



SMALL GRINDER PUMP (SGP) CUSTOMER INFORMATION PACKAGE

CONTENTS

1. **POLICIES:** Policies related to Small Grinder Pumps are available on Bedford Water's website at <https://www.brwa.com/policies/> as noted below:
 - a. [Policy 6.11](#) Pressure Sewer System
 - b. [Policy 6.12](#) Small Grinder Pump Agreement
 - c. [Policy 6.13](#) Small Grinder Pump Installation Checklist
2. **USER INSTRUCTIONS** for the Environment One Grinder Pump (Applicable for all pump manufacturers)
3. **BEDFORD COUNTY CODE EXCERPT – PRETREATMENT ORDINANCE**
4. **PRIMARY CONTACT INFORMATION**
 - a. BEDFORD WATER DEPARTMENTS
 - i. CUSTOMER SERVICE DEPARTMENT
 - ii. ENGINEERING DEPARTMENT
 - iii. MAINTENANCE DEPARTMENT
 - b. DISTRIBUTORS & SUPPLIERS
5. **APPROVED CONTRACTORS** for Small Grinder Pump Station Installations
6. **SPECIFICATIONS:** Standard Details depicting the installation requirements and schematics can be found in the Master Specifications available on the website at <https://www.brwa.com/your-water/building-developing/developer-services/>. Relevant details include the following:
 - a. **GP-8:** Division of Pressure Sewer / Small Grinder Pump Installation Diagram
 - b. **CO-2:** Sanitary Sewer Cleanout
 - c. **GP-2:** Low Pressure Sewer Force Main Connection
 - d. **GP-3E:** Residential E-One Model 2010-074 Pump Station Installation
 - e. **GP-3L:** Residential Liberty Omnivore Model 2472-LSGX Pump Station Installation
 - f. **GP-4:** Pump Station Slab Mounting Detail

BEFORE BEGINNING CONSTRUCTION, PLEASE CONTACT:

SHANNELL DADE
CONSTRUCTION SUPERVISOR
(540) 586-7679 EXT. 135
(540) 871-6855

User Instructions for the Environment One Grinder Pump



Congratulations on your Environment One grinder pump investment. With proper care and by following a few guidelines, your grinder pump will give you years of dependable service.

Care and Use of your Grinder Pump

The Environment One grinder pump is capable of accepting and pumping a wide range of materials. Regulatory agencies advise that the following items should not be introduced into any sewer, either directly or through a kitchen waste disposal unit:

Glass	Diapers, socks, rags or cloth
Metal	Plastic objects (toys, utensils, etc.)
Seafood shells	Sanitary napkins or tampons
Goldfish stone	Kitty litter

In addition, you must **never** introduce into any sewer:

Explosives	Strong chemicals
Flammable material	Gasoline
Lubricating oil and/or grease	

Periods of Disuse

If your home or building is left unoccupied for longer than a couple of weeks, perform the following procedure:

Purge the System. Run clean water into the unit until the pump activates. Immediately turn off the water and allow the grinder pump to run until it shuts off automatically.

Duplex Units. Special attention must be taken to ensure that both pumps turn on when clean water is added to the tank.

Caution: Do not disconnect power to the unit

Power Failure

Your grinder pump cannot dispose of wastewater without electrical power. If electrical power service is interrupted, keep water usage to a minimum.

Pump Failure Alarm

Your Environment One grinder pump has been manufactured to produce an alarm signal (120 volt) in the event of a high water level in the basin. The installer must see that the alarm signal provided is connected to an audible and/or visual alarm in such a manner as to provide adequate warning to the user that service is required. During the interim prior to the arrival of an authorized service technician, water usage must be limited to the reserve capacity of the tank.

For service, please call your local distributor:



General Information

In order to provide you with suitable wastewater disposal, your home is served by a low pressure sewer system. The key element in this system is an Environment One grinder pump. The tank collects all solid materials and effluent from the house. The solid materials are then ground to a small size suitable for pumping as a slurry with the effluent water. The grinder pump generates sufficient pressure to pump this slurry from your home to the wastewater treatment receiving line and/or disposal plant.

BEDFORD COUNTY CODE – PRETREATMENT ORDINANCE (EXCERPT)

Definition.

Publicly owned treatment works or POTW: A "treatment works," as defined by section 212 of the act (33 U.S.C. § 1292). This article will affect discharges into several different treatments works having different owners. Local limits will be defined elsewhere in this article and may differ from site to site. This definition includes any devices or systems used in the collection, storage, treatment, recycling, and reclamation of sewage or industrial wastes of a liquid nature and any conveyances which convey wastewater to a treatment plant.

