

Section 5. Environmental Compliance

5-01 Grease, Oil and/or Solids Removal Devices

Central San may require any non-domestic user to install a grease, oil and/or solids removal device according to guidelines set forth below and [District Code §10](#) in order to prevent grease, sand, flammable liquids, and other substances which are likely to restrict the flow or create a hazard from entering the sanitary sewer system.

A. Food Service Facilities

Any commercial establishment with common food preparation facilities shall have a grease interceptor⁽⁰⁰¹⁾ and/or grease trap(s) installed, as specified by Central San. The size of all grease interceptors and/or grease traps will be determined by Central San on a case by case basis using objective criteria, that may include, but is not limited to the size and type of facility, volume of business or operation, plumbing fixtures, and cooking fixtures, drainage fixture units and estimated flow rate (reference Uniform Plumbing Code, latest edition). Standards for grease traps and grease interceptors for food service facilities are presented below.

1. Grease Interceptors (Gravity Grease Interceptors per UPC)

- a) The term "grease interceptor" shall mean a prefabricated or precast grease interceptor with a minimum capacity of 1,000 gallons conforming to current American National Standards Institute (ANSI) standards for Prefabricated Gravity Grease Interceptors (ANSI Z1001-2016), and *DWG 23-02* with a maximum depth of 5' to the top of the inlet pipe. All piping and connections shall be non-corrosive (e.g. no steel, cast iron, etc.).
- b) All grease interceptors shall be installed in accordance with *Section 03 40 00 - Precast Concrete* and the manufacturer's specifications.
- c) All non-domestic drain inlets including, but not limited to, floor drains, floor sinks, sinks, mop sinks and drains serving dishwashers, wash areas, trash enclosures and/or trash compactors, shall be plumbed to the grease interceptor. A *Variance* may be requested for non-domestic drain inlets outside the kitchen that will not produce grease.
- d) All domestic waste inlets shall be plumbed separately from non-domestic waste inlets and connected either to the building side sewer downstream of the grease interceptor or directly to the main sewer.
- e) Systems to add enzymes, microbes, or other materials intended to remove grease from a grease interceptor are prohibited.
- f) The grease interceptor shall be installed in a location that is readily accessible for periodic cleaning, inspection, and/or sampling. Typical installations of grease interceptors are outside of the building. Proposals for installations within the interior of the building will be considered on a case-by-case basis subject to the approval of the Contra Costa County Health Services Department.

- g) If the grease interceptor is located in an area subject to vehicle traffic, the grease interceptor shall be designed with a minimum of an H-20 traffic rating with a monolithic pour for the concrete cap. Alternatively, an appropriately designed traffic cover shall be installed over the grease interceptor in accordance with *DWG 23-04*.
 - h) A sampling structure shall be installed per *Subsection a)*.
 - i) Grease interceptors shall be filled with clean water after installation.
2. Grease Traps (Hydromechanical Grease Interceptors (HGI) per UPC)
- a) The term "grease trap" shall mean a rust/corrosion resistant grease removal device conforming to current American Society of Mechanical Engineers (ASME) standards for Hydromechanical Grease Interceptors (A112.14.3) or Grease Removal Devices (A112.14.4).
 - b) Grease traps shall be installed in accordance with the manufacturer's specifications with a minimum flow rating of 20 gpm and a minimum grease containment capacity of 40 pounds.
 - c) The grease trap shall be connected to specific plumbing fixtures or drains as required by Central San.
 - d) The grease trap shall not be connected to:
 - (i) Dishwashers shall not be plumbed to a grease trap. A *Variance* may be considered where an existing installation of a dishwasher is connected to a dedicated grease trap.
 - (ii) Garbage disposals/grinders shall not be plumbed to a grease trap and are prohibited in any commercial establishment with common food preparation in which the kitchen plumbing is not served by a grease interceptor.
 - (iii) Domestic waste shall not be plumbed to a grease trap.
 - e) The inlet pipe to the grease trap shall be equipped with a flow control fitting. The flow control fitting shall be designed so that the flow through the fitting does not exceed the designed input rate of the grease trap. The flow control fitting shall be installed to be readily accessible for inspection, cleaning and maintenance. A flow control fitting that has adjustable or removable parts is prohibited.
 - f) Systems to add enzymes, microbes, or other materials intended to remove grease from a grease trap are prohibited.
 - g) The grease trap shall be installed in a location that is readily accessible for periodic cleaning according to manufacturer's recommendation, inspection, and/or sampling.

- h) When the grease trap is installed in-ground, the grease trap lid shall be flush with the floor; risers provided by the manufacturer shall be used when needed.

3. Automated Grease Traps (Grease Removal Devices (GRD) per UPC)

- a) The term “automated grease trap” shall mean a device that is designed to remove grease from wastewater using mechanisms that do not rely on gravity to achieve the separation. The requirements specified above for grease traps shall apply to automated grease traps.
- b) The installation of an automated grease trap requires a *Variance* to be authorized by Central San’s Environmental Compliance Section.

B. Other Commercial Businesses

Any commercial establishment that has the potential to discharge waste and/or wastewater which may contain oil, grease, and/or prohibited solids (e.g., vehicle service, heavy or light industrial, car washes, engine washings, etc.) shall have a sand-oil interceptor and/or separator(s) installed, as specified by Central San. Standards for sand-oil interceptors and separators are presented below.

