Town of Cortland
Agenda Request

(SUBMIT FORM TO THE TOWN CLERK NO LATER THAN ONE WEEK BEFORE THE SCHEDULED MEETING)

ALL REQUESTS ARE SUBJECT TO THE APPROVAL OF THE MAYOR

☒ **RESOLUTION** ☐ **ORDINANCE** ☐ **INFORMATION** ☐ **OTHER**

DATE PREPARED: 7-9-2025 **FOR MEETING ON: 7-14-2025**

DESCRIPTION/TITLE:
Authorize the Mayor to sign the proposal from Huber Technology Inc. for a pilot study of their phosphorus removal equipment.

REQUIRED ACTION:
Authorize the Mayor to sign the proposal from Huber Technology Inc. for a pilot study of their phosphorus removal equipment
This is an unbudgeted expense, funds would come from the wastewater budget.

STAFF/COMMITTEE RECOMMENDATION:
Sign the proposal from Huber Technology Inc.

STATEMENT OF CONCERN/SUMMARY:

AGENDA PLACEMENT:

☐ BOARD REVIEW OF PENDING BUSINESS ☒ NEW BUSINESS ☐ CONCERNS ☐ STAFF REPORTS
☐ COMMITTEE OF THE WHOLE ☐ PRESIDENT'S REPORT ☐ CONSENT AGENDA ☐ UNFINISHED BUSINESS
☐ PUBLIC HEARING

Prepared by: Joel Summerhill Approved by: Date 7-9-2025

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Date: 6-29-2025
For: Cortland, IL
Proposal #: 525011-1A
Subject: Demonstration of HUBER Pile Cloth Media RotaFilt® for Tertiary Filtration

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Dear Cortland, IL,

HUBER Technology, Inc. offers you the opportunity to pilot the HUBER RotaFilt®; the very best way to filter biologically treated municipal wastewater after the secondary clarifier.

HUBER RotaFilt® 2 - Pilot

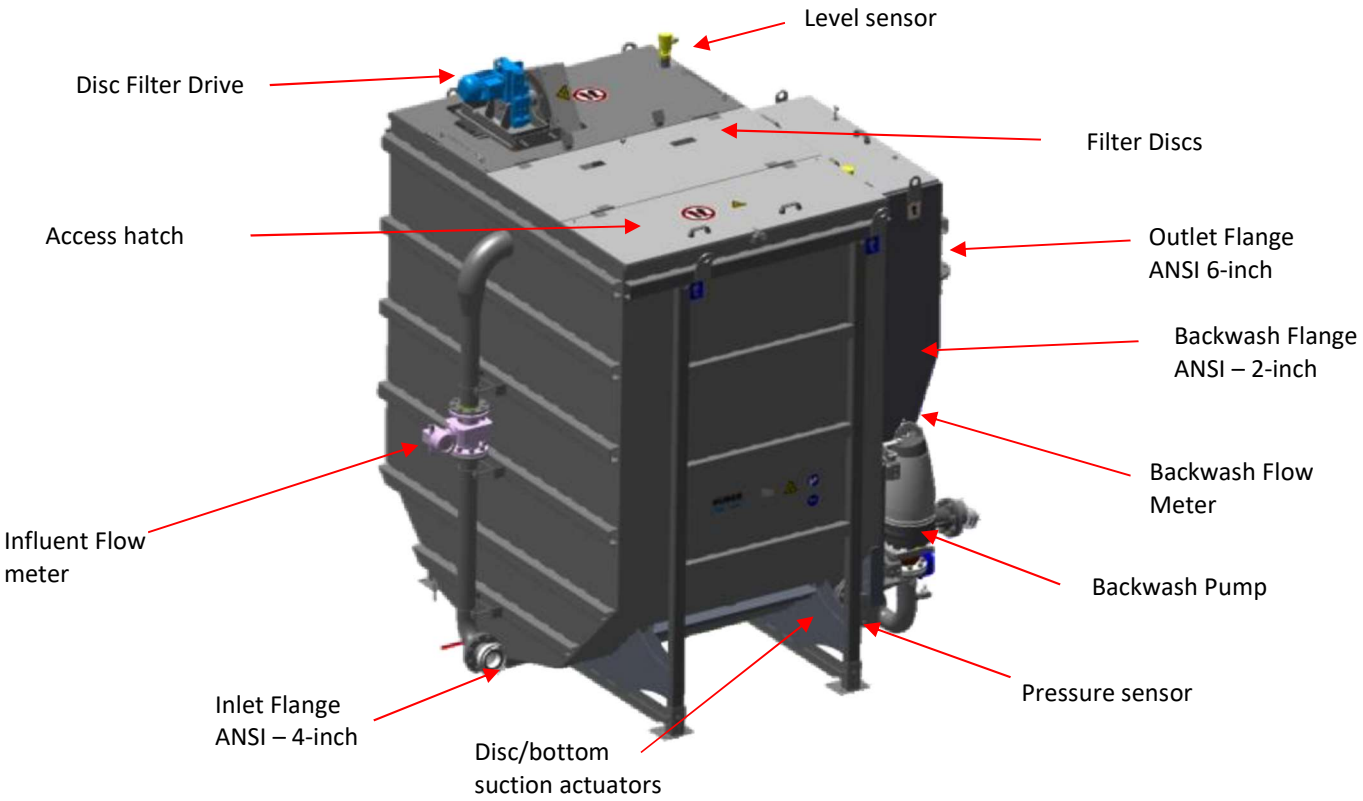
Process Description:

