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## Septic to Sewer

Dear Residents and Builders,

The Spring Lake Improvement District is initiating the transition from septic systems to sewer in our district. As we begin the installation of force mains and service lines, we strongly encourage existing residents to connect to our system, when lines become available in your area.

For new homes where service lines are available, connection to the sewer system will be mandatory. The district reserves the right to inspect all systems prior to their operation to ensure compliance with our standards.

In this transition, grinder pump systems will replace STEP systems. These pumps are more efficient, occupying a smaller footprint compared to traditional septic systems and drain fields. Grinder pump systems effectively grind solid waste and transport it to the treatment plant.

Please note that the installation of the grinder pumps will be the responsibility of the customer, contractor or builder. The district will provide the required specifications for the grinder system to ensure proper installation. However, the Spring Lake Improvement District will only maintain the service lines and force mains; maintenance of individual systems will not be provided by the district.

We appreciate your cooperation in this important initiative.

Sincerely,  
Israel Serrano  
Deputy manager  
Spring Lake Improvement District

## **RESIDENTIAL SEWAGE GRINDER PUMPING STATION**

### **DESIGN AND CONSTRUCTION**

#### **1. Type**

This section covers simplex grinder sewage pumping stations for residential uses installed and maintained by the owner. For duplex, triplex, and quadruplex residential buildings, each unit will be required to have their own station with electrical power supplied by the corresponding unit. Stations shall be of below ground design with submersible pumps and wall-mounted control panel.

#### **2. Pumps and Plumbing**

Pumps provided shall be a submersible, one or two (1) horsepower, progressive cavity grinder pump. The pump shall be capable of providing a minimum of five (5) GPM at one hundred (100) psi and fourteen (14) GPM at twenty-four (24) psi head. The pump shall be provided by the manufacturer with thirty (30) foot long leads for connection to the controller. The pump plumbing shall include a check valve and knife gate quick disconnect assembly prior to discharging through the basin wall with a 1-1/4-inch bulkhead fitting.

Force main shall be 1-1/4-inch High Density Polyethylene (HDPE) DR-9 with a minimum of 24-inches and a maximum of 48-inches of cover. A 1-1/4-inch x 2-inch adapter, 2-inch brass flapper style check valve, and a 2-inch brass curb stop valve shall be installed in the right of way.

The pipe between basin and valve at the right of way shall be either continuous or fused without compression fittings.

Any bends or deflections shall be installed with a smooth bend with a minimum radius of 25-inches for 1-1/4-inch pipe. A continuous #12 stranded tracer wire with green insulation shall be installed with force main from valve to basin.

Gravity pipe between the building and basin shall be installed per the requirements within the locally adopted plumbing code.

#### **3. Basin Structure and Location**

The station basin structure shall be high density polyethylene with a watertight cover with provisions for a 4-inch gravity inlet hub. The basin shall have integral anti-flotation

measures so concrete ballast is not required with a minimum internal volume of one hundred twenty (120) gallons. Basin excavation shall be dewatered as needed with basin installed plumb on 6- inches of compacted #57 stone.

The basin and control panel locations must be approved by Spring Lake Utilities prior to installation. The preferred basin location is in the front yard within five (5) feet of the adjacent dwelling wall, or on the side of the home no greater than five (5) feet behind the front plane of the building wall. The basin shall be installed with the top at least 3-inches but no more than 6-inches below finished floor elevation, and the surrounding grade 3 to 6-inches below the top of the basin. The basin should be located entirely within a green space and outside of any driveways, sidewalks, patios, pavers, or other hardscaped areas. The basin must be no closer than ten (10) feet to any existing or proposed trees and no landscaping other than grass, groundcover, or mulch is permitted within five (5) feet of the basin. The routing of the force main must be centered within a five (5) foot wide path clear of any trees, shrubs, fences, walls, or other structures.

#### **4. Electrical Service and Control Panel**

The property owner shall provide single phase, two-hundred forty (240) volt, 4-wire electrical service, including neutral and ground, terminated within 18-inches of the station controller with a NEMA 3R disconnect. The service shall be protected at the building panel with a 2-pole 30A breaker, permitted and installed in accordance with the requirements of Highlands County Building Department.

Minimum conduit size for electrical service between the controller and the basin shall be 1-1/4-inch with appropriate sweeps for any change in direction. Due to the length of the pump leads, the controller must be installed no further than five (5) feet from the basin and shall be wall mounted.

The control panel shall be equipped with integral breakers for pump and control circuits and a 4-wire, two-hundred forty (240) volt, flanged inlet generator receptacle L15-30P, compatible with an L15-30R cord. The control panel shall have a red flashing alarm light and buzzer with provisions for future network interface. The lockable, NEMA 4x enclosure shall include provisions to allow for wall mounting. A label shall be affixed to the outside of

the enclosure with a plumber's emergency contact information.

The station shall be provided with a 3-point solid state electronic level transducer. The transducer shall provide a signal indicating pumps off, pumps on, and alarm with a 6-inch interval between each setting.

#### **5. Maintenance Obligations**

The property owner and their tenants are responsible for ensuring that the waste stream discharging to the station does not negatively affect the system. These include plastics, flushable wipes, diapers, hair, grease or oils, sand, paint, chemicals, or other items not associated with normal sanitary waste.

The property owner shall be responsible for the costs associated with all the repairs of the Electric, basin, controller, pump, valve, etc.

#### **6. Abandoning of Existing Septic Systems**

If the grinder system is utilized to connect a building previously served by a septic system, the septic tank and drain field must be abandoned and properly permitted by Highlands County Health Department in accordance with their standards.