



CITY COUNCIL PUBLIC WORKS & UTILITIES COMMITTEE

Thursday, May 12, 2022 at 5:00 PM

1 Benjamin Franklin Way Franklin, Ohio 45005

www.FranklinOhio.org

AGENDA

1. CALL TO ORDER
2. ROLL CALL
3. APPROVE THE CLERK'S JOURNAL AND ACCEPT THE TAPES AS THE OFFICIAL MINUTES
 - A. October 21, 2021
4. NEW BUSINESS
 - A. Lateral Sewer Repair Insurance Program
 - B. Proposed Water Softening Study
 - a. Springboro/Franklin Proposal
 - b. Franklin Alone Proposal
 - C. Gorsuch Rd Sewer Services
 - D. Storm Water Management
 - a. Gorsuch Rd
 - b. Commerce Center/Conover Drive
 - E. Construction Bid Update
 - a. William C. Good
 - b. SR 73 & I-75 Interchange Safety Project Cost Rise
 - F. Dial Park Update
 - a. Nature Works Grant Request

5. ADJOURNMENT



Location: 1 Benjamin Franklin Way
Date: Thursday, October 21, 2021
Time: 5:00 PM

PUBLIC WORKS & UTILITIES COMMITTEE CLERK'S JOURNAL

PUBLIC WORKS & UTILITIES COMMITTEE

Matt Wilcher, Chairman
Denny Centers
Paul Ruppert

CITY STAFF

Jonathan Westendorf, City Manager
Karisa Steed, Assistant to the City Manager
Barry Conway, City Engineer
Cindy Ryan, Finance Director
Steve Inman, Public Works Director
Ben Yoder, Law Director
Khristi Dunn, Clerk of Council

Members of the Franklin City Council Public Works & Utilities Committee met in regular session on Thursday, October 21, 2021 at 5:00 PM at the City Building located at 1 Benjamin Franklin Way, Franklin, Ohio 45005.

- Call to Order.** Chairman Wilcher called the meeting to order at 5:00 PM.
- Roll Call.** Chairman Wilcher, Mr. Centers and Mr. Ruppert were in attendance as well as Mr. Westendorf, Mr. Inman, Mr. Conway and Ms. Ryan.
- Sewer Fund Discussion.** Staff updated the Committee on challenges occurring with the sewer fund. There is an industrial user who has not paid since February 2021. The company is facing challenges from the pandemic and post pandemic recovery in international shipping. Staff met with company and are actively working with them to provide resources to help keep them in business. While they recover, staff is formulating a plan moving forward that does not rely on their back payments being made. Mr. Inman reported that the sewer fund has been struggling since 2018. Long term, the City needs to prepare for a sewer plant expansion at the cost of six to seven million dollars and possibly operation costs of said plant. Franklin Wastewater Treatment Corporation is composed of Warren County, Franklin, Carlisle, and Germantown. Franklin owns the facility, but it is ran by a private contractor who is making a profit. Franklin pays the FWTC for their services. Expansion by private contractor is not as cost effective compared to government funding available. The sewer fund has lost \$498,000 since 2018. The loss is mainly two fold; the City lost a company because FWTC reported they could not handle the type/volume of waste. This was a loss of \$250,000 year. Another \$150,000 was lost due to a closed business. The amount being paid to FWTC has increased \$480,000 since 2018. The City paid 2.17 million to FWTC in 2021 which is 95% of the sewer fund budget. The labor cost was spread over other funds to help alleviate the burden. The sewer fund is consistently operating at a loss.

Mr. Inman reported that the City is paying more to FWTC while income and flow is going down. This is due to a set operating cost of the plant. Entities pay by percentage of usage, not actual usage. The current contract with FWTC is through 2026.

Mr. Centers asked about a sewer rate increase that was passed and set to take place in January. Mr. Inman confirmed that a 7% increase was scheduled for January 2022.

Mr. Centers serves on the FWTC board and reported that the Wastewater plant is operating well but is planning for an expansion soon due to increased subdivisions in the service areas. The FWTC is considering changing back to a government entity with the option of Franklin or Warren County taking control of operations. Current operations are approximately 70% capacity.

Mr. Wilcher asked what the advantages would be for the City to operate the plant versus allowing Warren County to take over. Mr. Inman replied that there would be some profit for the City to operate the system.

Mr. Westendorf wanted the committee to understand the status of the fund and understand the upcoming issues. He also wanted to make them aware of the default issue and share that another default could put the fund in serious jeopardy. An increase in the sewer rate may be necessary. Mr. Centers would like to ensure the City works with the company in default to help them stay in business as losing them would also be bad for the fund. Staff agrees.

The increase in sewer rates scheduled for January 2022 is \$1.11 and the COLA will increase the rate again in March. The Committee proposed adding a slight increase to avoid a large increase all at once. They decided to raise the rate \$1.50 in addition to the upcoming increases. Mr. Wilcher asked to see neighboring rates for comparison. He also asked if there was any aid available from the state or federal relief funds to help the company who has defaulted. Mr. Westendorf is looking into this already.

Mr. Centers made a motion to add a \$1.50 increase to the currently planned \$1.11 January increase for the sewer rate due to COVID issues, seconded by Mr. Ruppert. Mr. Wilcher called for a voice vote and by voice vote the motion passed 3-0.

4. Adjourn. Mr. Ruppert made the motion, seconded by Mr. Centers. The motion passed 3-0 and the meeting adjourned at approximately 5:58 PM.

