

Lakengren Water Authority Facilities Appraisal

Lake Lakengren ~ Preble County, Ohio

Date: April 2022



Prepared for:

Lakengren Water Authority



24 Lakengren Drive, Eaton, OH 45320
Phone: (937) 456-4455 Fax: (937) 456-7257
Website: www.lakengrenh2o.org

Prepared by:

Mote & Associates

Engineering, Land Surveying

214 West Fourth Street, Greenville, Ohio 45331
Phone: (937) 548-7511 Fax: (937) 548-7484
Email: info@moteassociates.com
Website: www.moteassociates.com

Table of Contents

Background: Report Cover Letter & Certification.....	4
Lakengren Water Authority Facilities Location Map.....	5
Facilities Appraisal.....	6
Wastewater Treatment Facility	6
Sanitary Lift Stations	14
<i>Sanitary Lift Station #1</i>	14
<i>Sanitary Lift Station #2</i>	15
<i>Sanitary Lift Station #3</i>	16
<i>Sanitary Lift Station #4</i>	17
Water Treatment Facility	18
Drinking Water Wells.....	23
<i>Well #1</i>	23
<i>Well #3</i>	24
<i>Well #4</i>	25
Elevated Water Storage Tanks.....	26
<i>East Elevated Water Storage Tank</i>	26
<i>West Elevated Water Storage Tank</i>	27
LWA Administrative Offices Building.....	28
Compilation of Infrastructure Replacement Costs	29
Appendices	30
<i>Table 1.14 – LWA Wastewater Equipment Inventory & Replacement Cost</i>	30
<i>Table 1.15 – LWA Water Equipment Inventory & Replacement Cost</i>	33
<i>Table 1.16 – LWA Admin. Offices Equipment Inventory & Replacement Cost</i>	35
<i>Table 1.17 – Water & Wastewater Distribution & Collection Infrastructure Pipelines</i>	37
<u><i>Site Maps</i></u>	
<i>Site Map #1 – Wastewater Treatment Facility</i>	
<i>Site Map #2 – Water Treatment Facility</i>	
<i>Site Map #3 – Lakengren Water Authority Administration Building</i>	
<i>Site Map #4 – West Elevated Water Storage Tank</i>	
<i>Site Map #5 – East Elevated Water Storage Tank</i>	

List of Tables

Table 1.1 – Wastewater Treatment Facility Appraisal.....	13
Table 1.2 – Sanitary Lift Station #1 Appraisal.....	14
Table 1.3 – Sanitary Lift Station #2 Appraisal.....	15
Table 1.4 – Sanitary Lift Station #3 Appraisal.....	16
Table 1.5 – Sanitary Lift Station #4 Appraisal.....	17
Table 1.6 – Water Treatment Facility Appraisal.....	22
Table 1.7 – Drinking Water Well #1 Appraisal.....	23
Table 1.8 – Drinking Water Well #3 Appraisal.....	24
Table 1.9 – Drinking Water Well #4 Appraisal.....	25
Table 1.10 – East Elevated Water Storage Tank Appraisal	26
Table 1.11 – West Elevated Water Storage Tank Appraisal.....	27
Table 1.12 – LWA Administrative Office Building Appraisal.....	28
Table 1.13 – LWA Combined Infrastructure Replacement.....	29
Table 1.14 – LWA Wastewater Equipment Inventory & Replacement Cost	30
Table 1.15 – LWA Water Equipment Inventory & Replacement Cost	33
Table 1.16 – LWA Admin. Offices Equipment Inventory & Replacement Cost	35
Table 1.17 – Water & Wastewater Distribution & Collection Infrastructure Pipelines	37

Background

April 21, 2022

Lakengren Water Authority
24 Lakengren Drive
Eaton, OH 45320

Re: Lakengren Water Authority Facilities Appraisal

Mr. Justin Erbaugh,

The basis of this report is to provide a replacement appraisal for Lakengren Water Authority owned properties and infrastructure. This appraisal is to be used for insurance purposes for in-kind replacement of existing equipment and infrastructure. Please note that underground conduit and piping is not included within the appraisal items.

The facilities included on this appraisal are as follows:


- Wastewater Treatment Facility
- Sanitary Lift Stations
- Water Treatment Facility
- Potable Water Drinking Wells
- Elevated Water Storage Tanks
- Administrative Office Building

The location map on the next page itemizes the location of each facility within the Lake Lakengren community for which an appraisal will be provided within this report.

