

CHAPTER 3 - STORM DRAINAGE

3.00 General Requirements

- A. Subject to Volume 1, Section 3.01 of these Standards, the following Construction Specifications shall apply.
- B. Provisions must be made for stormwater from private property to remain on private property wherever feasible. Runoff from driveways shall be directed to adjacent lawn whenever practical and not be permitted to drain directly to the street unless topography presents undue constraints.
- C. These requirements shall apply to all storm drainage facilities in existing and proposed public right-of-way, public drainage easements, and tracts of common ownership in the City. Storm drainage systems include, but are not limited to: inlets, pipes, ditches, creeks, rivers, wetlands, and storm water quality and quantity facilities.
- D. Stormwater pipes shall be installed in accordance with Chapter 4 - Wastewater Collection System Construction, of these Standards. All applicable provisions of Chapter 4 shall be followed except where specifically amended in this Chapter.

3.01 Culverts

All exposed culvert ends shall be beveled. Materials and construction shall conform to Section 7-02 of the Standard Specifications.

3.02 Catch Basins and Inlets

Materials and construction shall conform to Section 7-05 of the Standard Specifications.

3.03 Cleaning Existing Drainage Structures

Following installation of storm drainage facilities, clean existing drainage structures as specified in Section 7-07 of the Standard Specifications.

3.04 Embankment

Embankment for stormwater retention or detention basins shall be placed in maximum eight (8) inch lifts and each lift shall be compacted to 95% of maximum density at optimum moisture content. Embankments shall be constructed per Section 2-03 of the Standard Specifications.

3.05 Oil/Water Separator

Oil/water separators shall be constructed as shown in the standard details. Excavation for precast vault shall be sufficient to provide a minimum of 12 inches between the vault and the side of the excavation. Vault shall be placed at proper depth to set vault cover flush with finish grade. If additional depth of cover is required over inlet or outlet piping vault riser sections shall be installed to raise vault cover a maximum of 24 inches.

The oil/water separator shall be placed on firm soil. If the foundation material is inadequate, the Contractor shall use foundation gravel or bedding concrete under the normal base to support the separator.

Vault shall be placed and set plumb so as to provide vertical sides. The completed separator shall be rigid and watertight.

Joints of precast concrete sections shall be thoroughly wetted and completely filled with mortar, plastered and trowled smooth with 3/4" of mortar in order to attain a watertight surface.

All lift holes, if any, on precast items shall be completely filled with expanding mortar and smoothed both inside and out, to insure water-tightness. All steel loops, if any, on precast section must be removed, flush with the vault wall. The stubs shall be covered with mortar and smoothed. Rough, uneven surfaces will not be permitted.

Precast vault shall be provided with 8 inch diameter knockouts at all pipe openings or have openings core-drilled prior to installation.

All rigid pipe entering or leaving the structure shall be provided with flexible joints within twelve inches (12") of the manhole structure and shall be placed on firmly compacted bedding. Special care shall be taken to see that the openings through which pipes enter the structure are completely and firmly filled with mortar from the outside to ensure water-tightness. All P.V.C. pipe connections to vault shall be made with gasketed coupling as approved by the City.

3.06 Television Inspections

Where requested by the City Engineer, the developer's contractor shall pay for the cost of scanning all new public storm pipe along with existing sections of pipe which are disturbed or affected by new construction. Prior to a television scan, the contractor shall flush, clean, and remove all debris from the system and shall string all lines with nylon cord (or equivalent) having a minimum test strength of 250 pounds. The string ends shall be tied to the top rung of the steps in each structure.