



WASTEWATER DEPARTMENT
STANDARD SPECIFICATIONS

SECTION 407
LOW PRESSURE SEWER

FEBRUARY 1, 2021

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407.01 GENERAL

This section only applies to developments that have received prior written consent from Riviera Utilities' (Board) and the City of Foley's (City) respective Engineering Departments. The development shall comply with Board and City requirements.

The applicant shall provide, construct, operate, and maintain a low-pressure sewer pump system of a type and size acceptable to the Board and the City. The pump system shall be suitable for the delivery of sewage into the Board and City's sewer system. Low-Pressure Sewer Pump Systems (LPSPS) shall comply with the requirements more particularly described in Section 407.2.

Each Low-Pressure Sewer (LPSPS) pump system and all appurtenances shall be located within the property to be provided service. The LPSPS shall include a discharge line of suitable size from the pump station to the point of connection to the Board and City's sewer system at the property line.

Board's Engineering Department shall review and provide comments on all site plans for Low-Pressure Sewer developments as part of the overall plan review process.

407.02 TYPES OF SYSTEMS

Terms utilized herein to characterize classification of service shall have the same meaning as outlined in the Board's policy and City's ordinance and may be amended as required

A. Septic Tank Effluent Pump (STEP) Package

1. This system consists of a Septic tank, pump vault with filter, control panel, and turbine pump
2. Solids are retained inside the septic tank and only effluent water is pumped to the Board and City's sewer system. This results in a lower Biochemical Oxygen Demand entering the sewer system from the Customer connection.

B. Grinder pump package

1. This system consists of a fiberglass tank, pump, control panel, and grinder pump

2. Solids are ground up and pumped to the Board and City's sewer system.

407.03 TANK MATERIALS AND SIZES

A. Septic Tank Effluent Pump (STEP) Package

1. Fiberglass with baffle
2. Minimum 1000 gallon capacity

B. Grinder pump package

1. Fiberglass
2. Minimum 150 gallon capacity

407.04 PUMPS AND MOTOR SIZING

A. Septic Tank Effluent Pump (STEP) Package

1. 1" discharge
2. 1/2 to 1hp, depending on location and design requirements
3. 115v, single-phase power

B. Grinder pump package

1. 1-1/4" discharge
2. 2hp motor
3. 230v, single-phase power

407.05 SIZING CONSIDERATIONS AND RECOMMENDATIONS

- A. Residential Service (Single Family) – Minimum pumping system capable of introducing into the Board and City's sewer system ten (10) gallons per minute of waste at a total dynamic head of ninety (90) feet. Minimum tank volume of one hundred fifty (150) gallons.
- B. Residential Service (Multi-Family) – Minimum pumping system capable of introducing into the Board and City's sewer system waste at a total dynamic head of ninety (90) feet. Pumping system requirements for horsepower, pumping rate, and tank volume shall be determined by a certified engineer or manufacturer representative for each specific installation.

- C. Basic Commercial Service – Shall meet the same specifications as a Residential Service (Single Family) as outlined in the above. Potential Peak Demand Flow (PPDF) above twenty gallons per minute (20 GPM) shall require a pumping system as set forth below.
1. Commercial Service (PPDF up to 40 GPM) – Minimum system capable of introducing into the Board and City’s sewer system with each pump ten (10) gallons per minute of waste at a total dynamic head of ninety (90) feet. Minimum tank volume of fifteen hundred (1,500) gallons for STEP system, or three hundred seventy (370) gallons for grinder pump system.
 2. Commercial Service (PPDF up to 100 GPM) – Minimum duplex pumping system capable of introducing into the Board’s sewer system with each pump twenty-five (25) gallons per minute of waste at a total dynamic head of ninety (90) feet. Minimum tank volume of 1,500 gallons for STEP system, or six hundred sixty (660) gallons for grinder pump system.
 3. Commercial Service (PPDF greater than 110 GPM) – Pumping system requirements shall be determined by a certified engineer for each specific installation.

407.06 FORCE MAIN PIPING SYSTEM

Refer to Section 400 for required materials, installation, and testing for all items installed within the right-of-way or easement, that will be conveyed to the Board for ownership, operation, and maintenance.

407.07 PROPERTY CONNECTION

There shall be a 316 stainless steel Curb Stop/Swing Check valve assembly installed inside an appropriately sized curb box or meter box. This shall act as a way to isolate the customer’s service lateral from the Board and City’s sewer system, in the event of a failure. The check valve shall prevent flows back to the Customer’s LPSPS from the Board and City’s sewer system. This item will be the point of demarcation of operation, maintenance, and ownership.

407.08 SPECIAL CONSIDERATIONS

As per the Board's policy and City's ordinance, the control panel for each LPSPS shall have a properly sized generator receptacle and manual transfer breaker to allow the Customer to operate the station during a prolonged power outage.

407.09 ALTERNATIVE SYSTEMS

No other pumps or pumping system shall be connected to the Board and City's sewer system without prior written authorization from the Board's and City's respective Engineering Departments.