

08-05

**ROGERS WATER UTILITIES SEWER SYSTEM  
ROGERS, ARKANSAS**

**SPECIFICATIONS FOR  
SANITARY SEWER  
WET WELL TESTING  
FEBRUARY 2006**

1. **SCOPE**

This specification governs the testing of a sanitary sewer wet well by the exfiltration/water method. The wet well shall be watertight after completion of exfiltration testing.

2. **GENERAL REQUIREMENTS**

- a. The wet well shall be exfiltration tested for water tightness upon the completion of the backfill and compaction operation and the completion of the wet well structure and piping.
- b. The exfiltration test method shall be based upon 0.0142 gallons/hour (gph) per foot diameter per foot depth.
- c. The Contractor shall furnish all equipment and labor required, including necessary piping/hoses, pneumatic plug(s), water source with a measuring meter and stopwatch. The measuring meter dial shall be in 0.10 gallons increments.
- d. The exfiltration test shall be performed by the Contractor and witnessed by the Engineer and the RWU personnel. The Engineer shall furnish test reports of the exfiltration test to the Contractor and RWU.

3. **TEST PROCEDURES**

- a. After cleaning the interior surface of the wet well, the Contractor shall set the pneumatic plug in the gravity inlet pipe(s) and fill wet well with water to within 1 foot of the bottom of the wet well top slab.
- b. The test water must be placed in the wet well to the specified depth for a minimum of 48 hours for stabilization prior to beginning the exfiltration test.
- c. After the 48 hours stabilization period, the Contractor shall refilling the wet well to the specified depth (test level). The test level shall be clearly marked by the Contractor on the wet well wall. The exfiltration test period is 2 hours. Once the

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exfiltration test begins, no water may be added to the wet well. The exfiltration test will be determined by measuring the amount of water required to raise the water level back to the marked level on the wet well at the end of the test period. The allowable water loss is determined from the following table.

| Depth of Wet Well<br>(Feet) | Diameter of Wet Well (Foot) |      |
|-----------------------------|-----------------------------|------|
|                             | 10                          | 16   |
| 14                          | 4.0                         | 6.4  |
| 16                          | 4.5                         | 7.3  |
| 18                          | 5.1                         | 8.2  |
| 20                          | 5.7                         | 9.1  |
| 22                          | 6.2                         | 10.0 |
| 24                          | 6.8                         | 10.9 |
| 26                          | 7.4                         | 11.8 |
| 28                          | 7.9                         | 12.7 |
| 30                          | 8.5                         | 13.6 |

d. Pneumatic plug(s) shall be removed from the wet well after the test.

4. **FAILURE OF EXFILTRATION TEST**

If the measured water is more than the specified allowable loss during the 2 hour test period, the wet well has failed the exfiltration test. The wet well must be repaired with a non-skrink grout material that is specified in Section 3-11. The Contractor shall excavate the wet well and apply non-skrink grout on the interior and exterior of the wet well. Any repair between the pipe(s) and the wet well wall (gasket waterstop area) requires the removal of the pipe and the re-installation of a pipe with waterstop (grouting the annular opening). Upon completion of the repairs, the wet well shall be retested as described in the above test procedures. The Engineer must witness the wet well repair and backfill operation. The cost of the wet well repair and backfill is incidental to the cost of the project.

5. **ACCEPTANCE**

The wet well shall have passed the exfiltration test if the measured water is less than or equal to the specified allowable loss during the 2 hour test period.