

SAN ANTONIO RIVER AUTHORITY  
UTILITIES DEPARTMENT

SECTION 33-05-63  
SANITARY SEWER STRUCTURES

**PART 1 GENERAL**

1.1 DESCRIPTION:

A. RELATED WORK SPECIFIED ELSEWHERE:

Section 01-33-00 – Submittals  
Section 31-50-00 - Trench Excavation Protection  
Section 33-05-05 - Sewer Excavation, Trenching and Backfilling  
Section 33-01-31 - Sewer Main TV Inspection  
Section 33-05-06 - Sanitary Sewer Testing  
Section 33-05-07 - Jacking, Boring or Tunneling Pipe  
Section 33-05-61 - Standard Sanitary Sewer Manholes  
Section 33-31-00 - Sanitary Sewers  
SAWS ITEM NO. 300 Concrete (Natural Aggregate)  
SAWS ITEM NO. 301 Reinforcing Steel  
SAWS ITEM NO. 550 Trench Excavation Safety Protection  
SAWS ITEM NO. 307 Concrete Structures

B. SCOPE:

This item shall govern for the construction of all concrete sanitary sewer structures other than standard sanitary sewer manholes. All concrete sanitary sewer structures shall be constructed in accordance with the specifications herein outlined and in conformity with the required lines, grades, sections, and details shown on the plans or as directed by the OWNER. All plans, materials and specifications shall be in accordance with the *Texas Commission on Environmental Quality (TCEQ) Chapter 217 – Design Criteria for Domestic Wastewater Systems*.

C. SUBMITTALS:

CONTRACTOR shall submit manufacturer's product data, instructions, recommendations, shop drawings and certifications. All submittals shall be in accordance with OWNER'S requirements and submittals shall be approved by the OWNER prior to delivery.

**PART 2 PRODUCTS**

2.1 GENERAL

All structures shall be watertight, and the interior walls coated with a sewer structural coating on the Approved Product List. The list is located on the OWNER'S website and is periodically updated. The CONTRACTOR should review this list prior to start of construction.

2.2 CONCRETE

All concrete shall conform to the provisions of *SAWS ITEM NO. 300, Concrete (Class A)* or shall be of the class as noted on the plans. Concrete for precast structures shall have a minimum compressive strength of four-thousand (4,000) psi in twenty-eighth (28) days and comply with the applicable requirements of ASTM C 478.

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2.3 REINFORCING STEEL:

All reinforcing steel shall conform to the provisions of *SAWS ITEM NO. 301 Reinforcing Steel*.

2.4 MEMBRANE CURING COMPOUND:

All membrane curing compound shall conform to the provisions of *TxDOT's DMS-4650, "Hydraulic Cement Concrete Curing Materials and Evaporation Retardants."*

2.5 MANHOLE RINGS AND COVERS:

All manhole rings and covers shall conform to the provisions of *Section 330561 - Standard Sanitary Sewer Manholes*.

**PART 3 EXECUTION**

2.1 CONSTRUCTION METHODS:

Construction methods shall conform to all applicable terms of *SAWS ITEM NO. 307 Concrete Structures*.

Sanitary sewer structures constructed to function as manholes, wet wells, dry wells or maintenance access appurtenances to gravity sewer systems shall be constructed to accommodate influent and effluent pipes as described in applicable provisions of *Section 330561 - Standard Sanitary Sewer Manholes* and the entire completed structure tested as described therein or as approved by the OWNER. All sanitary sewer structures and manholes larger than four feet (4') in internal diameter shall conform with the minimum wall thickness, reinforcement steel, and other requirements of ASTM C 478.

All excavation and trenching shall conform to *SAWS ITEM NO. 550 Trench Excavation Safety Protection*.

2.2 TESTING:

All testing shall conform to *Section 330506 - Sanitary Sewer Testing*.

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**PART 4 MEASUREMENT AND PAYMENT**

- A. "Sanitary Sewer Structures" materials and installation will be measured in the field for each structure that is complete in place.
- B. Payment will be at the unit price bid for the diameter of structure indicated and will be full compensation to complete construction. No separate payment will be made for any items of work, materials, parts, equipment, supplies, or related items required to perform and complete the requirements of the specifications for "Sanitary Sewer Structures" complete in place.
- C. Payment for structures specifically identified in the project plans and specifications will be made at the unit price bid for each, which price shall include monolithic manholes, manhole ring and cover, concrete ring encasement, crushed stone, precast sections, manhole covers, precast section O-ring gaskets, lubricants, throat rings, cones, flat lids, manhole bases, pipe cradles, embedment, testing, concrete, mortar, labor, tools, equipment, pipe to manhole connectors, tees, wyes, castings, and related items required to construct, test and complete the work.

**END OF SECTION**