of heavy-metal bearing wastewater are:
  - Hot tank and cabinet washer solutions from auto repair or machine shops
  - Pressure-wash water from ship and boat yards
  - Water-soluble machine coolant

#### OPERATION AND MAINTENANCE

The ability of oil/water separators to function properly depends upon routine service and maintenance. Operators need to understand the separation process and the components of the specific oil/water separator under their responsibility. The operator should make frequent inspections of all parts of the separator and its draining system to prevent failures caused by operations, breaks, and mechanical settings. The operator must also be familiar with the capacity of the separator and holding tanks, uses of the system, and its potential misuses to be able to determine periodic draining and cleaning requirements.

##### Maintaining an Oil/Water Separator

- Recommended inspection frequency: at least every 6 months.
- Save maintenance costs by diverting oils and sludge out of the separator. The sooner the oils are removed, the less the chance they will become emulsified. Oils that are free-floating can be carefully vacuumed off with a wet/dry vacuum. This oil should be stored in a separate drum for proper disposal.
- Oil may also be removed by use of absorbent pads. These float on top of the water and attract only the oil. The pads should be placed in the inlet chamber to trap the oils before they get a



chance to migrate. Pads should be checked often so they do not become saturated. These pads can be wrung out and reused if handled properly.

- Sludge (caked-on grease and oily dirt buildup on the bottom of the separator) are expensive to dispose of and difficult to clean out. A catch basin, installed before the separator, can be shoveled out and will trap solids before they wash into the separator. This can be very helpful to facilities cleaning muddy equipment.

The sludge should be collected in a drum and tested to determine proper disposal methods.

### **Car Washes**

For commercial car washes, separators shall have a minimum capacity of 1000 gallons for the first bay, with an additional 500 gallons of capacity for each additional bay.

Wash racks must be constructed to eliminate or minimize the impact of run-off from rain/storm events. Minimum requirements are roofed structures with at least two walls and appropriate grading to prevent stormwater infiltration into the sanitary sewer.

An effluent sampling well shall be required.

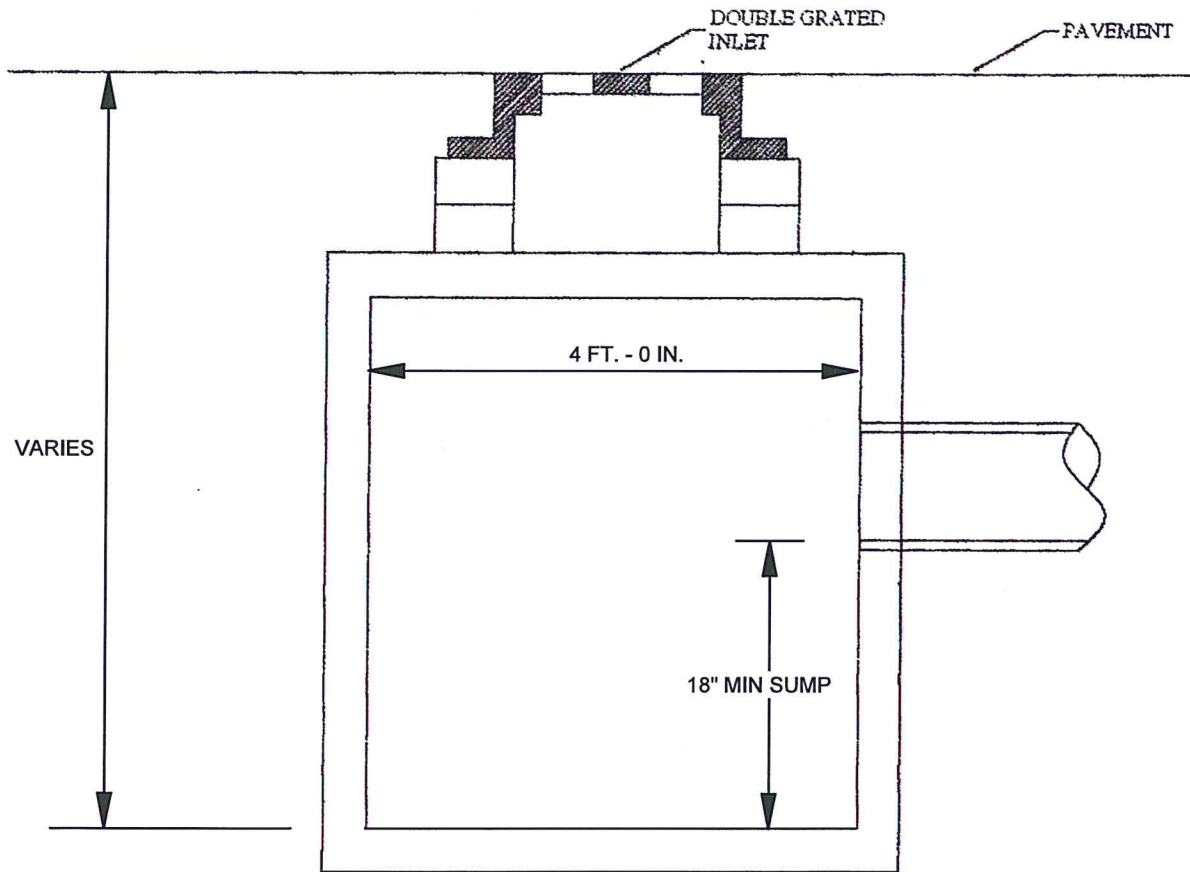
### **Automotive Repair Facilities** (Garages and Gas Stations)

Automotive repair shops which include a floor drain in its areas of operation shall be required to design, install and maintain a grit trap/oil separator, with a minimum capacity of 50 gallons for the first 100 square feet of area to be drained, plus 1 cu. Ft (7.5 gals) for each additional 100 sq. foot of area to be drained into the separator.

An effluent sampling well shall be required.

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**SUMP CATCH BASIN**



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TYPICAL OIL/GRIT SEPARATOR