Sec. 18-2.1 Prohibited discharge standards.

- (a) *General prohibitions.* No user shall introduce or cause to be introduced into the POTW any pollutant or wastewater which causes pass through or interference. These general prohibitions apply to all users of POTW(s) whether or not they are subject to categorical pretreatment standards or any other national, state, or local pretreatment standards or requirements.
- (b) *Specific prohibitions.* No user shall introduce or cause to be introduced into the POTW(s) the following pollutants, substances, or wastewater:
- (1) Pollutants which create a fire or explosive hazard in the POTW, including, but not limited to, wastestreams with a closed-cup flashpoint of less than one hundred forty (140) degrees Fahrenheit (60°C) using the test methods specified in 40 CFR 261.21 (2005);
 - (2) Wastewater having a pH which is outside the limits established at the POTW receiving the wastewater, but in no case discharges with pH lower than 5.0 or greater than 12.5 or otherwise causing corrosive structural damage to the POTW or equipment;
 - (3) Solid or viscous substances in quantities or sizes which will cause obstruction of the flow in the POTW resulting in interference.
 - (4) Pollutants, including oxygen-demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which, either singly or by interaction with other pollutants, will cause interference with the POTW(s);
 - (5) Wastewater having a temperature greater than one hundred fifty (150) degrees Fahrenheit (65°C), or which will inhibit biological activity in the treatment plant resulting in interference, but in no case wastewater which causes the temperature at the introduction into the treatment plant to exceed one hundred four (104) degrees Fahrenheit (40°C);
 - (6) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin, in amounts that will cause interference or pass through;
 - (7) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
 - (8) Trucked or hauled pollutants, except at discharge points designated by the administrator in accordance with this article;
 - (9) Noxious or malodorous liquids, gases, solids, or other wastewater which, either singly or by interaction with other wastes, are sufficient to create a public nuisance or a hazard to life, or to prevent entry into the sewers for maintenance or repair;

- (10) Wastewater which imparts color which cannot be removed by the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions, which consequently imparts color to the treatment plant's effluent, thereby violating the plants VPDES permit;
- (11) Wastewater containing any radioactive wastes or isotopes except in compliance with applicable state or federal regulations;

(12) Storm water, surface water, ground water, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, noncontact cooling water, and unpolluted wastewater, unless specifically authorized by the administrator;

- (13) Sludges, screenings, or other residues from the pretreatment of industrial wastes;
- (14) Medical wastes, except as specifically authorized by the administrator in a wastewater discharge permit;
- (15) Wastewater causing, alone or in conjunction with other sources, the treatment plant's effluent to fail a toxicity test;

(16) Detergents, surface-active agents, or other substances which may cause excessive foaming in the POTW;

(17) Fats, oils, or greases of animal or vegetable origin in concentrations greater than the limits specified in Appendix A.

- (18) Discharges containing toxic or poisonous solids, liquids or gases in sufficient quantity, singly or by interaction with other wastes, to injure or cause interference with any waste treatment process, constitute a hazard to humans or animals, or create any hazard in the receiving waters of the wastewater facilities.
- (19) Any wastewaters containing elements, heavy metals, cyanide, hydrocarbons, insecticides, herbicides, fungicides, or containing materials in excess of the maximum limits as established by the control authority.
- (20) Quantities of flow and/or concentrations which constitute "slug" as defined in these regulations.
- (21) Waters or wastes which contain substances which cannot be treated by an individual wastewater facility to such degree that they would cause that particular wastewater facility to violate its effluent discharge limits.
- (22) Hazardous wastes as defined in 40 CFR Part 261 and not listed elsewhere in this article.

Pollutants, wastewater, and any other specific substances prohibited with respect to each POTW or by this section shall not be processed or stored in such a manner that they could be discharged to the POTW.

