LS # 3

Roth Professional Solutions

LIFT STATION CONDITION ASSESSMENT FORM

Assessment Date: 25 April 2023

Location: 2361 Tower Rd, Kronenwetter, WI Municipality: Village of Kronenwetter LS Type: Dry Pit Vacuum Prime Duplex

Engineer: Roth Proffessional Solutions Technical & Equipment Assistance: B&M Technical Services

House Keeping: ■ Good ☐ N/A ☐ Poor Lighting ☐ Tripping Hazards Present ☐ No Fall Protection ☐ Exposure to Raw Wastewater in Dry Well ☐ Sump Pump Inoperable ☐ Electric Space Heater Inoperable ☐ Potential for Shock or Electrocution ☐ Other

Health and Safety Issues: None

Other Observations: USEMCO ORIGINAL / LWALLEN 2016 refurbished

Asset Class	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Field Observations/Comments
Site Improvement (SIM)					
* **Access Driveway**	X				
* **Parking**	X				
* **Gate and Fencing**	☐				
* **Site Drainage**	X				
* **Grounding System**	☐				
* **Site Lighting**	☐				
* **Site Alarm Horn and Strobe Lighting**	X				on building

General Site Electrical Observations

Access Driveway Details: ☐ Gravel or aggregate basecourse only ☐ Concrete Pavement ■ Bituminous Pavement

Parking Details: ☐ None ☐ Gravel ■ Paved

Fence Details: ☐ Chain Link ☐ Other Fencing Height (ft): Fencing Length (ft):

Gate Type: ☐ Single ☐ Double N/A

Traffic: ☐ Other ☐ Site too Close to Traffic N/A

Grounding System Details : ☐ Present ☐ Grounding Rings ☐ Grounding Rods N/A

If applicable, approximate parking area: N/A

If applicable, approximate site area: N/A

Other Notes:

Pin Valve Issues on Vacuum Doesn't stay primed; 3 Phase 208

LS # 3

Roth Professional Solutions

LIFT STATION CONDITION ASSESSMENT FORM

Asset Class	CMMS Code	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Utiliz. (%)	Field Observations/Comments
Structure and Wetwell (PST)							
* **Building**		☐	*				*Sampling Bldg onsite w/generator hooku
Building Structures: ☒ None ☐ Concrete Walls ☐ Concrete Floor ☐ Doors Total Floor Area: Plan Floor Area:							
Field Observations: ☐ Good ☐ N/A ☐ Roof Degraded ☐ Doors and Security Failing ☒ Needs Paint ☐ Cracks on the Wall ☐ Cracks on the Floor ☐ Other							
* **Odor Control**		☑					NONE
Odor Details: ☒ Vent Pipe ☐ Other ☐ Details							
Field Observations: ☒ Operational and in use ☐ On site, but not required ☐ Does not operate, needs repair ☐ Other							
* **Crane/Hoist**		☑	*				*Lift Chain/Roller
Crane Details: Manufacturer: Model: Serial Number:							
Field Observations: ☐ Good operating condition ☐ Does not operate, requires repair ☐ Mounting Hardware intact ☒ Other *Requires Lift Truck or Portable Lift							
* **Bar Screen or Com minuter**	N/A	☐					
System Description: ☐ No Bar Screen ☐ Manually Raked Bar Screen ☐ Mechanically Raked Bar Screen ☐ Screen Bypass Provided?							
Mechanical Bar Screens: ☐ Manufacturer: Model: Serial Number: Power Requirements (hp):							
Odor Details: ☒ N/A ☐ Screens need frequent cleaning ☐ Short repsonse time ☐ Odor fly nuisance ☐ Screens not in use ☐ Other							
* **Flow Meter**	N/A	☐					
Type: ☐ N/A Type: Manufacturer: Model: Serial Number:							
Flow Meter Field Observations: ☐ Operational ☐ Location ☐ Other							
* **Wet Well**		☑					Lower Wet Well is Concrete
Walls: ☒ Concrete ☒ Steel ☐ Fiberglass							
Slab/Cover: ☐ Reinforced Concrete ☒ Steel ☐ Pumps, motors and electric panel are mounted on cover/slab directly over wet well							
Pump Control System: ☒ Floats ☐ Bubbler System ☐ Ultrasonic & Transducer							
Measurement (PPM):							
Wet Well Field Observations: ☒ Good ☐ PN/A ☐ Hatch Damaged or Difficult to Open ☐ Wet Structure Spalling or Cracked ☐ Evidence of Concrete Corrosion ☐ Wet Well Needs Cleaning - Solids/Grease ☐ Other							
Hatch Field Observations: ☐ Good ☐ Fair: Minor Corrosion to Hatches, Hinges, or Latches ☐ Poor:Corroded or Broken Hatches, Hinges, or Latches ☐ Other							
Wet Well Ladder Observations: ☐ Good ☐ Fair: Surface Corrosion; Steps Intact and Solid; Minor Anchor Bolt Corrosion ☐ Poor: Corroded or Broken Steps; Corroded or Broken Wall Anchors ☒ Other N/A							
Wet Well Wall Observations: ☐ Good ☐ Fair: Concrete Sealant Peeled or Cracked; Concrete Soft at Surface ☐ Poor: Exposed/Missing Aggregate; Exposed/Missing Re-bar ☒ Other							Painted Concrete Lower Wet Well Okay Painted Metal Upper Losing Paint w/Corro
Slab/Cover Observations: ☒ Good ☐ Fair: Concrete or Aluminum Grate Slightly Corroded But Safe ☐ Poor: Concrete Aggregate Missing/Exposed; Grate Corroded or Warped; Debris Over Platform ☐ Other							