Matt Wilcher, Chair

Savings Solutions for Aging Infrastructure

NLC Service Line Warranty Program

NLC Service Line
Warranty Program by  HomeServe

Mike Chambers
mike.chambers@homeserveusa.com
724-678-6075

NLC NATIONAL
LEAGUE
OF CITIES
CITIES STRONG TOGETHER

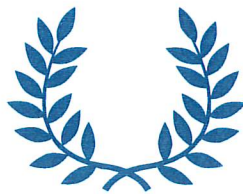
NLC SAVINGS AND SOLUTIONS PROGRAMS

The NLC Service Line Warranty Program is one of seven Savings & Solutions Programs that are offered through corporate partnerships

NLC launched its partnership with Utility Service Partners in 2010, and now there are 1,000+ participating municipalities and utilities



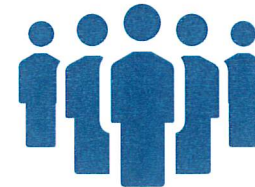
UTILITY SERVICE PARTNERS



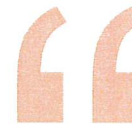
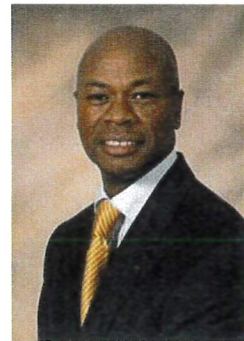
EXPERIENCE



REPUTATION



PARTNERSHIP



This award underscores one of the primary reasons the National League of Cities selected USP as a partner and extended our agreement for another five years. The organization's exemplary record of customer service and transparency is what has driven the success of this partnership over the years.

— Clarence Anthony, Executive Director
National League of Cities



AGING INFRASTRUCTURE IS PROBLEMATIC FOR CITIES & HOMEOWNERS



- Lateral lines are subjected to the same elements as public lines -ground shifting, fluctuating temperatures, tree root penetration, corrosion and more
- Failed lines waste thousands of gallons of water and present an environmental hazard
- Common homeowner misconceptions the municipality is responsible for maintenance of the water and sewer lines on their property or repairs are covered by their homeowner's policy

FINANCIAL SHOCK – AN UNPLANNED EXPENSE

78% of homeowners surveyed believe the utility provider should educate them on repairs and preventative measures



59% of homeowners surveyed have had a home repair emergency in the past year



40% 4 out of 10 Americans can't afford a \$400 emergency expense (and would have to sell something or take out a loan to cover it).*

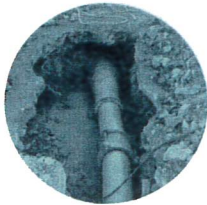


NLC SERVICE LINE WARRANTY PROGRAM BENEFITS

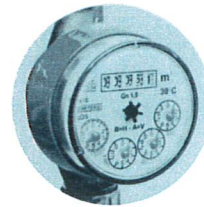


- Only Service Line Program Endorsed by the National League of Cities
- No cost for the Municipality to participate
- Ongoing Revenue Stream for the Municipality
- Educates homeowners about their lateral line responsibilities
- Free Public Awareness Campaign
- Peace of Mind - with one toll-free call a reputable plumber is dispatched
- All repairs performed to code by local licensed contractors
- Contractors undergo rigorous vetting process to ensure quality service

NLC SERVICE LINE WARRANTY PROGRAM AND WHAT IT COVERS



SEWER/SEPTIC LATERAL
COVERAGE



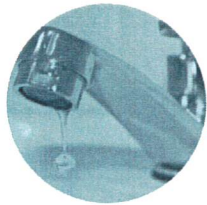
WATER/WELL LINE
COVERAGE

Homeowner repair protection for leaking, clogged or broken water and sewer lines from the point of utility connection to the home exterior

Coverage includes:

- Educating homeowners about their service line responsibilities
- Up to \$8,500 coverage per repair incident
- Includes coverage for thawing of frozen external water lines
- No annual or lifetime limits, deductibles, service fees, forms, or paperwork
- 24/7/365 availability
- Repairs made only by licensed, local contractors
- Affordable rates and multiple payment methods

NLC SERVICE LINE WARRANTY PROGRAM AND WHAT IT COVERS




INTERIOR PLUMBING
AND DRAINAGE

Homeowner repair protection for in-home water supply lines and in-home sewer lines and all drain lines connected to the main sewer stack that are broken or leaking inside the home after the point of entry

Coverage includes:

- Up to \$3,000 coverage per repair incident.
- Repair of clogged toilets
- Includes coverage for broken or leaking water, sewer, or drain lines under the slab or basement floor
- No annual or lifetime limits, deductibles, service fees, forms, or paperwork
- 24/7/365 availability
- Repairs made only by licensed, local contractors
- Affordable rates and multiple payment methods

MARKETING APPROACH

- No Public Funds are used in marketing, distribution, or administration of the program.
 - Only market by direct mail, no telemarketing
 - Would never mail without your review and approval of marketing material before each and every campaign
 - Limited mailing campaigns per year
 - Consumer friendly marketing
 - Always voluntary for the homeowner
- 
- Consumers can enroll one of three ways:
 - Calling into our toll free number that is provided on the mailing;
 - Returning the bottom of the letter to us in the self addressed stamped envelope provided
 - Visiting our consumer website www.slwofa.com at any time

SOLUTIONS FOR MUNICIPALITIES AND THEIR HOMEOWNERS



- More than 1,000 municipal and utility partnerships
- Currently serving over 4.5 million customers
- Saved customers over \$520 million in repair costs over the past 3 years
- Consistent customer satisfaction rating of 4.8 out of 5
- 9 of every 10 customers surveyed have recommended the program to friends, family and neighbors