1. Sand-Oil Interceptors:

- a) The term “sand-oil interceptor” shall mean a prefabricated or precast grease, oil, and/or solids removal device with a minimum capacity of 320 gallons as shown on *DWG 23-02* and *23-03*. All piping and connections shall be non-corrosive (e.g. no steel, cast iron, etc.).
- b) The sand-oil interceptor shall be designed in accordance with the following performance-based standards:
 - (i) The interceptor shall have the capacity for a 30-minute retention time, based on the maximum influent flow rate.
 - (ii) The interceptor shall be designed to reduce turbulence of the flow through the unit.
- c) The interceptor shall provide for the removal of floatables and settleables from the wastewater to the maximum extent practicable using multiple sedimentation chambers, pipe elbows installed between chambers, and/or other pretreatment design elements.
- d) Alternative designs of sand-oil interceptors may be submitted to Central San for consideration. The specifications, operation, and effectiveness for the proposed application of the alternative design shall be certified by a licensed Professional Engineer prior to approval by Central San.
- e) All plumbing fixtures which may discharge wastewater containing oil, grease, and/or solids to the sanitary sewer system including, but not limited to, floor drains, service sinks, mop sinks, and drains serving wash

areas and/or trash enclosures shall be connected to the sand-oil interceptor.

- f) All domestic waste inlets shall be plumbed separately from non-domestic waste inlets and connected either to the building side sewer downstream of the sand-oil interceptor or directly to the main sewer.
- g) Systems to add enzymes, microbes, or other materials intended to remove grease or oil from a sand-oil interceptor are prohibited without a *Variance* authorized by Central San's Environmental Compliance Section.
- h) The sand-oil interceptor shall be installed in a location that is readily accessible for periodic cleaning by a vacuum truck, inspection, and/or sampling.
- i) If the sand-oil interceptor is located in an area subject to vehicular traffic, the sand-oil interceptor shall be designed with a minimum of an H-20 traffic rating. Alternatively, an appropriately designed traffic cover shall be installed over the sand-oil interceptor in accordance with *DWG 23-04*.
- j) A sampling structure shall be installed per *Subsection a)*.

2. Separators

- a) The term "separator" shall mean a rust/corrosion resistant grease, oil, and/or solids separation device, with a minimum flow rating of 20 gpm.
- b) The design, specifications, operation, and effectiveness of the separator for the proposed application shall be certified by a licensed Professional Engineer prior to approval by Central San.
- c) The separator shall be connected to specific plumbing fixtures or drains as required by Central San.
- d) Domestic waste shall not be plumbed to a separator.
- e) The inlet pipe to the separator shall be equipped with a flow control fitting. The flow control fitting shall be designed so that the flow through the fitting does not exceed the designed input rate of the separator. The flow control fitting shall be installed to be readily accessible for inspection, cleaning and maintenance. A flow control fitting that has adjustable or removable parts is prohibited.
- f) Systems to add enzymes, microbes, or other materials intended to remove grease or oil from a separator are prohibited.
- g) The separator shall be installed in a location that is readily accessible for periodic cleaning according to manufacturer's recommendation, inspection, and/or sampling.
- h) A sampling structure may be required per *Subsection a)*.

3. Hair/Fiber/Lint Traps

Barbershops, beauty salons, pet groomers, animal care facilities, and any other commercial facility that discharges wastewater containing significant amounts of hair/fiber/lint shall install a “hair trap” or other pretreatment device as specified by Central San.

4. Clay/Ceramic/Granite/Marble/Solids Traps

Classrooms, manufacturing or any other commercial facilities that discharge wastewater containing significant amounts of clay, ceramic, granite, marble, solids, or other similar material residuals shall install a trap or other pretreatment device as specified by Central San.

5. Dental Practices

a) Amalgam Separators - Dental practices that generate amalgam wastes shall install an amalgam separator on the vacuum system(s) serving the facility, prior to discharge to the sanitary sewer. The amalgam separator shall meet the ISO 11143 standards that are effective at the time of installation. Separator shall be sized to according to manufacturer’s recommendation to serve the number of operatories and chairs. A sampling structure may be required per *Subsection a*).

b) Plaster Traps - Dental practices that discharge wastewater containing plaster residuals shall install a plaster trap.

6. Other Pretreatment Devices

a) Other pretreatment devices will be considered on a case-by-case basis to treat specific pollutants.

5-02 Sampling Structures

A. Sampling structures shall be installed immediately downstream of grease interceptors, sand-oil interceptors, separators, and other pretreatment devices as specified in this Section and in accordance with *DWG 23-05*, except if the interceptor only services the area drains of a parking garage or a trash enclosure.

B. Sampling structures may also be required by Central San on a case-by-case basis for the following additional applications:

1. Process waste lines and/or immediately downstream of any pretreatment units (e.g., silver recovery system, pH adjustment system).
2. Sanitary sewer laterals serving a shell building constructed in an area zoned for light or heavy industrial use.
3. A business operation classified by Central San as a Permitted Industrial User (see [District Code §10](#)). Contact Central San’s Environmental Compliance Section for specific requirements.

5-03 Parking Structures

Standards for the connection of parking structures to the sanitary sewer system are as follows:

- A. Drainage from uncovered areas that are exposed to rainwater and/or storm water run-off shall be directed into the storm drainage system. This includes, but is not limited to, trench drains placed at the entrance and/or exit of parking structures.
- B. All interior floor drains and/or catch basins which are plumbed to the sanitary sewer shall be connected to an appropriately designed and sized (excluding flows from fire suppression system) sand-oil interceptor as specified by Central San.
- C. Sand-oil interceptors for parking structures shall be filled with clean water after installation.

5-04 Sewer Connections in Outdoor Areas

A. General Requirements

To avoid dedicating wastewater collection and treatment capacity to handling of clean water, [District Code §10](#) prohibits the discharge of unpolluted water, including, but not limited to rainwater and storm water run-off to sanitary sewers. Standards for the connection of outdoor areas to the sanitary sewer are as follows:

- 1. The outdoor area shall be bermed, raised, and/or sloped to prevent the introduction of storm water and roofed or equipped with a cover to prevent rainwater from entering the sanitary sewer system. Roof leaders shall not discharge to the sanitary sewer.
 - 2. Central San may consider an alternative positive storm water control method in lieu of a fixed roof or cover for an outdoor area on a case-by-case basis. The business shall provide Central San with detailed design drawings, equipment specifications, and operation descriptions, including standard operation and maintenance procedures, for the proposed alternative positive storm water control method. In all cases, Central San has the authority to either approve or disapprove a proposed alternative positive storm water control method.
 - 3. The installation of a positive storm water control method other than a fixed roof/cover or a complete wastewater recycling system may subject the business operation to the monitoring and reporting requirements of an *Industrial User Permit*, including the payment of permit fees and additional oversight by Central San.
- B. Surface area drains for stormwater shall not discharge to the sanitary sewer.