Certification:

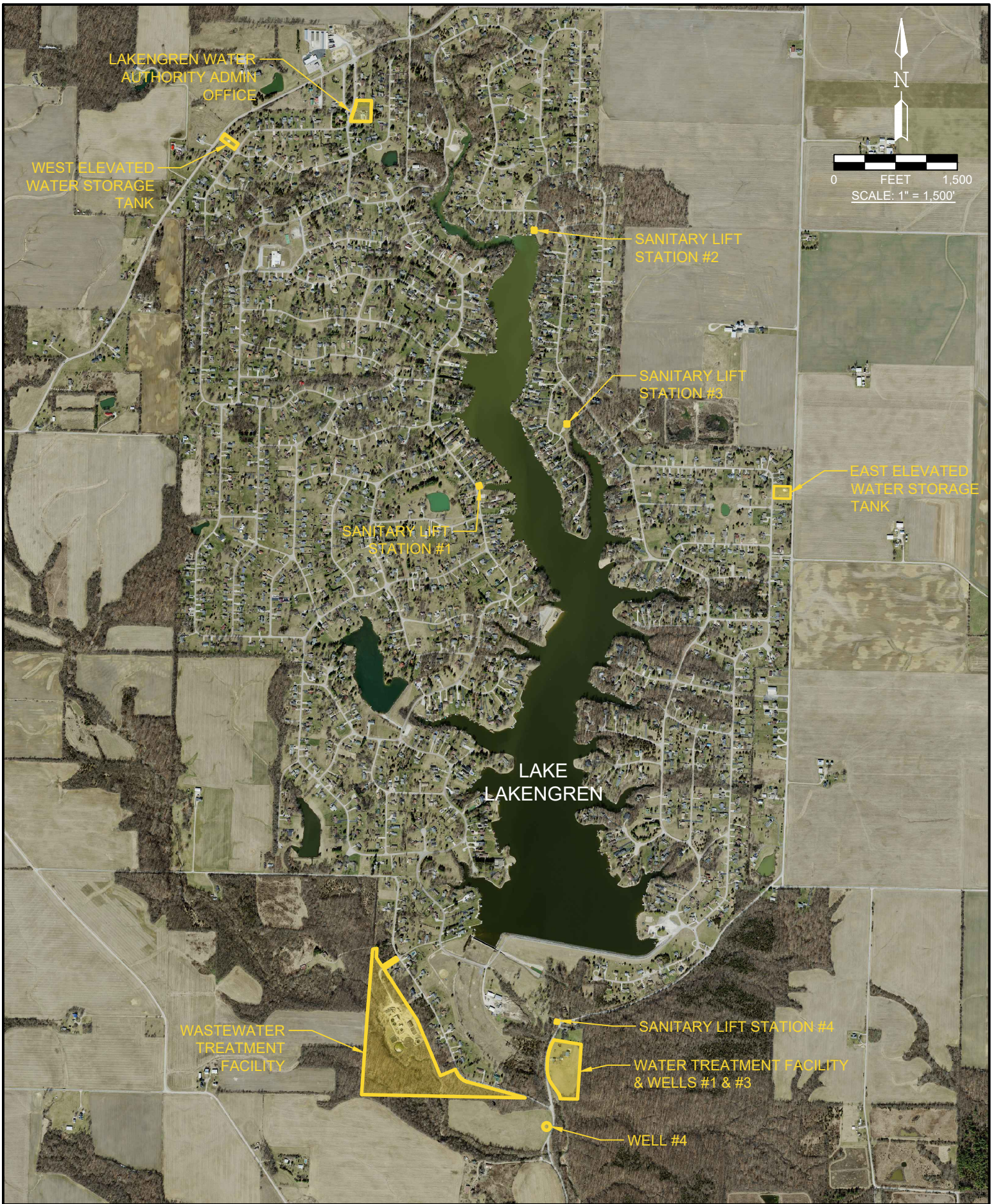
I hereby certify the estimates within this report to be realistic for the information currently available and that Prevailing Wage Rates were taken into consideration when determining the estimated costs; in evidence whereof, I have set my signature and seal on this date.

Mote & Associates:

Signature: 
Ohio's Engineer's License E-48648

Date: April 21, 2022





Facilities Appraisal

Wastewater Treatment Facility – 3800 Longman Road, Eaton, OH

The Lakengren Water Authority Wastewater Treatment Facility is currently permitted by the Ohio EPA to discharge up to 600,000 gallons of treated wastewater to Sugar Run Creek per day. The original facility was constructed in 1976, with a recent upgrade completed in 2020. The recent upgrade in 2020 modified the facility from an extended aeration process to a modern oxidation ditch. The new oxidation ditch is a biological nutrient removal (BNR) process with biological phosphorus removal. Descriptions and breakdown of the treatment facility are detailed below with the cost appraisal in Figure 1.1 below:

➤ *Influent Building & Grit Removal*

- The first step in the wastewater treatment process is to remove both large and fine particles from the waste stream. The influent building houses fine screening equipment capable of screening particles larger than ¼". Upon completion of fine screening, the waste stream enters the grit removal chamber to allow for removal of smaller particles. This chamber is constructed of cast-in-place concrete and is located adjacent to the influent building. The screening's washer and compactor, along with the grit classifier, are both located within the building and both used to dewater captured solids.
- The influent building is a two-story, 275 square foot concrete masonry unit (CMU) building with a cast-in-place concrete foundation and removable metal truss roof system.
- Appraisal cost for this component would include the building and its components, the screening and grit removal equipment, along with concrete and electrical controls.