LS # 3

Roth Professional Solutions

LIFT STATION CONDITION ASSESSMENT FORM

Asset Class	CMMS Code	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Utiliz. (%)	Field Observations/Comments

Influent Pipe Observations: ☐ Good ☐ Fair: Slight Corrosion; Pipe Intact ☐ Poor: Severe Pipe Corrosion ☐ Other

Alarm Float Observations: ☐ Good ☒ Fair: Some Grease But Operating Properly ☐ Poor: Covered in Grease or Broken ☒ Other Grease

Pump Vent Line Observations: ☒ Good ☐ Fair: Slight Corrosion But Operates Properly; Needs Sealant Around Opening
☐ Poor: Any One Vent Does Not Operate; Corroded or Broken Off at Wall ☐ Other

* **Dry Well**		☑					

Location Type: ☐ None ☒ Underground pump vault with access tube and ladder ☐ Located below grade inside building

Lighting: ☒ Yes ☐ No

Cathodic Protection ☐ Not Required ☐ None ☐ Yes

Access Tube and Ladder Field Observations: ☐ N/A ☒ Good ☐ Fair: Surface Corrosion; Steps Intact and Solid; Minor Anchor Bolt Corrosion
☐ Poor: Corroded or Broken Steps; Corroded or Broken Wall Anchors ☐ Other

Underground Vault Observations: ☐ N/A ☒ Good ☐ Fair: Surface Corrosion ☐ Poor: Corrosion ☒ Other Floor Cooroded but OK

Building Floor Slabs: ☒ N/A ☐ Good ☐ Fair: Concrete Sealant Peeled or Cracked; Concrete Soft at Surface
☐ Poor: Exposed/Missing Aggregate; Exposed/Missing Re-bar ☐ Other

Staircases/Stairwells: ☒ N/A ☐ Good ☐ Fair: Concrete Cracked; Concrete Soft at Surface
☐ Poor: Exposed/Missing Aggregate; Exposed/Missing Re-bar ☐ Other

Building Walls: ☐ N/A ☐ Good ☐ Fair: Concrete Sealant Peeled or Cracked; Concrete Soft at Surface
☐ Poor: Exposed/Missing Aggregate; Exposed/Missing Re-bar ☒ Other N/A

Sump Pump: ☐ No ☒ Yes Type Model: Power (hp): TDH: Serial:

Field Observations: ☐ Not Operational ☐ Poor Floor Drainage ☒ Other OK-No Apparent Issues

* **Cathodic Protection**		☐					Assumed Yes (not visible)

Field Observations: ☐ Disconnected ☐ Other

HVAC (HVA)