- C. Wash Areas –Shall comply with Subsection A above and additionally:
1. Outdoor wash areas shall be adequately sized to capture the wastewater generated by the washing operations performed in that area.
 2. All sanitary sewer drains in the outdoor wash area shall discharge to an appropriately designed and sized pretreatment device as specified by Central San.
- D. Trash Enclosures – Shall comply with Subsection A above and additionally:
1. If a sanitary sewer drain is required in an outdoor trash enclosure located on property zoned and/or used for food service facilities, then it shall discharge to a grease interceptor or grease trap as specified by Central San and as shown on *DWG 23-06*.
 2. If a sanitary sewer drain is required in an outdoor trash enclosure located on property zoned for light/heavy industrial use, vehicle service, or used by any facility that may generate wastes containing oil, grease, flammable liquids, or other restricted materials, then it shall discharge to an appropriately designed and sized grease, oil, and/or solids removal device as specified by Central San.
- E. RV/Trailer Holding Tank Dump Station
1. The installation of a centralized RV/Trailer holding tank dump station at a commercial location may subject the business to the assessment of additional Central San Sewer Service Charges and to the monitoring and reporting requirements of an *Industrial User Permit*, including the payment of fees and additional oversight by Central San.
 2. The RV/Trailer holding tank dump station drain shall be installed per *DWG 23-01* and be capped at all times unless being used for the disposal of RV/Trailer holding tank waste. No other types of waste shall be discharged to the drain.
- F. Outside Utility Equipment Areas
1. All discharges of polluted water from outside utility equipment areas (roof ventilation systems, boiler blowdown, etc.) shall be discharged to a raised floor sink or similarly raised floor drain to prohibit the discharge of unpolluted water (rainwater, storm water run-off) to the sanitary sewer.
 2. The discharge of condensate from exterior air conditioning units to the sanitary sewer is prohibited.

5-05 Swimming Pools, Spas and Fountains

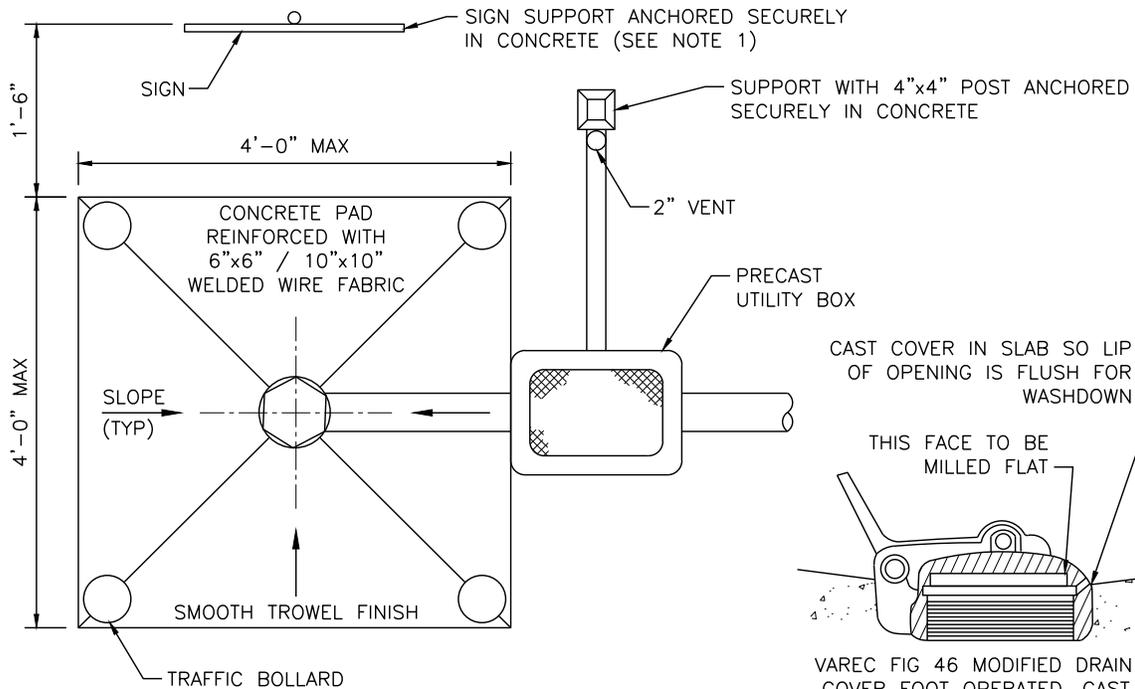
A swimming pool or spa connected to the public sewer shall be equipped with a 2" maximum diameter discharge pipe.

The draining of water from swimming pools, spas and/or fountains to the sanitary sewer shall only be conducted under a *Special Discharge Permit* issued by Central San. The discharge shall be controlled with a valve and/or the use of an approved temporary connection.