(Ord. No. 0081015-19, 8-10-2015)



PRIMARY CONTACT INFORMATION

BEDFORD WATER

CUSTOMER SERVICE DEPARTMENT

Office: (540) 586-7679 ext. 309

Email: csfrontdesk@brwa.com

Contact for inspections, pump installations, or service needed under the Small Grinder Pump ("SGP") Agreement during office hours, Monday through Friday, 8:30 am – 5:00 pm

ENGINEERING DIVISION

Office: (540) 586-7679 ext. 5

Email: engineering@brwa.com

MAINTENANCE DEPARTMENT

AFTER HOURS EMERGENCIES:

Office: (540) 586-7679 ext. 9

Contact outside of office hours for emergency service needs under the SGP Agreement

DISTRIBUTORS & SUPPLIERS**

DISTRIBUTOR - E-ONE PUMP (VA)

CES Water

Sales Representative: Mike Oden

303 Ashcake Road, Suite G

Ashland, VA 23005

Bus: (804) 752-2959

Fax: (804) 752-2116

Cell: (804) 350-0679

Email: mikeo@commengsales.com

SUPPLIERS - E-ONE, LIBERTY

Ferguson Enterprises Inc.

Sales Representative: Josh Pelfrey

2010 Graves Mill Road

Forest, VA 24551

Bus: (434) 385-6600

Fax: (434) 385-9861

Cell: (434) 942-9815

Email: josh.pelfrey@ferguson.com

CMC Supply Inc.

Sales Representative: Scott Hambrick

2510 Johnson Avenue NW Roanoke,

VA 24017

Bus: (540) 982-1095

Fax: (540) 982-8219

Cell: (540) 588-0047

Email: shambrick@cmcsupply.com

** Low-pressure sewer systems are designed specifically for either E-One or Liberty units. Requests to install an E-One unit in a subdivision designed for Liberty systems, or vice versa, require prior review and approval from the Engineering Division.



LIST OF APPROVED CONTRACTORS
FOR LOW PRESSURE SEWER (LPS) PUMP INSTALLATION

The following is a list of utility contractors that are pre-approved for LPS Pump Station installations. This list will be revised as necessary by adding or removing contractors based on job performance and experience.

CONTRACTOR	ADDRESS	PHONE	FAX	Date Added
J & W Hauling & Grading, LLC	10045 Leesville Road Evington, VA 24550	434-821-1920		9/8/2005
Falwell Corporation	3195 Campbell Avenue Lynchburg, VA 24501	434-846-2739		1/1/2006
Bill Gillespie Gillespie Plumbing*	P.O. Box 24502 Lynchburg, VA 24502	434-525-9440		12/7/2007
Johnny on the Spot, LLC	2094 Wheatland Road Bedford, VA 24523	540-871-0058		4/29/2021
Blue Ride Pro Services, LLC	P.O. Box 258 Copper Hill, VA 24079	540-797-9322		4/29/2021
Pips Plumbing	6588 Old Courthouse Road Appomattox, VA 24522	434-546-1680		5/15/2023

* Does not do individual residential installations

All work related to the LPS Pump Station, including but not limited to the installation of the Station itself, the electrical and plumbing connections from the Station to the Control Panel and residence, must be performed by a pre-approved contractor. Pre-approved contractors will be given an approved list of materials for the LPS pump station installation.

If the Developer desires to use a Contractor which has not been pre-approved by the BRWA, a letter must be presented to the BRWA requesting the subject Contractor be reviewed for approval and placement on this pre-approved list. Approval may be denied by the BRWA during the review of the Contractor's qualifications without further explanation.

Training and successful experience in the installation and maintenance is required in order for a contractor to be added to this list.