* **Dry Well HVAC**		☑					HTR Electrical

Asset Size:

Field Observations: ☒ Good ☐ N/A ☐ Old ☐ Ventilation Inoperable ☐ Makes Noise ☐ Fans Vibrate
☐ Ventilation Duct Work Corroded ☐ Belts Loose or Torn ☐ Louvers ☐ Roof Vents ☐ Other

* **Wet Well HVAC**		☐					None

Asset Size:

Field Observations: ☐ Good ☐ N/A ☐ Old ☐ Ventilation Inoperable ☐ Makes Noise ☐ Fans Vibrate ☐ Belts Loose or Torn
☐ Ventilation Duct Work Corroded ☐ Louvers ☐ Roof Vents ☐ Other

Electrical Systems (ELE)

* **Control Panel**		☑					

Asset Size (Volts) 208 (Volts) ☐ Single phase ☒ Three Phase

Manufacturer: Model: Serial Number:

Power Supply Manufacturer: Model: Type:

LS # 3

Roth Professional Solutions

LIFT STATION CONDITION ASSESSMENT FORM

Asset Class	CMMS Code	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Utiliz. (%)	Field Observations/Comments

Field Observations: ☐ Good ☐ Panel Corroded ☐ Old / Outdated / Obsolete ☐ Contacts Loose ☐ Cables Fatigued Checked ☐ Dust Inside Panel ☐ Exposed Wires ☐ Shop Drawings Available ☐ UL Listed ☐ Uncovered Holes ☐ Surge Protection ☐ Grounded ☐ Wiring Labelled ☐ Panel Labelled ☐ Other

* **Lighting Panel**		☑					

Asset Size (Volts)

Manufacturer: Interanal Model: Square D Serial Number: N/A

Field Observations: ☑ Good ☐ Panel Corroded ☐ Old / Outdated / Obsolete ☐ Contacts Loose ☐ Cables Fatigued Checked ☐ Dust Inside Panel ☐ Exposed Wires ☐ Switch Gear Worn ☐ Bus and.or lugs corroded ☐ Spare Spaces Available ☐ Breakers Labelled ☐ Panel Grounded ☐ Panel Labelled ☐ Other

* **Main Switch**		☑					

Asset Size (Volts)

Manufacturer: Square D Model: Serial Number:

Field Observations: ☐ Good ☐ Panel Corroded ☐ Old / Outdated / Obsolete ☐ Contacts Loose ☐ Cables Fatigued Checked ☐ Dust Inside Panel ☐ Exposed Wires ☐ Switch Gear Worn ☐ Lugs Corroded ☐ Panel Grounded ☐ Panel Labelled ☐ Other

* **Transfer Switch**	Manual	☑					

Asset Size (Volts 208 VAC 3 Phase

Manufacturer: OE Model: N/A Serial Number: N/A

Field Observations: ☑ Good ☐ Panel Corroded ☐ Old / Outdated / Obsolete ☐ Contacts Loose ☐ Cables Fatigued Checked ☐ Dust Inside Panel ☐ Exposed Wires ☐ Switch Gear Worn ☐ Lugs Corroded ☐ Panel Grounded ☐ Panel Labelled ☐ Other

* **Motor Control Center**	N/A	☐					

Asset Size (Volts)

Manufacturer: Model: Serial Number:

Field Observations: ☐ Good ☐ Panel Corroded ☐ Old / Outdated / Obsolete ☐ Contacts Loose ☐ Cables Fatigued Checked ☐ Dust Inside Panel ☐ Exposed Wires ☐ Switch Gear Worn ☐ Lugs Corroded ☐ Panel Labelled ☐ Other

* **Junction Box**		☐					

Asset Size (Volts) 24x36x8 208 VAC

Manufacturer: Square D Model: Duplex Serial Number: 5776

Field Observations: ☑ Good ☐ Panel Corroded ☐ Old / Outdated / Obsolete ☐ Contacts Loose ☐ Cables Fatigued Checked ☐ Dust Inside Panel ☐ Exposed Wires ☐ Switch Gear Worn ☐ Lugs Corroded ☐ Panel Grounded ☐ Panel Labelled ☐ Other