A submersible pump delivers wastewater from a chamber directly into the RotaFilt® pilot. Wastewater flow enters the tank surrounding the filter discs, passes through the fine pile cloth media segments, collecting the solids on the outer surface. Filtering from the outside to inside, the media will gradually blind resulting in an increasing pressure differential. At a predetermined set point, the disc filters will slowly rotate and a suction module cleans the pile cloth media, removing the solids and flowing out of the machine via the backwash piping. The screened wastewater passes over an outlet weir and exits the pilot tank through the outlet pipe. The filtration process operates continuously while the filter discs are being cleaned.

HUBER'S SCOPE OF SUPPLY INCLUDES THE FOLLOWING:

Disc Filter RotaFilt® size 2:

- Shipping and unloading the RotaFilt® plant to site
- Further details and description of the RotaFilt® pilot unit: (*please reference **Appendix 1** for RotaFilt® pilot unit drawings and pictures).*
    - Mounting type: Disc filters mounted inside an enclosed tank
    - Material of Construction: 304 stainless steel construction
    - Filter disc diameter: 7.2 feet (2200mm)
    - Submerged area per filter disc: 51 square feet (4.75 square meter)
    - Filter disc media nominal mesh size: ~5 micron
    - Filter disc media material: Fine Fiber Pile Cloth Media
    - Number of filter discs: Two (2)
    - Number of filter segments per disc: Twelve (12)
    - Suction modules: Disc suction modules and bottom suction modules
    - Number of back wash pumps included: One (1)
    - Differential water level measurement to control disc filter
    - Influent feed pump provided; mounted in partially submerged wastewater in channel
    - On-board turbidity monitoring and data logging (influent & effluent)
    - On-board magnetic flow meters (influent & backwash)
    - Influent flexible hoses – 4-inch diameter (75')
    - Effluent flexible hoses – 6-inch diameter (75')
    - Back wash hoses – 2-inch diameter (75')
    - Control panel integrated with RotaFilt® unit and mounted on side of tank
    - Power cable is included to power the control panel and wastewater pump (75')



- Chemical dosing pump and cabinet.
- In-line static mixer.
- Discharge piping for turbidity monitoring (75')
- System Installation and Startup Personnel:
    - Inlet connection piping between RotaFilt® inlet and feed pump.
    - Outlet connection piping between RotaFilt® outlet and to discharge point.
    - Backwash line connection piping between backwash outlet and discharge point.
    - Turbidity line connection between influent & effluent turbidity discharge point.
    - Electrical power cable from RotaFilt® to site's electrical power source. (Power connection by others)
    - Set-up and leveling of RotaFilt®, set-up of feed pump, installation and positioning of all piping.