Revenue share and other benefits to city

- Non-tax revenue can be estimated at \$0.50 per product, per month
- Cities utilize funds for important initiatives including:
 - ✓ Infrastructure improvements
 - ✓ Low-income assistance/community charities
 - ✓ Partially offset rate increases
- Saves money for residents that can be re-invested in the local economy
- Reduces calls to the city
- Timely repairs reduce water loss from line breaks

CURRENT OHIO PARTNERS

- City of Akron
- City of Dayton
- City of Huber Heights
- City of Deer Park
- City of Willowick
- City of Olmsted Falls
- City of Harrison
- City of Toronto
- Village of Whitehouse
- City of Alliance
- City of Newark
- City of Cleveland
- Northern OH Rural Water
- Ross County Water Co.
- Village of Strasburg
- City of Ironton
- City of Oberlin
- City of Bucyrus
- City of Athens
- City of Cortland
- Village of Lore City
- City of Rittman
- Village of Blanchester
- Village of Liberty City
- City of Trotwood
- City of Conneaut
- Rural Lorain CO Water
- Gallia Rural Water
- Hecla Rural Water
- Scioto Water Co.
- City of Youngstown



QUESTIONS?

For more information contact:

Mike Chambers

mike.chambers@homeserveusa.com

724-678-6075 (office)

Steve Inman

From: Mike Chambers <Mike.Chambers@homeserveusa.com>
Sent: Thursday, May 12, 2022 10:00 AM
To: Steve Inman
Subject: RE: NLC Service Line Program

No Problem Steve,

External Water Line Coverage \$5.75/month

External Sewer Line Coverage \$7.75/month

In Home Plumbing and Drainage Coverage \$9.99/month

Thank you Steve and please let me know if you need any other information.

Best,

Mike

Mike Chambers
Director, Regional Accounts

T: 724-749-1043
M: 724-678-6075
mike.chambers@homeserveusa.com
www.servicelinepartner.com

**NLC Service Line
Warranty Program**

by



From: Steve Inman <sinman@franklinohio.org>
Sent: Thursday, May 12, 2022 9:56 AM

Memorandum of Understanding

Memorandum of Understanding

Between

City of Springboro (Springboro)

And

City of Franklin (Franklin)

This Memorandum of Understanding (MOU) sets forth the understanding between the City of Springboro and the City of Franklin to seek out a potential pathway to construct and operate a joint water softening facility to be used by both jurisdictions. It is each jurisdictions desire to provide softened water to their respective communities.

Background

Springboro and Franklin have both independently studied and sought out mechanisms to provide softened water to their communities individually. In an effort to provide these services in the most efficient and economical manner each jurisdiction now wishes to consider the possibility of building this water softening facility together to potentially save time, manpower, and money.

Purpose

This MOU will show the commitment of both Springboro and Franklin to work together to accomplish the following:

- Determine if building a joint water softening facility is feasible.
- If building a joint facility is feasible, they also will determine if building the water softening facility jointly is the most efficient and best way to build and operate the facility into the future
- Establish a cost estimate and appropriate cost sharing formula for building and operating a joint water softening facility
- Jointly seek additional outside funding to lower costs for both jurisdictions

Funding

Costs for these studies to determine the feasibility and operating costs of the joint water softening will be shared equally between Springboro and Franklin.

Duration

This MOU is at-will and may be cancelled by either party at any time without the approval of the other party. This MOU shall become effective upon signature by the authorized officials and will remain in effect until the studies are completed or this agreement is terminated by any one of the partners. Nothing in this agreement shall be considered binding. This agreement is designed to show good faith of both Springboro and Franklin to determine the feasibility and costs of a joint

water softening facility. Nothing herein is to be considered a promise to build, construct, and operate a joint softening facility.

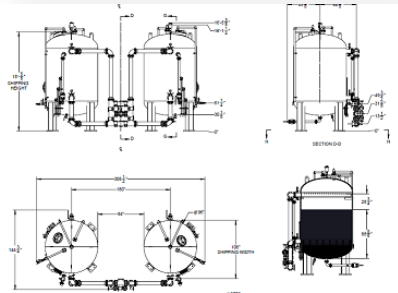
Contact Information

Chris Pozzuto
City of Springboro
City Manger
320 W Central Ave
Springboro, Ohio 45066

Chris Pozzuto

Jonathan Westendorf
City of Franklin
City Manager
One Benjamin Way
Franklin, Ohio, 45005

Jonathan Westendorf



DESIGN

Proposal for Softening System

City of Franklin

Franklin, OH



DEVELOP

May 9, 2022

Loprest Representative Contact
Peter Herlihy - Pelton Environmental
Email: PHerlihy@Peltonenv.com
Phone: 513-476-5600



DELIVER

Loprest Contact
Daryl Bond, National Sales Manager
Email: dbond@wrtnet.com
Phone: 610-568-6742

Quote Number 22-058



Water Treatment Solutions Since 1928
loprest.com

901 W. 116th Ave., Suite 400 • Westminster, CO 80234 • 303-424-5355

Softening System



PROCESS DESCRIPTION

The Loprest Ion Exchange Softening System includes 4 vessels in parallel to remove calcium and magnesium. Three vessels remain in service while one is regenerated. The full treated flow can be processed with three vessels online.

MANUAL BLENDING

As raw water hardness varies over time, the blend ratio can be manually adjusted to achieve the desired blended effluent hardness concentration.