* **Miscellaneous Panel 1**	N/A	☐					

Asset Size

Manufacturer: Model: Serial Number:

Field Observations: ☐ Good ☐ Panel Corroded ☐ Old / Outdated / Obsolete ☐ Contacts Loose ☐ Cables Fatigued Checked ☐ Dust Inside Panel ☐ Exposed Wires ☐ Switch Gear Worn ☐ Lugs Corroded ☐ Panel Grounded ☐ Panel Labelled ☐ Other

LS # 3

Roth Professional Solutions

LIFT STATION CONDITION ASSESSMENT FORM

Asset Class	CMMS Code	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Utiliz. (%)	Field Observations/Comments
Generator (GEN)							
* **Emergency Generator**	N/A	☐					
* **Emer. Gen. Connector**		☑					
Asset Size:	Manufacturer:		Model:		Serial:		Generator Type:
Field Observations: ☐ Good ☐ N/A ☐ Contacts Loose ☐ Cables Fatigued Checked ☐ Engine Fluids Low ☐ Poor Housekeeping ☐ Poor Accessibility ☐ Panel Grounded ☐ Panel Labelled ☐ Diesel Containment ☐ Other							
Instrumentation (INS)							
* **Auto Dialer**		☐					
Manufacturer:		Model:			Phone Number:		
Alarms: ☐ High Level ☐ Low Level ☐ Generator Running ☐ Power Fail ☐ Other							
* **Float Controls**	back up	☐	2 float				
* **Bubbler Controls**		☐					
Manufacturer: Mercoid		Model: MPC Junior					
* **Ultrasonic Controls**	Primary	☐					
Field Observations: ☐ Good ☐ N/A ☐ Bubbler Compressor Failing ☐ Air Lines Clogged / Full of Moisture ☐ Drain Condensate Traps in Air System ☐ Floats Tangled ☐ Controls Obsolete ☐ Other							
SCADA (SCA)							
Field Observations: ☐ Good ☑ N/A ☐ Obsolete ☐ Other 1400 Allen Bradley PLC MDS Radio 4710 SD4							
Variable Frequency Drive							
* **Control Panel - VFD**		☐					
* **Harmonic Filter**		☐					
* **Output Filter**		☐					
Asset Size:	Manufacturer:		Model:				Observed RPM:
Field Observations: ☐ Good ☐ N/A ☐ Makes Noise ☐ Obsolete ☐ Panel Corroded / Dusty / Leaky ☐ Other							
Motors (MTR)							
* **Motor 1**		☐					
Asset Size (HP) 3							
Manufacturer: Marathon Electric		Model: RVB			Serial Number: N/A		
Field Observations: ☑ Good ☐ N/A ☐ Makes Noise ☐ Vibrates ☐ Shaft Bearing Noise ☐ Opposite End Bearing Noise ☐ Overheating ☐ Needs Lubrication ☐ Over Lubricated ☐ Mount Failing ☐ Leaking ☐ Emergency Stop Button in Dry Well Inoperable ☐ Other							
* **Motor 2**		☐					
Asset Size (HP): 3	Manufacturer: Marathon Electric		Model: Same				Serial Number: N/A
Field Observations: ☑ Good ☐ N/A ☐ Makes Noise ☐ Vibrates ☐ Shaft Bearing Noise ☐ Opposite End Bearing Noise ☐ Overheating ☐ Needs Lubrication ☐ Over Lubricated ☐ Mount Failing ☐ Leaking ☐ Emergency Stop Button in Dry Well Inoperable ☐ Other							