- Operating personnel:
    - One (1) HUBER Field Service Specialist will be provided for the pilot to install and start-up the pilot unit, provide operator training, and decommission the equipment.

CUSTOMER'S SCOPE OF SUPPLY INCLUDES THE FOLLOWING:

Disc Filter RotaFilt®:

- RotaFilt® Machine Weights:
    - Weight empty 8,940 lbs
    - Weight with water 22,000 lbs
    - Fortified ground/location for machine.

- Space for Tsurumi Feed Pump:
    - Wastewater influent feed pump: 348 lbs
    - Adequate space required for the feed pump installation.
        - Please see **Appendix 2** for feed pump dimensions.

- Discharge locations:
    - Filtered effluent: Flow should be discharged downstream of the inlet feed pump.
    - Backwash sludge: Flow should be discharged appropriately back into WWTP process, and near the influent feeding pump to RotaFilt®.
    - Turbidity monitoring discharge

- Process parameters:
    - Installation after aeration basin & secondary clarifier.
    - Maximum flow to disc filter: 720 gpm. (*note: flow rate is dependent on influent TSS)*
    - *Max TSS:* _____ *Average TSS:* _____
    - *Peak Total P:* _____ *Peak Ortho P:* _____
    - *Average TP:* _____ *Average Ortho P:* _____

- Chemicals as required (application and performance dependent)

- Any additional piping / hose:
    - If the pilot unit cannot be placed within 75' of the feed pump and drain points.

- RotaFilt® control panel and Power Supply:
  - 480V / 60Hz, 3 phases
  - Customer shall supply additional power cable if the provided 75' is insufficient.
  - Site will need to accommodate a certified electrician if wiring will be involved for connecting to site power.

- Operating environment of > 32°F (e.g. heated garage in winter months)
  - This ensures that the backwash line any water lines do not freeze.

- Unrestricted access to the installation area per site guidelines or as applicable, including permission for pictures of pilot machines.

- **ALL rental fees of additional required equipment or supplies will be the responsibility of the customer. (e.g. Power Generator, chemicals for additional testing, etc.)**

- Operation of the Unit
  - The customer is responsible for operating the pilot unit, sampling, reports, and data collection after startup and training from HUBER. HUBER Technology needs to be informed within a day if any issues with the pilot unit come up and if any alarms are indicated by the PLC.

- Data Acquired
  - Grant HUBER access to the sampling data collected and set-up an agreement on when and how HUBER can use that data. Data required should include at a minimum the TSS influent (mg/L), TSS effluent (mg/L), flow rate (GPM), and phosphorus (mg/L).

Procedures:

- Before turning on the pilot unit:
  - If the TSS (Total Suspended Solids) concentration is unknown, measure the TSS concentration nearby the suction point of the feeding pump at a representative time of the day.
    - TSS: _____ mg/l
  - If phosphorous needs to be tested as well:
    - Total phosphorous: _____ mg/l (= total)
    - Ortho-phosphorous: _____ mg/l (= dissolved fraction)
  - Set the flow rate of the unit based on the existing TSS concentration measured under via the VFD. Switch on the pilot plant.
    - Flow rate: _____ gpm

- Sampling:
  - Sample type (composite or grab): Composite recommended.
  - Frequency of sample: Daily
  - If auto-sampler is available than the samples should be collected by the auto-sampler every hour for a 24hr composite sample. If sampling manually by hand, the samples should be collected at a minimum of three (3) to four (4) times per day.
  - Collect influent and effluent same during the same period for accuracy of the separation efficiency.
  - Each sample size should be minimum 100mL in volume.
  - All samples collected for the day should be combined into one container before testing as this provides the composite sample for the day.