- A. The drain valve for connections to the sanitary sewer shall always be kept in the closed position unless a permit is obtained to discharge the water.
- B. A flow restrictor or valve shall be installed on the discharge piping of the system to maintain the approved flow rate.
- C. Passive overflow drains shall not be connected to the sanitary sewer system.
- D. Outdoor Pool Deck Drains shall not be connected to the sanitary sewer system.
- E. Filter Backwash - All filter backwash media shall be prevented from entering the sanitary sewer system.
 - 1. Diatomaceous Earth (DE) Filters - Wastewater from the backwash of diatomaceous earth filters shall pass through a solids separation/filtration system approved by Central San prior to discharge to the sanitary sewer system.
 - 2. Sand Filters - Wastewater from the backwash of sand filters shall pass through a sump or similar device approved by Central San to capture any sand prior to the discharge to the sanitary sewer system.
- F. Outdoor Shower Areas
 - 1. Any outdoor shower area with a drain to the sanitary sewer shall be bermed, raised and/or sloped to prevent the introduction of storm water.
 - 2. The outdoor shower area shall be roofed or equipped with a cover to prevent rainwater from entering the sanitary sewer system.

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

RV/TRAILER HOLDING TANK DISPOSAL FACILITY



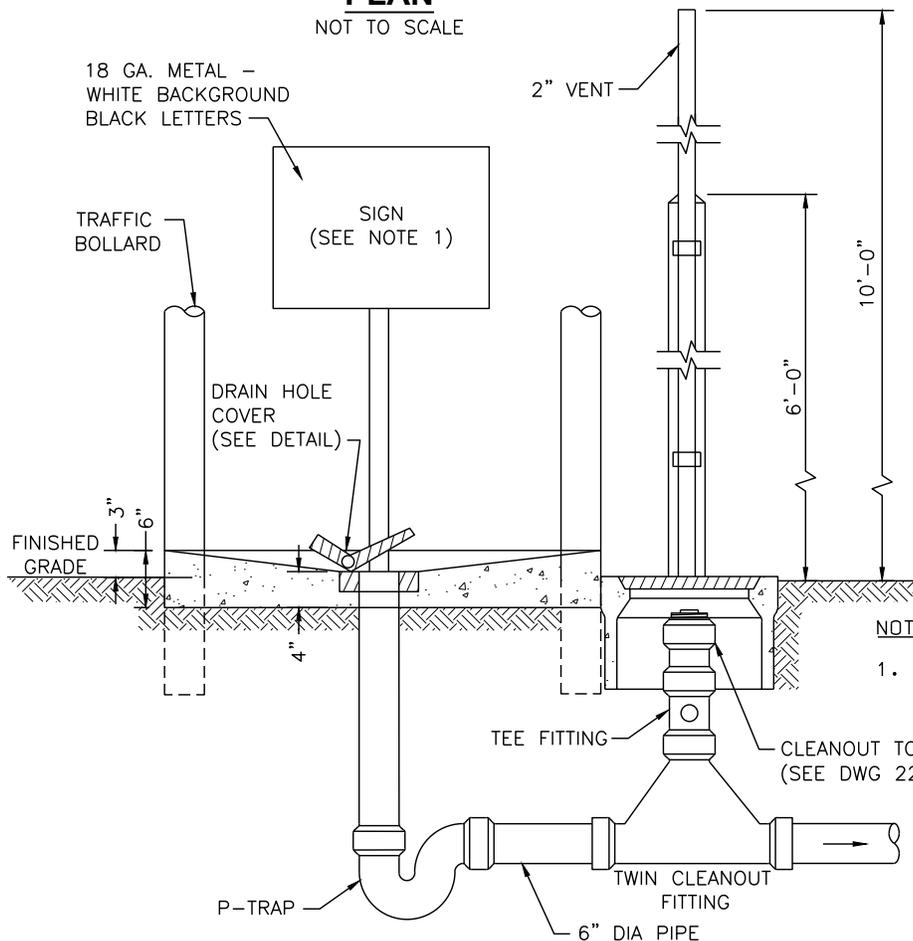
PLAN

NOT TO SCALE

VAREC FIG 46 MODIFIED DRAIN HOLE COVER FOOT OPERATED, CAST IRON BODY, BRONZE COVER, TIGHT AT 3.5 OZ. PRESSURE OR AN APPROVED EQUAL.