About Loprest

LOPREST'S CAPABILITIES

- Design and manufacturing of treatment systems: 10 to 10,000 GPM
- Process design for the removal of numerous contaminants
- Pressure filters, ion exchange systems, activated carbon systems
- Controls design, manufacturing, and programming
- Onsite filter inspection, evaluation, and maintenance



EFFICIENT Energy- and water-efficient designs to meet client needs

ECONOMICAL Design choices such as multi-cell horizontal filters and stainless steel underdrains reduce cost of ownership

PROVEN Thousands of treatment systems, over 90 years of experience

Complete System



This proposal includes a complete system for hardness removal:

- ASME Pressure Vessels and Internals
- Media
- Brine Generators and Pumping Systems
- System Valving and Piping
- PLC-based Controls for fully automated regeneration cycle
- System commissioning on-site

Design Parameters



Each treatment system shall be specifically designed to remove calcium and magnesium hardness from the groundwater supply. All components and media in contact with water are NSF-61 compliant for potable water consumption. The treatment systems shall be designed based on the following parameters:

INFLUENT WATER QUALITY

Total Iron	0.22 PPM
Total Manganese	0.12 PPM
Total Hardness as CaCO ₃	430 PPM

EFFLUENT WATER QUALITY

Total Iron	< 0.22 PPM
Total Manganese	< 0.12 PPM
Total Hardness as CaCO ₃ (blended effluent)	150 PPM

DESIGN PARAMETERS

Max Design Pressure	100 PSI
System Design Flow Rate	5,555 GPM
Typical Treated Flow Rate	3,000 GPM
Typical Bypass Flow Rate	2,555 GPM
Number of IX Vessels	4
Softening Media Volume, Per Vessel	589 CU FT
Resin Bed Depth	66 IN
Maximum Vessel Design Flow Rate	1,000 GPM
Maximum Waste Flow Rate	750 GPM
Regeneration Cycle Duration (per vessel)	< 120 MINUTES

SOFTENING SYSTEM OPTIMIZATION

Salt Dose	5	7	10	LBS/CF
Softening Capacity (with 10% engineering factor)	18,450	20,250	24,300	GRAINS/CF
Service Cycle (per vessel)	571,000	627,000	753,000	GALLONS
Runtime (max system flow, all vessels online)	12.7	13.9	16.7	HOURS
Waste Volume per million gallons blended effluent	29,000	27,500	24,000	GALLONS
NaCl Salt required per million gallons blended effluent	1.4	1.8	2.1	TONS

Scope of Supply



Engineering	Engineering including submittals, calculations, and installation instructions
Vessels	Four (4) ASME Code vertical vessels, 144" diam x 72" sideshell Internal: epoxy lined per NSF-61/NSF-600 External: epoxy primed, no topcoat
Internals	Upper: full-length perforated header, SS316 Middle: brine header and laterals, SS316 Lower: drop pipe underdrain design with 116 collection points, SS316
IX Media	2,360 CU FT high-purity strong acid cation exchange resin
Control Valves	(23) Electrically actuated butterfly valves, with modulating actuators as needed for flow control
Other Valves	(4) Air release valves Manual butterfly valves and check valves as needed for isolation
Face Piping	Carbon steel spools with ductile iron fittings, NSF-61 epoxy lined with external prime, no topcoat. Bolt-up kits provided for furnished pipe.
Brine Piping	PVC Sch80 flanged piping with SS316 bolt-up kits
Instrumentation	(6) Flow meters: vessel effluent, system bypass, and waste (1) Effluent online hardness analyzer (2) Pressure transmitters (10) Pressure gauges with sample taps
Brine Generators	(2) Brine generators: food-grade FRP vessels with gravel underlayment and appurtenances, each with 75 tons salt storage capacity.
Dilution Pump skid	Duty-standby pump skid with (2) pumps, (1) flow meter, and valves
Brine Pump Skid	Duty-standby pump skid with (2) pumps, (1) flow meter, and valves
Control Panel	Control panel, NEMA 4, with Allen Bradley PLC and Automation Direct OIT, Panel is factory wired and tested. PLC is factory programmed and tested.
Start-up and Commissioning	Electrical Check Rinse to Quality Operation Training Operation and Maintenance Manual



Budgetary Pricing



Softening System

as described above

\$ 1,750,000

PAYMENT TERMS

- 15% upon submitted drawings
- 35% upon release for fabrication
- 40% upon delivery to site
- 10% upon system commissioning

Payment of invoices is due in full within 30 days of the date of the invoice.

DELIVERY

- 6-8 weeks for submittals after execution of purchase order
- 20-24 weeks for delivery after approval of submitted drawings

NOTES

- This proposal is based upon today's costs and is valid for a period of 30 days.
- System manifold and bypass piping not included
- System shipped as vessels, media, valves, piping, and appurtenances loose for field assembly by Contractor.
- Freeze protection not included for brine generators.
- No offloading, setting, or installation.
- Taxes, bonding, and permitting not included.
- Pricing is based on Loprest standard terms and conditions.
- Pricing includes freight to site.