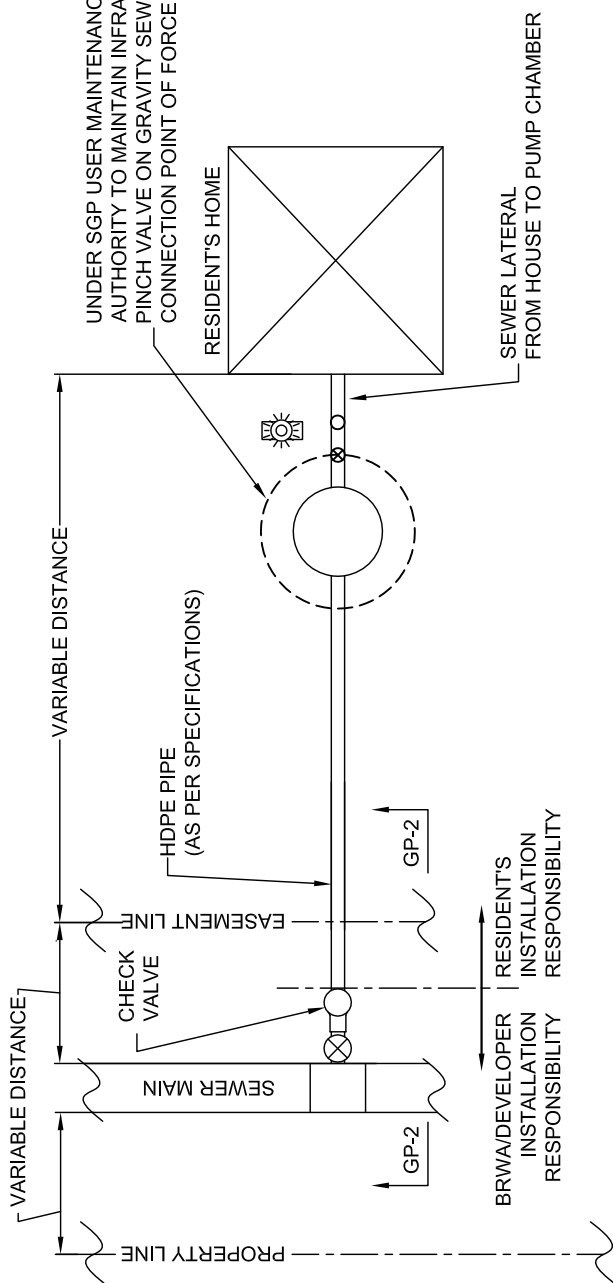


No.	Date
1	December 22, 2014
2	October 6, 2017
3	
4	

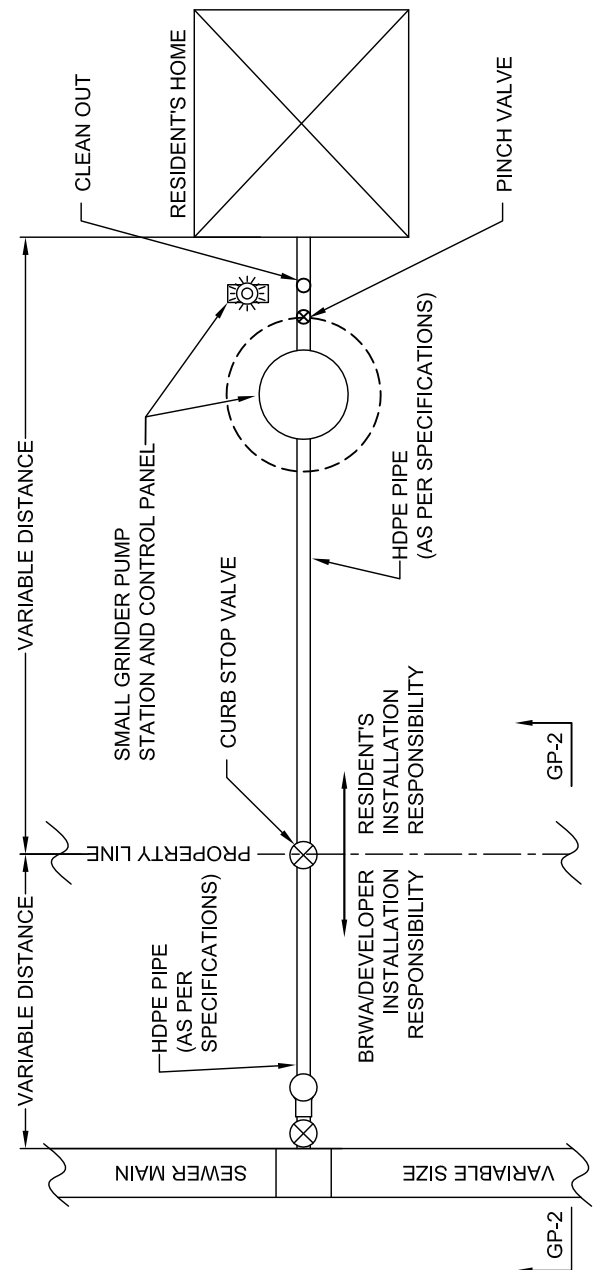
DIVISION OF PRESSURE SEWER/ SMALL GRINDER PUMP (SGP) INSTALLATION DIAGRAM

Detail:

GP-8



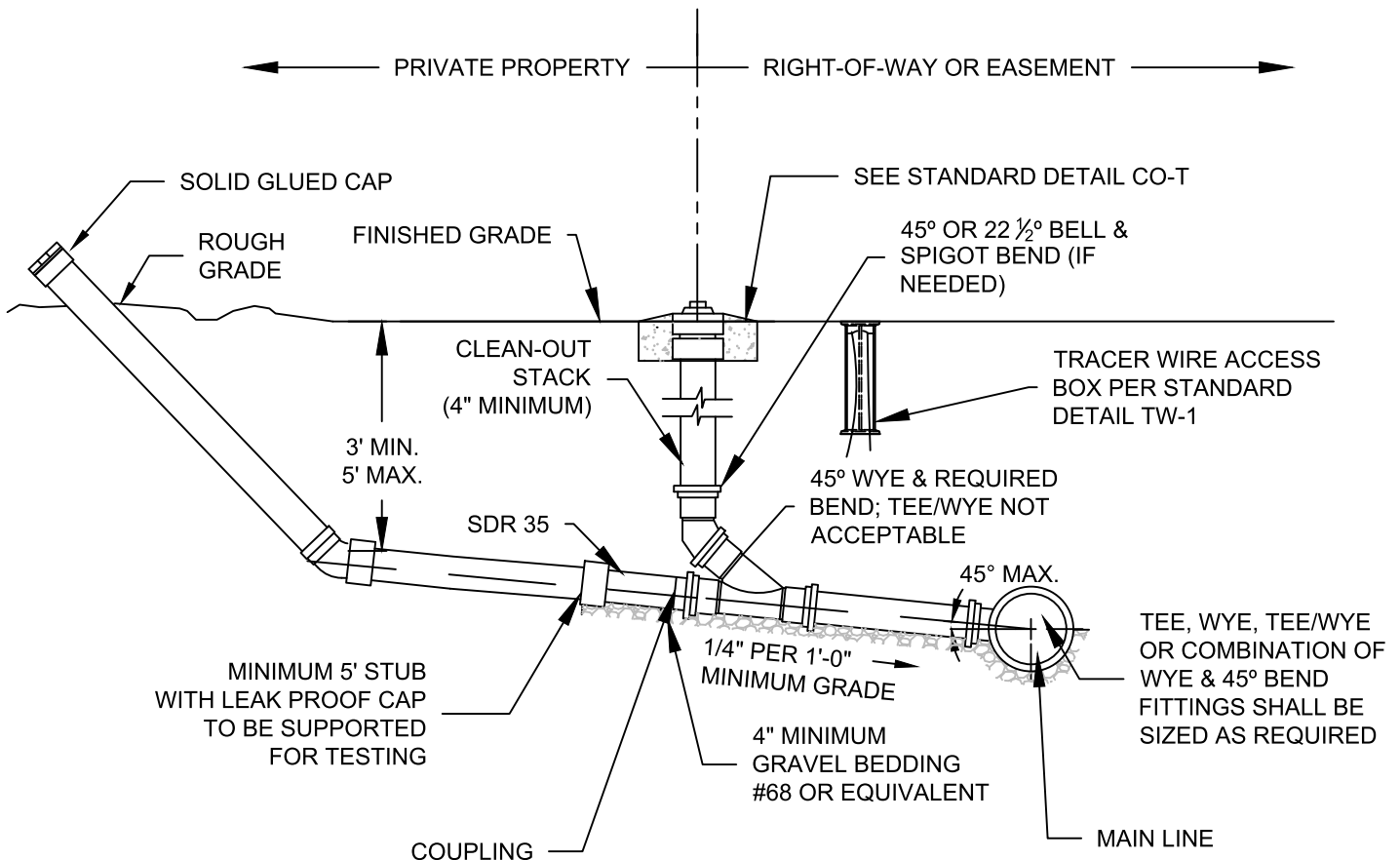
PRESSURE SEWER FORCE MAIN IN EASEMENT



PRESSURE SEWER FORCE MAIN IN RIGHT-OF-WAY

NOTES:

1. TRAFFIC BEARING BOX AND LID REQUIRED IN TRAFFIC AREAS.
2. ALL PIPE AND FITTINGS SHALL BE OF SIMILAR MATERIAL.
3. ALL PIPE SHALL BE OF SAME SIZE.
4. NO BENDS ARE ALLOWED IN THE LATERAL FROM THE MAIN TO THE CLEANOUT STACK WYE (EXCEPT AS NOTED).
5. ALL MAIN LINE TAPS ON ACTIVE MAINS WILL BE PERFORMED BY UTILITY OWNER.
6. PIPING ON PRIVATE SIDE OF CLEANOUT TO BE INSTALLED PER GOVERNING JURISDICTION REQUIREMENTS.
7. MINIMUM LATERAL SIZE SHALL BE 4" FOR RESIDENTIAL, 6" FOR COMMERCIAL.
8. MINIMUM COVER FOR ALL SEWER LATERALS SHALL BE THREE (3') FEET.
9. LOWEST FINISHED FLOOR ELEVATION TO BE SERVICED BY GRAVITY SHALL BE A MINIMUM OF THREE FEET (3') ABOVE THE TOP OF THE MAIN AT THE POINT WHERE THE SERVICE LATERAL CONNECTS TO THE MAIN; IF FINISHED FLOOR ELEVATION FALLS BELOW THE MAIN, PROPERTY OWNER IS RESPONSIBLE FOR ANY NECESSARY FORCE MAIN CONNECTIONS ON THE PRIVATE SIDE OF THE PROVIDED CLEANOUT.
10. WHERE REQUIRED, CHECK VALVES SHALL BE INSTALLED ON THE PRIVATE SIDE OF THE CLEANOUT. CHECK VALVES SHALL BE CLEAN CHECK® EXTENDABLE BACKWATER VALVES AS MANUFACTURED BY RECTORSEAL OR APPROVED EQUAL.