DRAIN HOLE COVER DETAIL

NOT TO SCALE

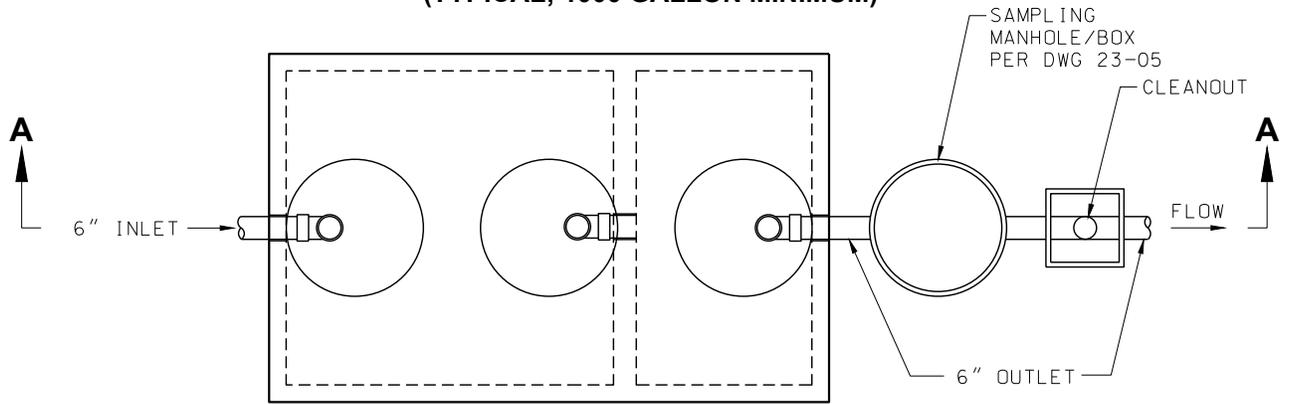


ELEVATION

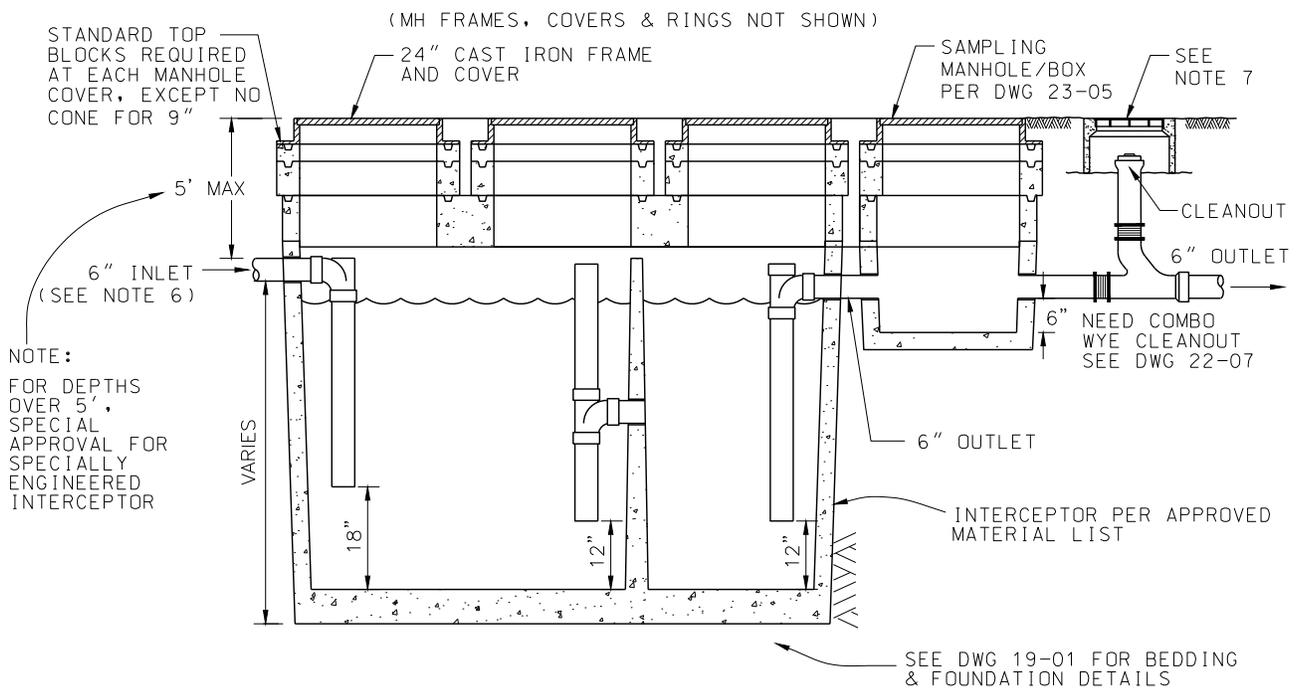
NOT TO SCALE

**CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CALIFORNIA**

GREASE INTERCEPTOR
(TYPICAL; 1000 GALLON MINIMUM)



PLAN VIEW



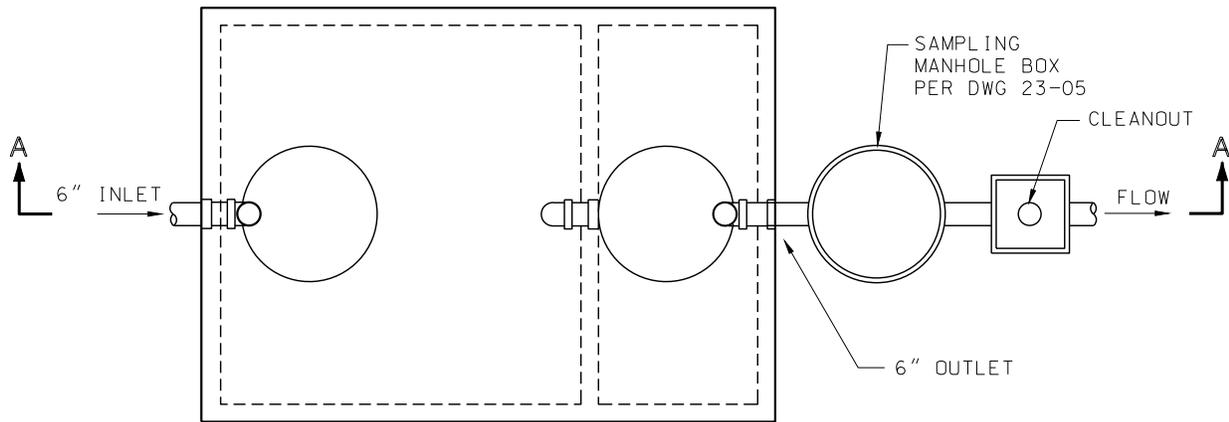
SECTION A-A

NOTES:

1. INTERCEPTOR SHALL BE PLACED ON A MINIMUM OF 6" TYPE I BEDDING MATERIAL, COMPACTED TO 95% RC.
2. ALL ELEVATIONS SHALL BE APPROVED BY CCCSD PRIOR TO INSTALLATION.
3. GREASE INTERCEPTORS ARE NOT INTENDED FOR THE INTRODUCTION OF DOMESTIC SEWAGE. LOCATION AND TRIBUTARY DISCHARGE SOURCES SHALL BE APPROVED BY CCCSD PRIOR TO INSTALLATION.
4. INTERCEPTOR LOCATED IN AN AREA SUBJECT TO TRAFFIC MUST BE H-20 TRAFFIC RATED. NON-PRECAST INTERCEPTORS ACCEPTED UPON SPECIAL APPROVAL.
5. ALL INLET AND OUTLET PIPES SHALL BE 6" DIAMETER.
6. THE USE OF CAST IRON SOIL PIPE FOR GREASE INTERCEPTOR APPLICATIONS IS PROHIBITED.
7. SEE APPROVED MATERIALS LIST FOR TRAFFIC AND NON-TRAFFIC AREA PRECAST UTILITY BOXES AND GRATED LIDS. SEE DWG 19-08 & 19-09 FOR COVER REQUIREMENTS.