Standard Terms and Conditions

- 1. Payment.** Unless otherwise agreed by the parties in writing, payment for all products purchased pursuant to this Agreement shall be made within 30 day of Seller's invoice. Any amount not paid as agreed shall be subject to an interest charge of 1% per month, compounded monthly. Buyer will be liable for all of Buyer's costs to collect amounts due under this agreement, including reasonable attorney's fees, whether or not any collection action is commenced.
- 2. Limited Warranty.** Seller warrants the products sold to the Buyer to be free of defects in materials and workmanship for a period of one year after the products are delivered to Buyer. In the event of any such defect in the products during the warranty period, Seller will provide all parts and labor necessary to correct such defect.
- 3. Disclaimer Of Implied Warranties; Limitation Of Remedies.** THE BUYER'S SOLE AND EXCLUSIVE REMEDY UNDER THE LIMITED WARRANTY PROVIDED HEREIN SHALL BE THE PARTS AND LABOR AS PROVIDED IN THIS AGREEMENT. ALL IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. SELLER SHALL NOT BE RESPONSIBLE OR LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING FROM THE BREACH OF ANY WARRANTIES WITH RESPECT TO THE PRODUCTS PURCHASED PURSUANT TO THIS AGREEMENT.
- 4. Waiver of and Indemnification for Claims.** BUYER HEREBY AGREES TO WAIVE, RELEASE, DISCHARGE, INDEMNIFY AND HOLD SELLER HARMLESS FOR ANY AND ALL CLAIMS FOR DAMAGES FOR DEATH, PERSONAL INJURY OR PROPERTY DAMAGE WHICH IT OR THIRD PARTIES MAY HAVE OR WHICH MAY HEREAFTER ACCRUE AS A RESULT OF THE BUYERS' USE OF THE PRODUCTS SOLD PURSUANT TO THIS AGREEMENT.
- 5. Intellectual Property.** To the extent the products sold pursuant to this Agreement contain, reflect or consist of the Seller's intellectual property, the sale does not include a sale of such intellectual property or of a license to use such intellectual property beyond the use by the Buyer of the products sold.
- 6. Assignment.** In the event that Buyer assigns its rights and obligations under this Agreement any assignment of its payment obligation will be ineffective and Seller will remain jointly and severally liable, with its assignee, to pay all amounts due pursuant to this Agreement.
- 7. Non-Reliance on Written or Oral Statements.** Buyer has relied on its own investigation about the qualities and performance of the products purchased pursuant to this Agreement and has not relied upon the written or oral statements of Seller or its representatives in entering into this Agreement.
- 8. Only Agreement.** This is the only Agreement between the Buyer and Seller relating to the products purchased pursuant to this Agreement, and no oral or other statements, not contained herein, shall be binding on either the Buyer or the Seller.
- 9. Modification.** The terms of this Agreement may not be modified, except in a writing signed by the party to be bound.
- 10. Non-Waiver; Severability.** Waiver by either party hereto of non-performance of any term, provision, covenant, obligation or condition of this Agreement shall not be considered a waiver of any subsequent nonperformance, nor as waiver of the term, provision, covenant, obligation or condition itself. If any provision of this Agreement is found to be prohibited, invalid or unenforceable, such finding will not invalidate or render unenforceable any remaining provisions of this Agreement.
- 11. Arbitration.** Any disputes arising in any way in connection with this Agreement or the products sold by the Seller shall be resolved by binding arbitration under the Colorado Uniform Arbitration Act (C.R.S. § 13-22-201 *et seq.*) (the "Act"). The parties agree that the District Court of Jefferson County, Colorado shall have jurisdiction over them for the purposes of applying the provisions of the Act. All arbitration proceedings shall take place within the greater metropolitan area of Denver, Colorado. Buyer will reimburse Seller for all attorney's fees incurred by Seller in any arbitration (for collection or otherwise) in which Seller prevails.
- 12. Governing Law.** This Agreement and any disputes or claims arising from it shall be governed by and construed according to the laws of the State of Colorado.