No.	Date
1	August 20, 2012
2	October 6, 2017
3	February 2, 2023
4	

SINGLE SANITARY SEWER CLEANOUT

Detail:

CO-2

TAPPING SADDLE WITH AWWA TAPPING THREADS
SIMILAR TO ROMAC 306 OR FORD S70 WITH
APPROPRIATE BRASS BUSHINGS AND/OR
STAINLESS STEEL CLOSED NIPPLES AS NECESSARY

SECURELY PLUG

12" MAX.

PROPERTY
LINE

RATCHET HANDLE
CURB STOP
(FIPT X COMP)

TRACER WIRE ACCESS BOX
PER STD. DETAIL TW-1

12" MAX. SEPARATION

SIZE
VARIES

SWING CHECK
(COMP X COMP)

RATCHET HANDLE
CURB STOP
(COMP X COMP)

PIGTAIL FOR SERVICE
SAME SIZE AS VALVE,
MIN 48" LENGTH

MODEL GR1125-FSC ASSEMBLY
AS MANUFACTURED BY THE
LATERAL CONNECTION CORP
OR APPROVED EQUAL

IN/OR CROSSING RIGHT-OF-WAY

SECURELY PLUG

12" MAX.

SCREW STYLE CURB BOX SIMILAR TO
CAPITOL FOUNDRY OF VA, INC SERIES -
MODEL VB-92D APPROPRIATELY SIZED
FOR VARIABLE DEPTHS LID SHALL BE
LABELED SEWER W/ BRASS PENTAGON
PLUG (TYP.)

PIGTAIL FOR SERVICE
SAME SIZE AS VALVE,
MIN 48" LENGTH

SIZE
VARIES

BALL CORP (CC X MIPT)

IN EASEMENT

MODEL GR1125-FSC ASSEMBLY AS
MANUFACTURED BY THE LATERAL CONNECTION
CORP OR APPROVED EQUAL

NOTES:

1. ALL PIPING BETWEEN THE PUMP STATION AND THE SEWER FORCE MAIN SHALL BE SDR 9 OR SDR 11 HDPE PIPE RATED TO 200 PSI MIN.
2. ALL FITTINGS SHALL BE SPECIFIED AS HDPE FITTINGS, AND SHALL BE SIMILAR TO "THE LATERAL CONNECTION CORPORATION" PRODUCTS.
3. FOR STANDARD RESIDENTIAL APPLICATIONS, ALL HDPE PIPE AND FITTINGS SHALL BE 1 1/4" DIAMETER, AND SHALL BE IRON PIPE SIZES (IPS).
4. WHEN FORCE MAIN IS INSTALLED ALONG RIGHT-OF-WAY, THE VALVE ASSEMBLY SHALL BE LOCATED BEHIND THE DITCH LINE.
5. TRACER WIRE IS REQUIRED TO BE INSTALLED WITH THE HDPE PIPE, TRAVELING FROM THE PUMP STATION TO THE SEWER MAIN CONNECTION.