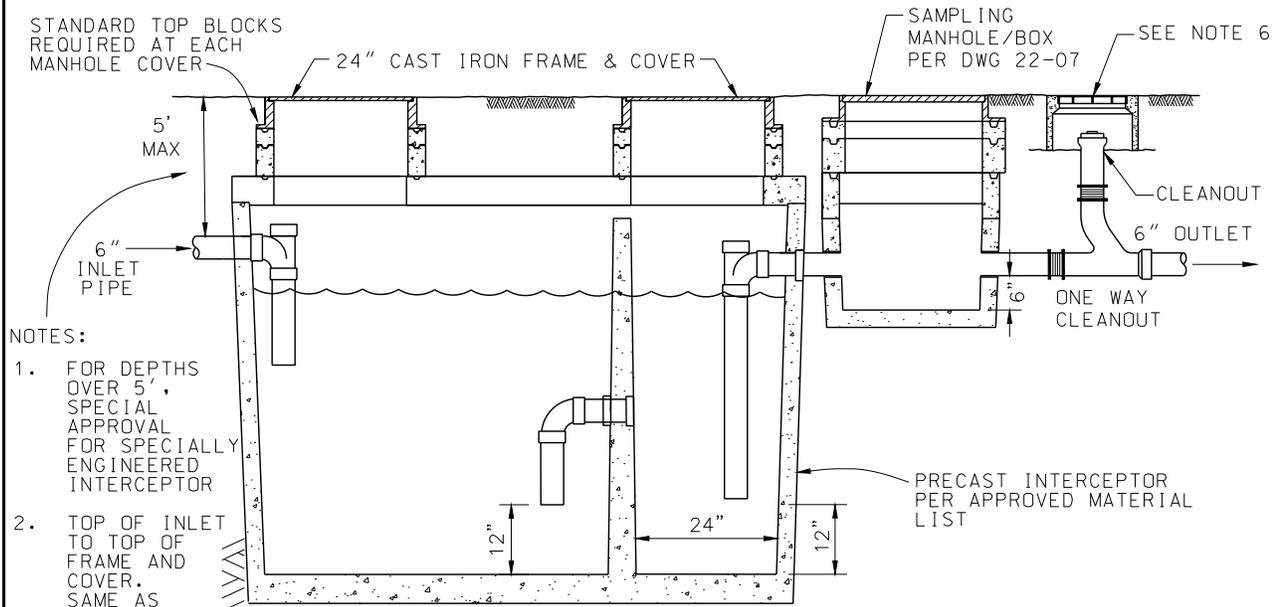
CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

SAND-OIL INTERCEPTOR (TYPICAL; 320 GALLON MINIMUM)



PLAN VIEW

(MH FRAMES, COVERS & RINGS NOT SHOWN)



SECTION A-A

SEE DWG 19-01 FOR BEDDING & FOUNDATION DETAILS

NOTES:

1. FOR DEPTHS OVER 5', SPECIAL APPROVAL FOR SPECIALLY ENGINEERED INTERCEPTOR
2. TOP OF INLET TO TOP OF FRAME AND COVER, SAME AS GREASE INTERCEPTOR

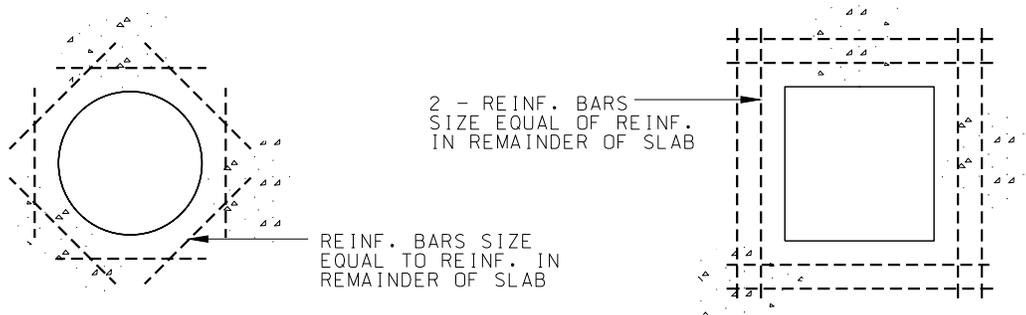
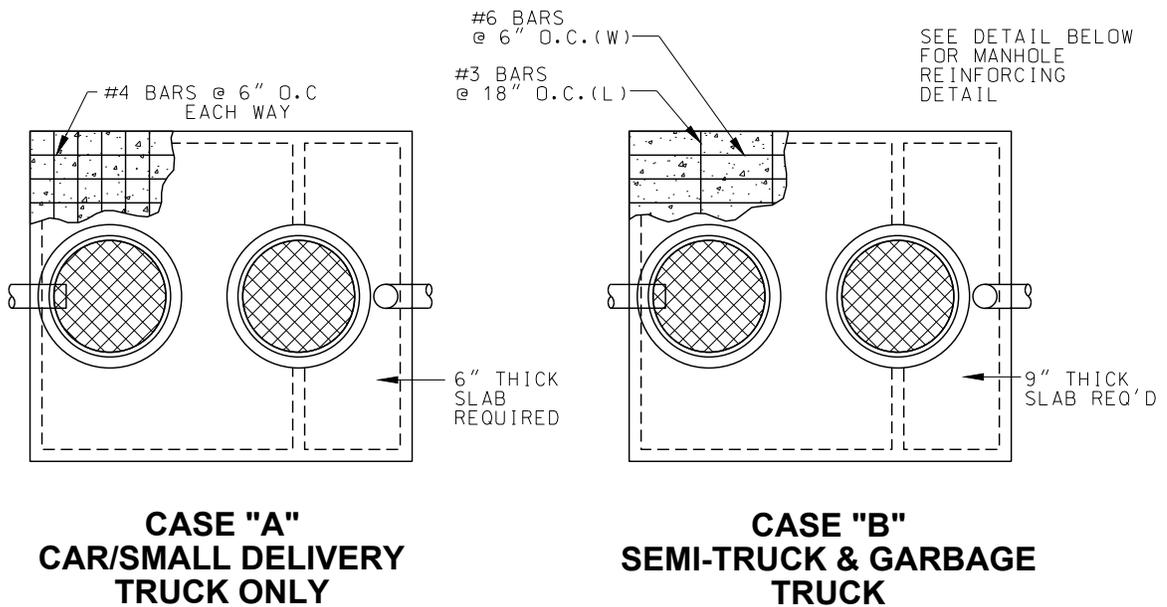
NOTES:

1. INTERCEPTOR SHALL BE PLACED ON A MINIMUM OF 6" TYPE I BEDDING MATERIAL, COMPACTED TO 95% RC.
2. ALL ELEVATIONS SHALL BE APPROVED BY CCCSD PRIOR TO INSTALLATION.
3. SAND-OIL INTERCEPTORS ARE NOT INTENDED FOR THE INTRODUCTION OF DOMESTIC SEWAGE. LOCATION AND TRIBUTARY DISCHARGE SOURCES SHALL BE APPROVED BY CCCSD PRIOR TO INSTALLATION.
4. INTERCEPTOR LOCATED IN AN AREA SUBJECT TO TRAFFIC MUST BE H-20 TRAFFIC RATED. NON-PRECAST INTERCEPTORS ACCEPTED UPON SPECIAL APPROVAL.
5. ALL INLET AND OUTLET PIPES SHALL BE 6" DIAMETER.
6. SEE APPROVED MATERIALS LIST FOR TRAFFIC AND NON-TRAFFIC AREA PRECAST UTILITY BOXES AND GRATED LIDS. SEE DWG 19-08 & 19-09 FOR COVER REQUIREMENTS.

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

CONCRETE TRAFFIC SLABS FOR GREASE INTERCEPTORS OR SAND - OIL INTERCEPTORS

(REQUIRED FOR NON-TRAFFIC RATED INTERCEPTORS)



MANHOLE AREA REINFORCING DETAILS

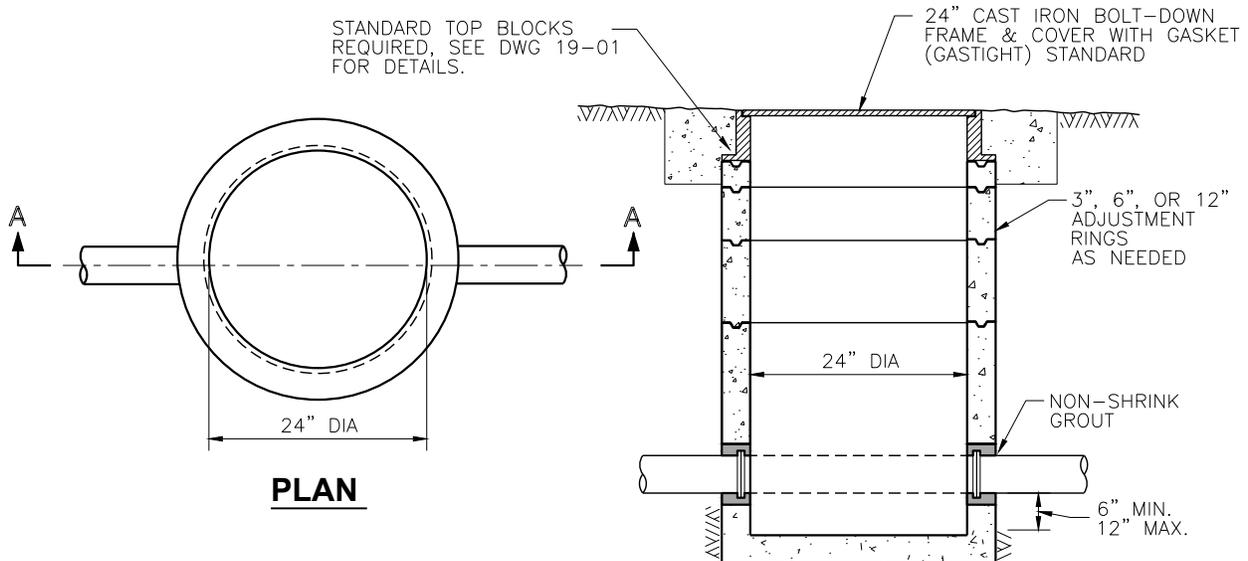
CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

PRECAST SAMPLING STRUCTURES

(SEE APPROVED MATERIALS LIST)

SAMPLING MANHOLE

(OUTSIDE)

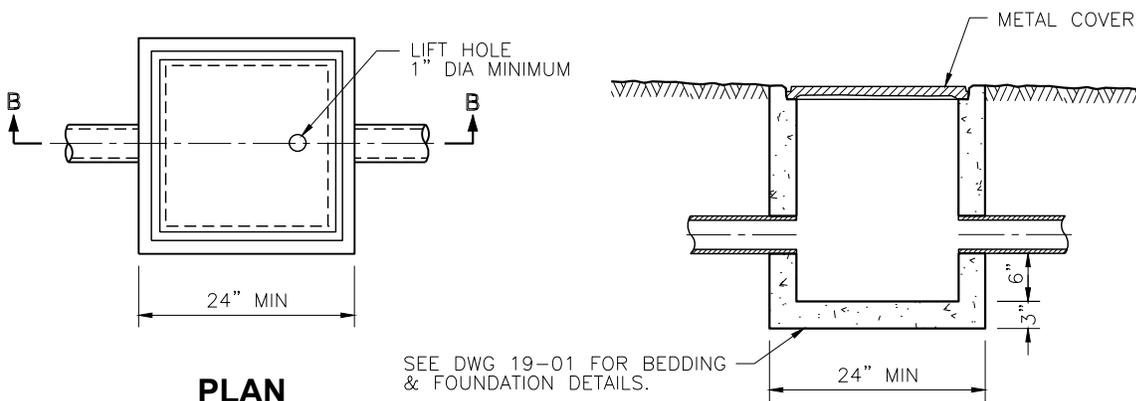


SEE DWG 19-01 FOR BEDDING & FOUNDATION DETAILS.