Water Treatment Solutions Since 1928
loprest.com

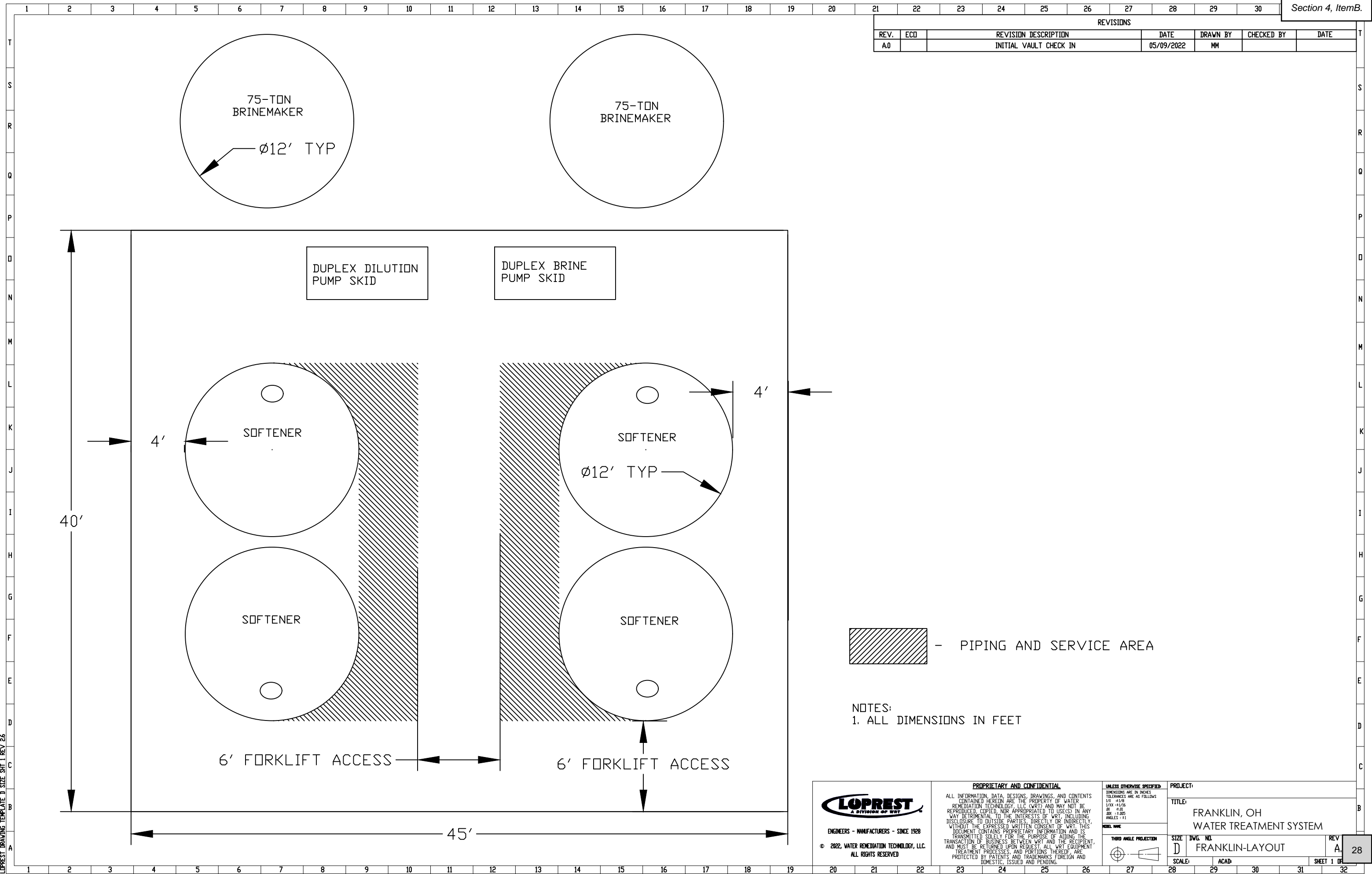


Clean water. Clean earth. That's our promise.®

WRT is the parent company of Loprest. For more information about our services, call 303.424.5355 or visit wrt.net.

Corporate Offices: 901 W. 116th Ave., Suite 400 • Westminster, CO 80234

REVISIONS						
REV.	ECO	REVISION DESCRIPTION	DATE	DRAWN BY	CHECKED BY	DATE
A.0		INITIAL VAULT CHECK IN	05/09/2022	MM		



 - PIPING AND SERVICE AREA

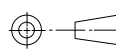
NOTES:
1. ALL DIMENSIONS IN FEET



PROPRIETARY AND CONFIDENTIAL
ALL INFORMATION, DATA, DESIGNS, DRAWINGS, AND CONTENTS CONTAINED HEREIN ARE THE PROPERTY OF WATER REMEDIATION TECHNOLOGY, LLC (WRT) AND MAY NOT BE REPRODUCED, COPIED, NOR APPROPRIATED TO USE(S) IN ANY WAY DETRIMENTAL TO THE INTERESTS OF WRT, INCLUDING DISCLOSURE TO OUTSIDE PARTIES, DIRECTLY OR INDIRECTLY, WITHOUT THE EXPRESSED WRITTEN CONSENT OF WRT. THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION AND IS TRANSMITTED SOLELY FOR THE PURPOSE OF AIDING THE TRANSACTION OF BUSINESS BETWEEN WRT AND THE RECIPIENT, AND MUST BE RETURNED UPON REQUEST. ALL WRT EQUIPMENT, TREATMENT PROCESSES, AND PORTIONS THEREOF, ARE PROTECTED BY PATENTS AND TRADEMARKS FOREIGN AND DOMESTIC, ISSUED AND PENDING.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES ARE AS FOLLOWS:
1/4" ±1/8"
1/8" ±1/16"
Ø ±.01
DIM ±.005
ANGLES ±.1°

THIRD ANGLE PROJECTION



PROJECT:		FRANKLIN, OH WATER TREATMENT SYSTEM
TITLE:		FRANKLIN-LAYOUT
SIZE	DWG. NO.	REV. A.
D		28
SCALE:	ACAD:	SHEET 1 OF

LOPREST DRAWING TEMPLATE D SIZE SHIT 1 REV 26

How It Works Prelos™ Collection System:

- Prelos™ uses small-diameter, pressurized, shallow-buried pipes that follow the contour of the land.
- Mainlines are often installed with directional boring, which doesn't require trenching, and can be installed without disrupting businesses, roads, and utilities.
- Like water mains, Prelos Sewer mains can be "surgically" extended to specific areas, streets, or new developments that need service most.
- Prelos reduces the volume of biosolids and final treatment costs.^{i, ii}
- The cost to make Prelos Sewer mains available for connections can be as low as 10% of the cost of gravity sewer mains.ⁱⁱⁱ

Prelos Processor™: Features & Benefits

- All-in-one, complete unit
- Primary treatment and solids removal at the source
- No cost to install or maintain until customers connect
- Engineered to be watertight
- Made of lightweight DCPD, ideal for a buried tank
- Maximum solids reduction via patented meandering flow path
- Passively self-cleaning pump vault
- Simple to maintain with basic tools and equipment
- Easily serviced pumps and controls, thanks to Orenco's ClickTight™ Wiring Connection System

ⁱ Alternative Sewer Systems Manual of Practice FD-12, second edition, published by the Water Environment Federation (WEF) 2008.

ⁱⁱ As seen in the Montesano, Washington, sewer system.

ⁱⁱⁱ As seen in the Vero Beach, Florida, system.