**Bedford
Regional
Water Authority**

No.	Date
1	August 20, 2012
2	October 6, 2017
3	February 27, 2023
4	

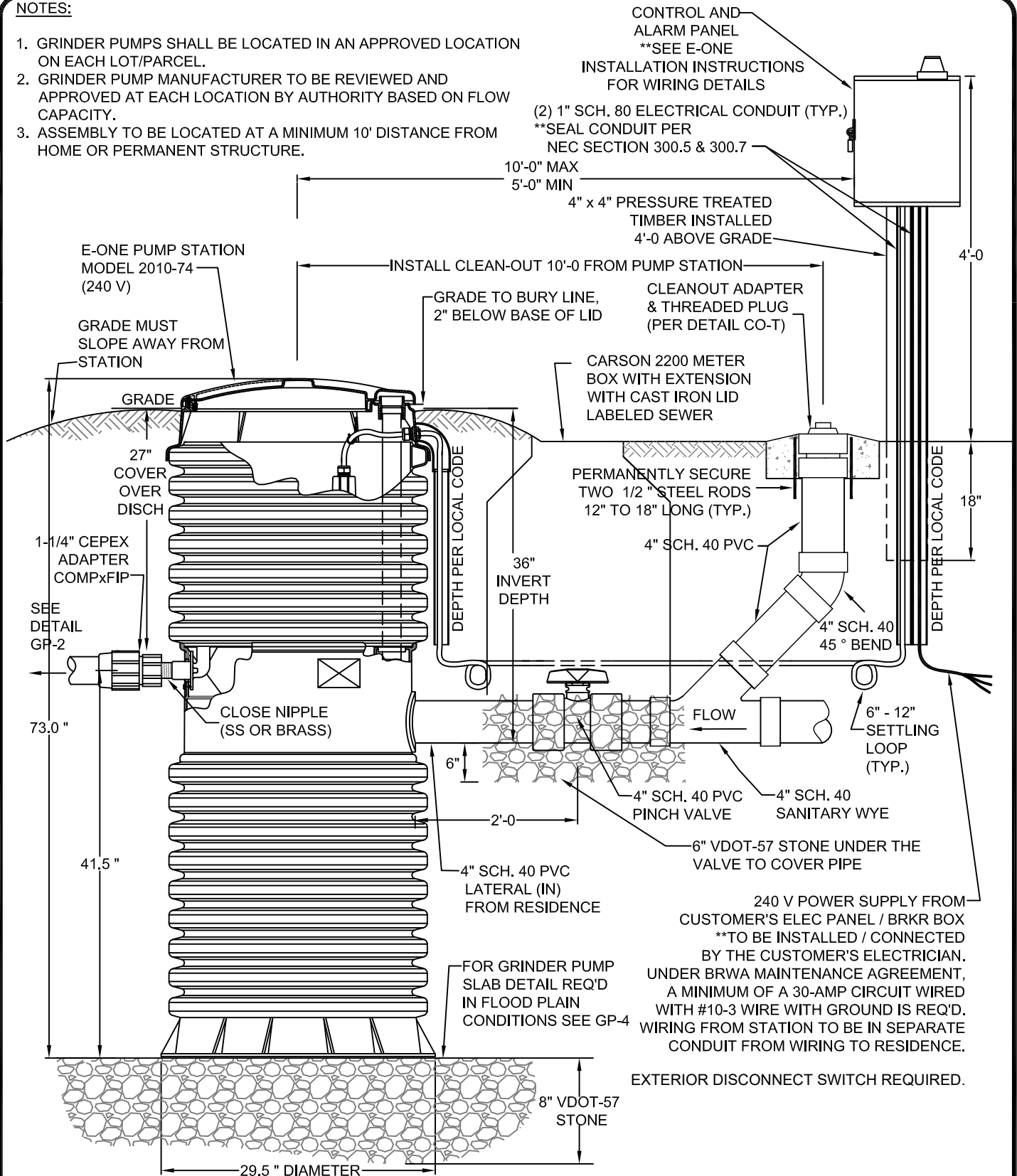
**LOW PRESSURE SEWER
FORCE MAIN CONNECTION**
(1 1/4" TO 2")

Detail:

GP-2

NOTES:

1. GRINDER PUMPS SHALL BE LOCATED IN AN APPROVED LOCATION ON EACH LOT/PARCEL.
2. GRINDER PUMP MANUFACTURER TO BE REVIEWED AND APPROVED AT EACH LOCATION BY AUTHORITY BASED ON FLOW CAPACITY.
3. ASSEMBLY TO BE LOCATED AT A MINIMUM 10' DISTANCE FROM HOME OR PERMANENT STRUCTURE.