NOTE: 1. CAST IRON COVER SHALL READ "SANITARY SEWER".

SAMPLING BOX

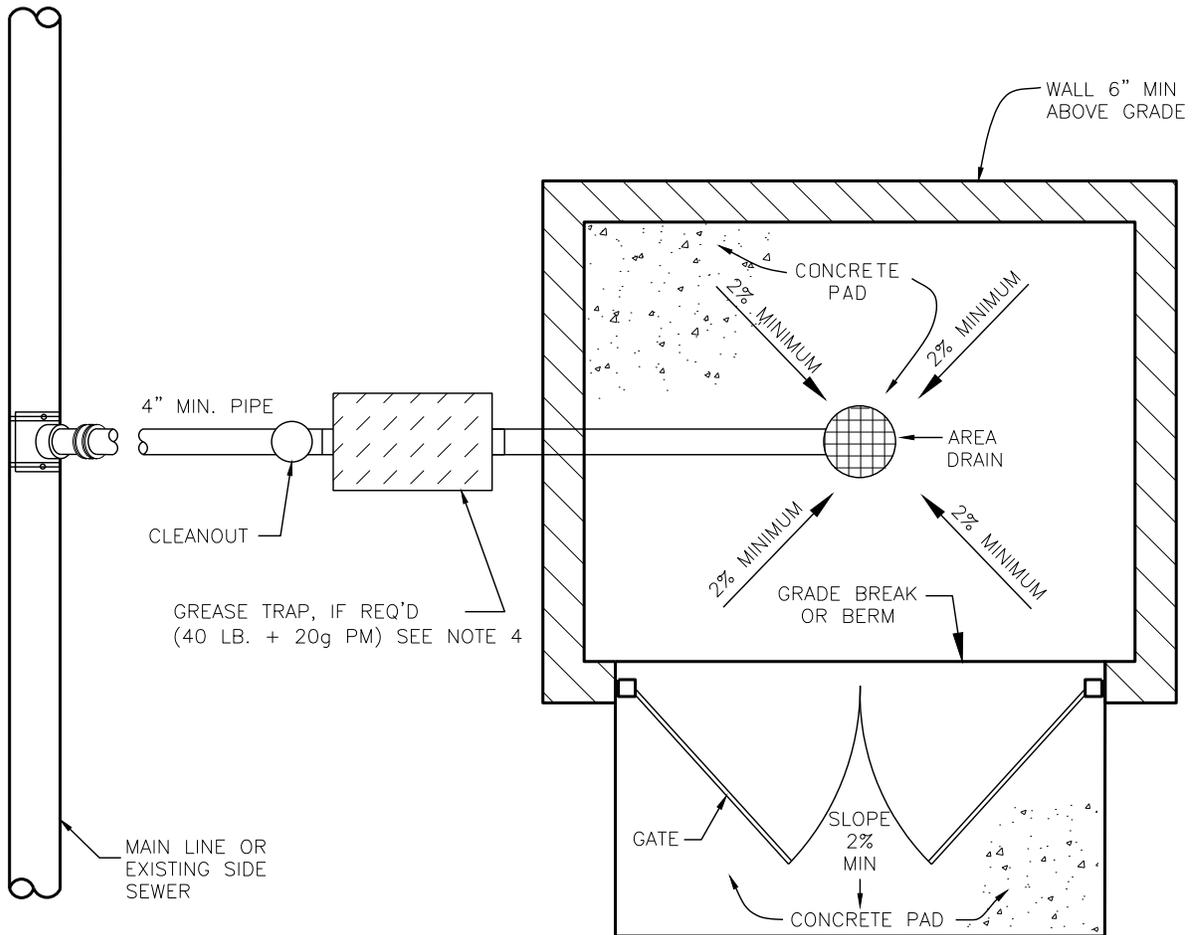
(INSIDE ONLY)



SEE DWG 19-01 FOR BEDDING & FOUNDATION DETAILS.

**CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CALIFORNIA**

TRASH ENCLOSURE DETAIL
(TYPICAL)



NOTES:

1. ROOF REQUIRED OVER ENTIRE ENCLOSURE WITH DOWNSPOUTS DIRECTED AWAY FROM ENCLOSURE.
2. A P-TRAP SHALL BE INSTALLED IMMEDIATELY DOWNSTREAM OF AREA DRAIN IF NO GREASE TRAP REQUIRED.
3. GREASE TRAP SHALL BE INSTALLED IF TRASH ENCLOSURE SERVES ANY COMMERCIAL FOOD SERVICE USE & AS DETERMINED BY SOURCE CONTROL FOR ALL OTHER APPLICATIONS.
4. ALL PIPING TO BE 4" MIN. SIZE INCLUDING INLET/OUTLET OF GREASE TRAP.
5. LOCATION OF GREASE TRAP & C/O VARIES WITH APPLICATION.
6. IF INSTALLED OUTSIDE PF ENCLOSURE, TRAFFIC RATED LID IS REQUIRED.
7. MAY ALSO BE CONNECTED TO GREASE INTERCEPTOR