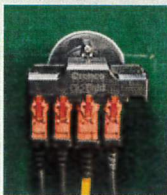


NPDE PIPE
DR 11

\$6500

The Prelos Processor pump package includes:

- Passively self-cleaning Biotube® Pump Vault (patent-pending)
- HDA Discharge Assembly with high-head pump
- Biotube Effluent Filter
- ClickTight™ Wiring Connection System



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Potters Mills, PA

The area around Potters Mills, a village in central Pennsylvania, has a long history of failing septic systems. In an evaluation performed by the local sewage enforcement officer, 72% of the on-lot septic systems in the proposed service area for Potters Mills had confirmed or suspected malfunctions.¹

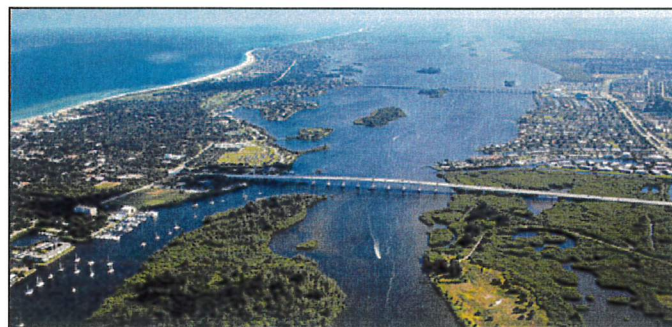
Located about 3.5 miles (5.6 km) from the closest city sewer system, Potters Mills needed an effective, affordable wastewater collection and treatment system that was easy to install, operate, and maintain with minimal disruption to residents' daily lives. The governing Potter Township chose an Orenco® Prelos™ Wastewater Collection System, followed by an Orenco AdvanTex® Wastewater System for advanced treatment.

Potter Township owns, operates, and maintains the collection system, from the Prelos Processor inlets to the treated effluent discharge outfall. They also own and operate the AdvanTex treatment facility, which is located near the northern end of the service area, next to a community park and about 200 feet (61 m) from the nearest home. The AdvanTex facility can be expanded in four phases to eventually handle up to 170 equivalent dwelling units (EDUs).

¹ Sewage Enforcement Officer Status Report, Potters Mills, March 3, 2015.

Vero Beach, FL

Along the Indian River Lagoon adjacent to Vero Beach, Florida, both residents and government officials were becoming increasingly concerned about excessive nutrient loads and pollution. About 1,500 homes in Vero Beach had septic systems, many of which were antiquated and failing. Experts believed that the failing onsite systems were a major contributor to the environmental degradation of the lagoon, loss of sea grass habitat, and the unexplained deaths of manatees and dolphins.



The City of Vero Beach installed an Orenco Liquid-Only Sewer consisting of directionally drilled, small-diameter mainlines and individual STEP (septic tank effluent pump) packages. Primary-treated effluent from each residential or multi-family property is ultimately conveyed to the city's existing centralized wastewater treatment plant.

At full build-out, with an estimated 1,500 residences connected to the city's liquid-only sewer, water quality in the Indian River Lagoon is expected to improve considerably. In its news release, the water management district reported that "the STEP project will divert septic system effluent ... preventing up to 40,500 pounds [18,370 kg] of nutrients per year from entering the groundwater."²

Replacement of failed septic systems will result in fewer pollutants ending up in the lagoon. Local officials are confident this will be a boon to the dolphins, manatees, and other wild creatures that make their home in these vital waters. The first on-lot systems were installed in April of 2015. Nearly five years later, Robert Bolton, Vero Beach's Director of Water and Sewer, describes the system's operation as "excellent, with no issues."

² St. Johns River Water Management District, District partners with Vero Beach to improve lagoon water quality, (news release, Palatka, Florida, February 13, 2015).

Lacey, WA

The City of Lacey was an early adopter of Orenco Liquid-Only Sewer. The community's first effluent sewer mains were installed in 1986. Orenco staff worked closely with the city to design an effective maintenance schedule that would provide residents with a sustainable and affordable level of service. "We truly appreciate the effort that Orenco has made in doing what they can to reduce our costs and effort," said Terry Cargil, City of Lacey Water and Wastewater Supervisor. The city now has over 3,200 Orenco Sewer connections and almost 50 miles of small-diameter effluent sewer mains.

Christiansburg, OH

The smell of sewage was becoming harder to ignore in Christiansburg, especially following a rainstorm. The village was plagued with failing onsite septic systems, and nearby West Fork Honey Creek had tested high for bacteria. With the Ohio EPA becoming concerned, village leaders began to explore wastewater management options.

Because Christiansburg has roughly 500 residents with a 2013 median income of just \$34,282,³ village leaders needed an affordable solution. For collection, they chose an Orenco Liquid-Only Sewer, which includes individual 1,000-gallon (3.8-m³) tanks for residences and 1,500- (5.7-m³)

or 2,000-gallon (7.6-m³) tanks for businesses. All tanks contain an Orenco septic tank effluent pump (STEP) package. The collection system conveys primary-treated effluent through small-diameter mainlines, without manholes or lift stations, to a two-stage AdvanTex® AX-Max™ treatment facility. Disinfected effluent from the AdvanTex system is then discharged to West Fork Honey Creek under the authority of an NPDES permit with strict ammonia limits. The engineer who designed the Christiansburg project said, "This was my first time working with Orenco, and it's been a success without a doubt. I am actively seeking new projects we can work together on in the future."

³ City-Data. Christiansburg, Ohio. Accessed September 9, 2015. <http://www.city-data.com/city/Christiansburg-Ohio.html>

SW Barry County, MI

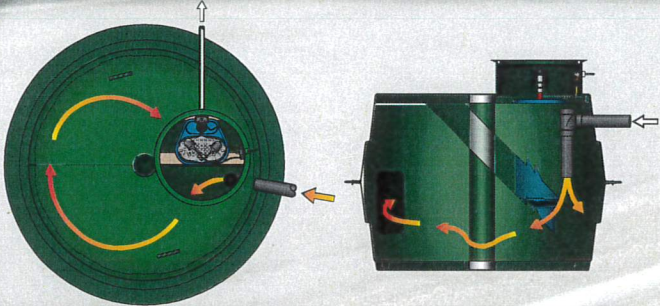
To preserve and improve water quality, this Michigan lake county has had a liquid-only sewer system since 1993. The collection system began with more than 1,200 Orenco on-lot STEP units, which have been so dependable that almost a thousand more have since been installed.