No.	Date
1	July 19, 2013
2	October 6, 2017
3	February 15, 2018
4	January 4, 2023

**RESIDENTIAL E-ONE
MODEL 2010-074 PUMP STATION
INSTALLATION**

Detail:

GP-3E

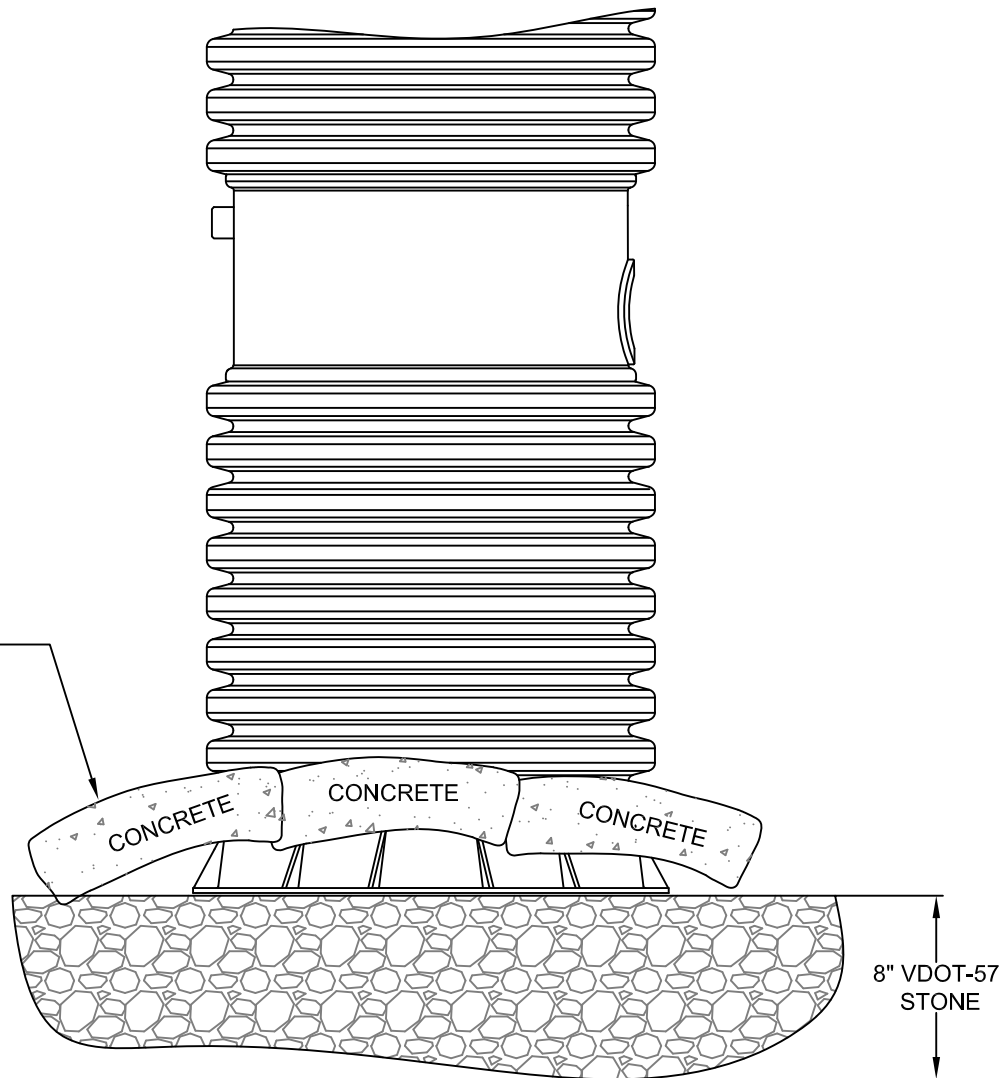
1. GRINDER PUMPS SHALL BE LOCATED IN AN APPROVED LOCATION ON EACH LOT/PARCEL.
2. GRINDER PUMP MANUFACTURER TO BE REVIEWED AND APPROVED AT EACH LOCATION BY AUTHORITY BASED ON FLOW CAPACITY.
3. ASSEMBLY TO BE LOCATED AT A MINIMUM 10' DISTANCE FROM HOME OR PERMANENT STRUCTURE.



RESIDENTIAL LIBERTY
OMNIVORE MODEL 2472-LSGX
PUMP STATION INSTALLATION

GP-3L

5 (80 #) BAGS OF
"READY TO MIX
CONCRETE" EVENLY
PLACED (UNOPENED)
AROUND BASE
FLANGE



NOTE:

1. CONCRETE BAGS ARE REQUIRED TO PREVENT FLOATING IN FLOOD PLAIN CONDITIONS.



Bedford
Regional
Water Authority

No.	Date
1	July 19, 2013
2	October 6, 2017
3	
4	

PUMP STATION SLAB
MOUNTING DETAIL

Detail:

GP-4