

ECUA ENGINEERING MANUAL

The Manual consists of 5 Divisions. A description of each section, its contents, and the use of each section is summarized below.

DIVISION

1. **ENGINEERING PROCEDURES**

The procedures are for those areas or functions where commercial customers, developers, engineers, contractors and builders must interact with the ECUA Engineering Department. The procedures identify what information is required to be provided to the Engineering Department, how the Engineering Department will process the information, and the responses to be issued by the Engineering Department.

Procedure 1	Engineering Review of a Development with a Water and/or Sewer Line Extension <ul style="list-style-type: none">• Request for Service Requirements• Utility Service Agreement• Notice of Intent• Contractor's Notification of Commencement of Construction• Certification of Completion – Water• Certification of Completion - Sewer
Procedure 7	Easements for ECUA Utilities
Procedure 8	New Product Approval
Procedure 9	Change Orders
Procedure 10	Pay Request Submittals

2. **DESIGN STANDARDS**

This division is intended for consultant engineer or engineer-of-record when designing and preparing plans for submittal to and review by the ECUA Engineering Department.

Section 1	Forward
Section 101	Plan Preparation
Section 556	Potable Water System
Section 570	Sanitary Wastewater Collection System
Section 575	Wastewater Lift Stations and Force Mains

3. **TECHNICAL SPECIFICATIONS**

This division contains the acceptable specifications for construction of all water and wastewater improvements which will become the responsibility of the ECUA. The engineers design shall conform to these specifications and the contractor shall construct the improvements according to these standards.

Section 1001	Abbreviations and Definitions
Section 1004	Testing Laboratory Services
Section 1013	Soils and Subsurface Investigations
Section 2102	Clearing and Grubbing
Section 2221	Trench Excavation, Backfill and Compaction
Section 2224	Pipe Boring, Drilling and Jacking
Section 2556	Water Distribution and Service Lines
Section 2570	Sanitary Sewers
Section 2575	Wastewater Lift Stations
Section 2576	Sanitary Sewer Force Mains (<i>Interim</i>)
Section 3300	Cast-in-Place Concrete

4. **DETAIL DRAWINGS**

This division contains standard plans for typical improvements and may be considered a supplement to the TECHNICAL SPECIFICATIONS. Where there is a conflict between the Technical Specifications and the Detail Drawings, the Detail Drawings will control.

D-1	Sewer Manhole
D-2	Shallow Manhole
D-4	Sewer Manhole Detail
D-6	Drop Manhole Connection
D-7	Lateral Sewer Connection
D-10	Pipe Envelope Requirements
D-11	Flexible Pipe Bedding
D-12	Typical Disinfection & Chlorination
D-13	Chlorine Required for Sterilization
D-21	Typical Water Service Installation
D-25	Typical Compound/Turbine Meter 2" and larger
D-34	Typical Valve and Box Installation
D-35	Typical Fire Hydrant Installation
D-41	Typical 2" Flush Hydrant
D-43	Typical Thrust Block Installation
D-44	Pipe Joint Restraint Tabulation
D-56	Sewer/Water Separation & Clearances
D-60	Air Release Valve
D-61	Automatic Air Release Valve

5. **FORMS**

This division contains most of the forms required for submission to ECUA for review of new developments, new services, contractors, and permitting.

Form E1.1	Request for Service Requirements Request for Single Service Connection
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