LS # 3

Roth Professional Solutions

LIFT STATION CONDITION ASSESSMENT FORM

Asset Class	CMMS Code	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Utiliz. (%)	Field Observations/Comments
Hor/Vert Centrifugal Pumps							
* **Pump 1**		✔					
Manufacturer: Fairbanks		Model: 2016		Serial Number:			
Discharge Size (in) 4"		Suction Diameter (in)		Pump Size (GPM)		TDH	
Priming Pump ■	Manufacturer:		Model:		Serial No.:		Size (hp):
Pressure Gauge ☐	Manufacturer:		Pressure Range:		PressureReading:		
Field Observations: ■ Good ☐ N/A ☐ Seals Leaking ☐ Vibrating ☐ Shaft Deflection ☐ Cavitating ☐ Belts Loose ☐ Bearing Noise ☐ Mount Failing ☐ Evidence of Pipe Strain ☐ Other							
* **Pump 2**	4"	✔					
Discharge Size (in)		Suction Diameter (in)		Pump Size (GPM)		TDH	
Priming Pump ■	Manufacturer:		Model: 2016		Serial No.:		Size (hp):
Pressure Gauge ☐	Manufacturer:		Pressure Range:		PressureReading:		
Field Observations: ☐ Good ☐ N/A ☐ Seals Leaking ☐ Vibrating ☐ Shaft Deflection ☐ Cavitating ☐ Belts Loose ☐ Bearing Noise ☐ Mount Failing ☐ Evidence of Pipe Strain ☐ Other							
Submersible Pumps (SUB)							
* **Pump 1**	N/A	☐					
Manufacturer:		Model:		Serial:			
Discharge Size (in)		Suction Diameter (in)		Pump Size (GPM)		TDH	
Field Observations: ☐ Good ☐ N/A ☐ Rail System Corroded ☐ Does Not Seat Well ☐ Cables Corroded or Failing ☐ Other							
* **Pump 2**	N/A	☐					
Manufacturer:		Model:		Serial:			
Discharge Size (in)		Suction Diameter (in)		Pump Size (GPM)		TDH	
Field Observations: ☐ Good ☐ N/A ☐ Rail System Corroded ☐ Does Not Seat Well ☐ Cables Corroded or Failing ☐ Other							
Check Valves							
* **Pump 1**		✔					
Size (in): 4"		Manufacturer:		Model:		Serial No:	
Field Observations: ■ Good ☐ N/A ☐ Valve Operator Stuck ☐ Valve Seat Leaking ☐ Flanges Leaking ☐ Check Valve Not Seating ☐ Check Valve Not Operating ☐ Evidence of Pipe Strain ☐ Other							
* **Pump 2**		☐					
Size (in): 4"		Manufacturer:		Model:		Serial No:	
Field Observations: ■ Good ☐ N/A ☐ Valve Operator Stuck ☐ Valve Seat Leaking ☐ Flanges Leaking ☐ Other ☐ Check Valve Not Seating ☐ Check Valve Not Operating ☐ Evidence of Pipe Strain							

LS # 3 _____

Roth Professional Solutions

LIFT STATION CONDITION ASSESSMENT FORM

Asset Class	CMMS Code	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Utiliz. (%)	Field Observations/Comments
Piping and Valves Suction Isolation Valves							
* **Pump 1**	N/A	☐					
Size (in):	Manufacturer:		Model:		Serial No:		
Field Observations:	☐ Good ☐ N/A ☐ Valve Operator Stuck ☐ Valve Seat Leaking ☐ Flanges Leaking ☐ Check Valve Not Seating ☐ Check Valve Not Operating ☐ Evidence of Pipe Strain ☐ Other						
* **Pump 2**	N/A	☐					
Size (in):	Manufacturer:		Model:		Serial No:		
Field Observations:	☐ Good ☐ N/A ☐ Valve Operator Stuck ☐ Valve Seat Leaking ☐ Flanges Leaking ☐ Check Valve Not Seating ☐ Check Valve Not Operating ☐ Evidence of Pipe Strain ☐ Other						
Discharge Isolation Valves							
* **Pump 1**	N/A	☐					
Size (in):	Manufacturer:		Model:		Serial No:		
Field Observations:	☐ Good ☐ N/A ☐ Valve Operator Stuck ☐ Valve Seat Leaking ☐ Flanges Leaking ☐ Check Valve Not Seating ☐ Check Valve Not Operating ☐ Evidence of Pipe Strain ☐ Other						
* **Pump 2**	N/A	☐					
Size (in):	Manufacturer:		Model:		Serial No:		
Field Observations:	☐ Good ☐ N/A ☐ Valve Operator Stuck ☐ Valve Seat Leaking ☐ Flanges Leaking ☐ Check Valve Not Seating ☐ Check Valve Not Operating ☐ Evidence of Pipe Strain ☐ Other						