The county also maintains about 250 homes with grinder sewer systems. Scott Monroe started as the superintendent of the county's sewer and water authority in 1993 and is now the general manager. He says, "I've analyzed historical data and we easily get three times the repair callouts for grinder systems as we do for our effluent sewer systems. Also, the duration of grinder unit service calls is twice as long as for the STEP units. I haven't had one employee in 26 years that preferred grinder systems over effluent sewer systems – not one!"





Prelos™



Prelos Processor™

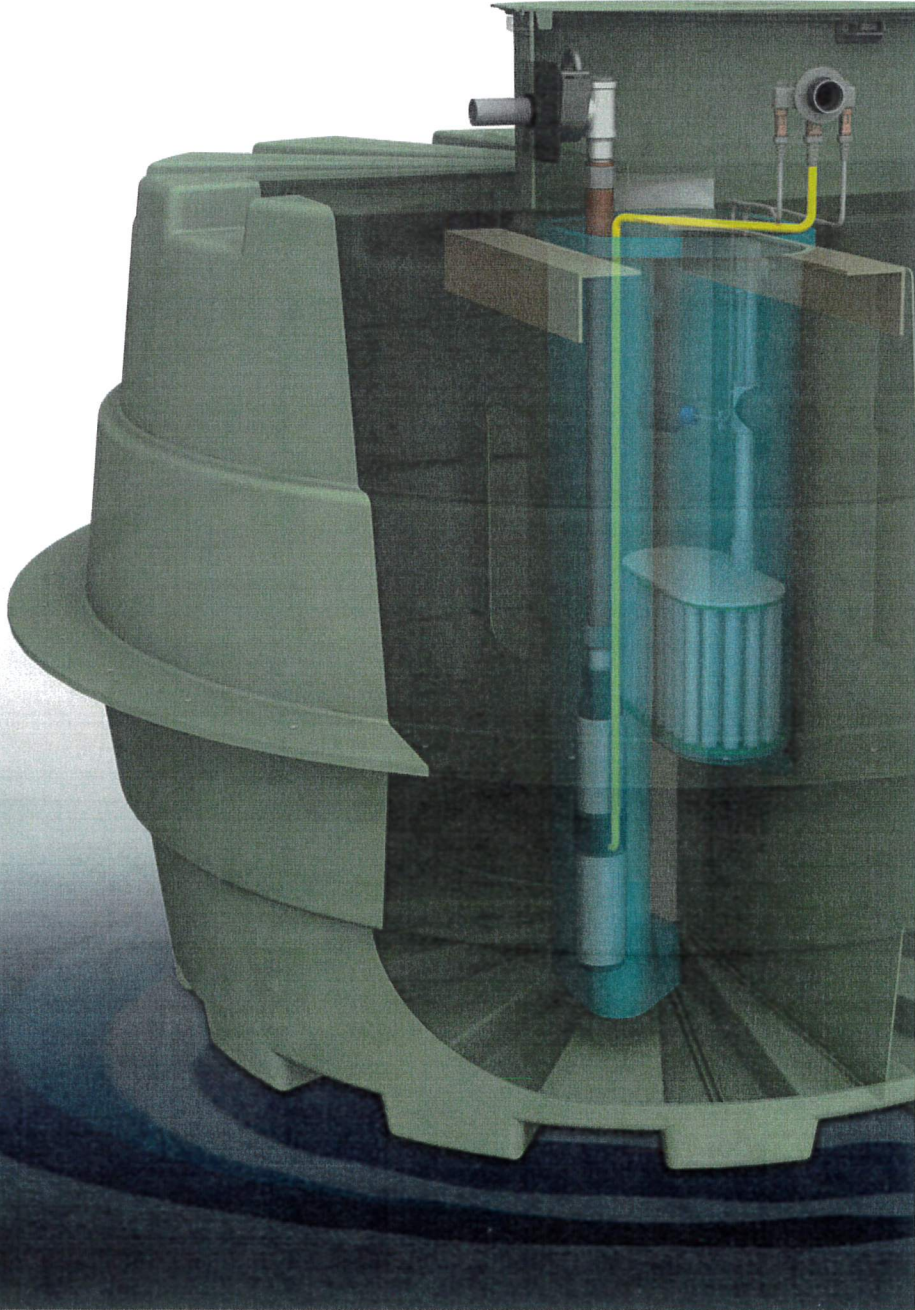
The Prelos Processor™ you see here is an all-in-one, complete unit that's easy to specify and install. It provides primary wastewater treatment and solids removal at the source



Prelos™

The Sewer Solution

“Sustainable development ... meets the needs of the present without compromising the ability of future generations to meet their own needs.” — Brundtland Report, 1987.



Choosing a sewer system is one of the most important decisions a community can make. It's a decision that will affect the community for decades. Prelos™ provides an efficient, affordable, and sustainable solution for the thousands of towns across the country in need of sewer infrastructure, whether it's new, an expansion, a repair, or replacement.

The Prelos Sewer Collection System is based on concepts that've been in use for more than 50 years. It's the culmination of technologies Orenco's been developing and refining since 1981.



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