  - Example: 24 samples per day * 0.1 L (100mL) per hour = 2.4 L total size of sample.
  - Please see diagram 1 below for sample point locations:
- Optimizing the Pilot unit:
  - Optimizing the final operation of the pilot unit by means of increasing the flowrate and still reaching the outlet guarantee values.
  - Operate the system at every individual set point for the next two days. If afterwards the pilot is corresponding to the required effluent guarantee values, the flow rate can then be increased by + 10 % and repeat the procedure noting down all parameters/results. In case the disc filter is not corresponding to the required TSS effluent guarantee values, decrease the throughput by – 10 %. Please reference a sample excel sheet for data recording at the end of this document (the excel file can be provided as required).

- Phosphorous outlet guarantee values:
  - If the pilot is not corresponding to the required total phosphorous concentration at the outlet please contact HUBER, to define if additional precipitation and/or polymer is required.

QUOTE – 6 WEEKS Demonstration, 8 WEEKS Total Duration

HUBER Unloading and Pilot Setup:	Week One (1) (Includes crane by HUBER)
HUBER Start-up & Training	Week One (1)
Pilot Duration:	(6) weeks
HUBER Technician/Engineer Visits:	(1) visit during pilot duration time. (Includes checking in on unit, optimizing, and completing any maintenance/cleaning as required)
HUBER Decommissioning:	Week after pilot duration completed (Includes crane by HUBER)

The Cost of the Pilot Unit Includes:

Cost of transport, commissioning and decommissioning:	**$ -**
Startup/training by HUBER technician:	**$ -**
Pilot Rental Costs	**$ *waived**
HUBER technician visits:	**$ -**
Total Costs:	**$ 21,500.00**

As part of our commitment to supporting your facility's evaluation of advanced tertiary filtration, HUBER Technology will waive all standard rental fees associated with the pilot disc filter unit for the duration of the pilot. Anticipated pilot ship date is September 1, 2025, but pending final confirmation and review, and subject to change by HUBER Technology, Inc.

By signing this document, the signee agrees to the above said scope of supply.

HUBER Technology, Inc. appreciates the opportunity to demonstrate the capabilities of our unit at your facility.

Sincerely,

Bryce Kerney
Product Manager Filtration
HUBER Technology, Inc.

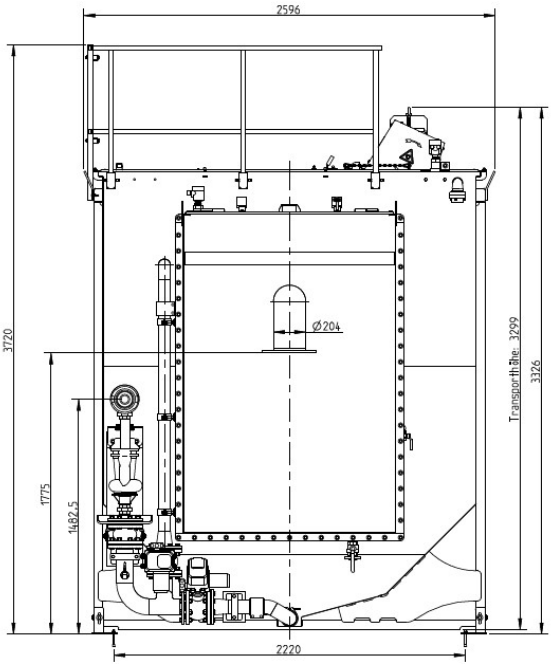
Purchase Order #: _____

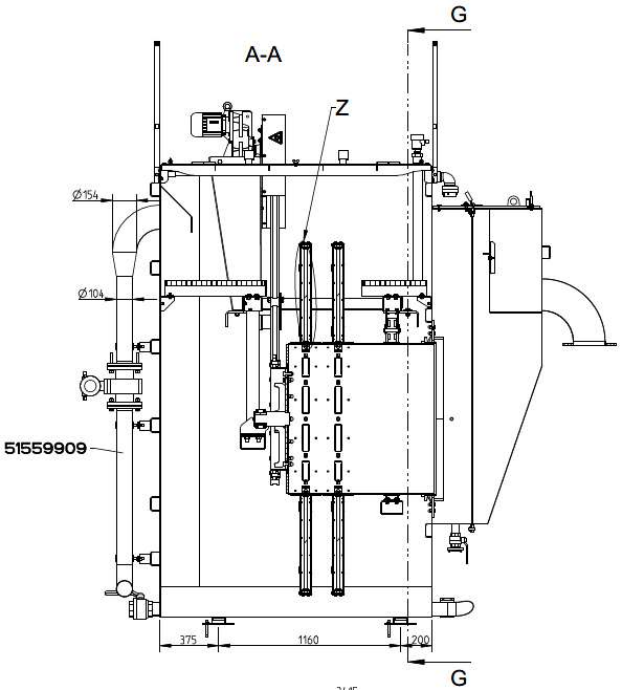
_____

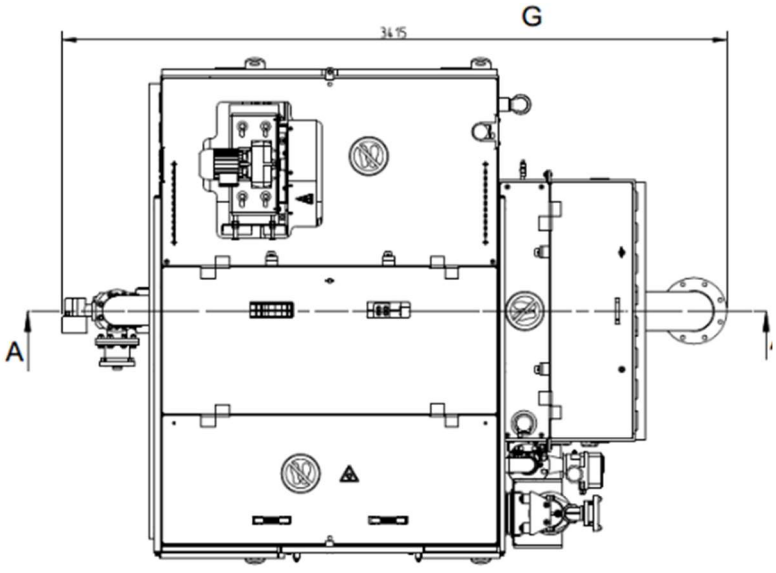
_____

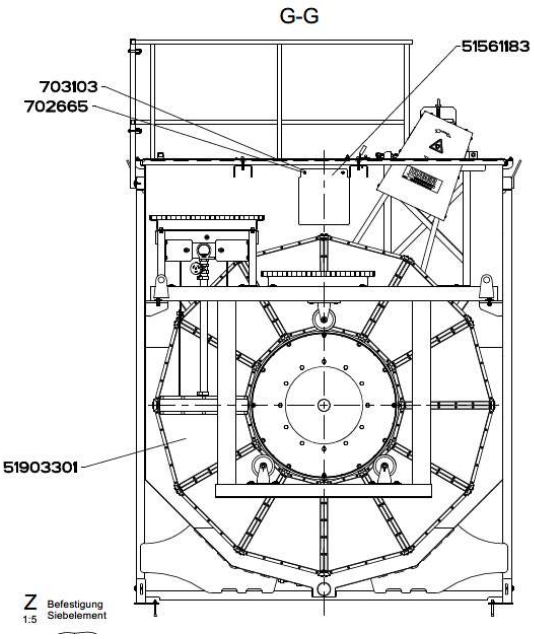
Purchaser print name, signature, and date

Appendix 1 – RotaFilt® Drawing









Appendix 2 – Photos

Effluent and backwash piping

Influent & Turbidity monitoring system Control Panel

Sample pilot installation showing piping

Appendix 2 – Feed Pump Details

Reference Feed Pump Installation

Feed Pump Showing Pipe Elbow

Chemical Dosing Cabinet; Static Mixer

Chemical Metering Pump