Lakengren WWTP ~ Influent Screening/Grit Removal Building

➤ *Surface Aerator Oxidation Ditches (Evoqua)*

- The Evoqua oxidation ditches serve as the primary biological treatment for the treatment plant. This system, manufactured by Evoqua, is an activated sludge biological nutrient removal (BNR) system with biological phosphorus removal. The mechanical system is comprised of four rotating disk surface aerators, one recycle pump and one mixer. Two probes located in the waste stream provide real-time monitoring for the system, allowing the aerators to change speeds automatically based on process objectives and setpoints. Appraisal cost for this component would include associated concrete, surface aerators, electrical and associated controls and lighting.



Lakengren WWTP ~ Surface Aerator Oxidation Ditches

➤ *Secondary and Tertiary Clarifiers (4 – 40' diameter)*

- The secondary and tertiary clarifiers are designed to allow biologically created “floc” from the oxidation ditches to settle. This biomass settles to the bottom of the clarifier, where it is either pumped back to the oxidation ditches (return activated sludge, RAS) or sent to the digester (waste activated sludge, WAS). The appraisal cost for this component includes the concrete tankage, clarifier mechanisms, RAS/WAS pumps and associated electrical controls.



Lakengren WWTW ~ Secondary Clarifier #2

➤ *Sludge Press Building*

- The press building, approximately 2,900 square feet, is a wood framed structure with a cast-in-place concrete foundation and wood trusses. This building houses master electrical switchgear for the treatment plant along with the sludge press and digester blowers. The digester blowers (three in total) provide air to the fine bubble diffusion grid in the digesters. The sludge press, manufactured by BDP, is a 1.0-meter belt press capable of dewatering sludge at a rate of up to 200 gallons per minute. This sludge press dewateres waste sludge from the digesters, increasing the solids content from around 2% to near 35%, reducing the amount of sludge disposed. Appraisal cost for this component includes the building, blower and press equipment and controls along with master electrical components.



Lakengren WWTW ~ Sludge Belt Press (in Sludge Press Building)

➤ *Flocculator & Rapid Mix Chemical Addition System*

- If chemical phosphorus removal is necessary to meet permit limits, the flocculation tank allows mixing of the clarified wastewater, post chemical addition. The tank is broken down into a rapid mix tank and a slow mix tank to accumulate new “floc” for final settling in the tertiary clarifier(s). The appraisal cost of this component includes the chemical feed system, mixing equipment, concrete tankage, electrical controls, and other related appurtenances.



Lakengren WWTP ~ Flocculator & Rapid Mix Tank

➤ *Non-Potable Water System*

- Non-potable water, in this case, is simply treated effluent water before discharge into the stream. The non-potable water system provides the facility reuse water for wastewater equipment and washdown operations. Appraisal cost of this component includes the vertical turbine system distribution pump, related hydrants and pre-cast water storage wetwell.

➤ *Sludge Digester (2 - 44'x44'x12' tanks)*

- The sludge digester tanks provide storage for waste activated sludge sent from the secondary or tertiary clarifiers. These storage tanks allow for additional sludge thickening/dewatering prior to pressing. The appraisal cost of this component includes the concrete tankage, fine bubble diffusers, sludge pumps, probes, air piping, valves, electrical and controls.



Lakengren WWTP ~ Sludge Digester Tank

- *Equalization Basins & Return Controls*
 - The equalization basins provide storage for flows that exceed the plant treatment capacity. These flows typically enter the sanitary collection system during weather related precipitation events. These tanks retain the wastewater until the plant influent flows normalize and the facility can treat more wastewater. The appraisal cost of this component includes the concrete tankage, equalization pumps, electrical and controls.



Lakengren WWTP ~ Equalization Basins

➤ *Lab Building*

- The lab building is an approximately 2,500 square foot structure composed of a cast-in-place concrete foundation with a partial basement, CMU w/brick vernier walls and concrete low slope roof. This building provides a place for day-to-day quality assurance process testing. along with housing the ultraviolet disinfection system and tertiary clarifiers waste sludge pumps.



Lakengren WWTP ~ Lab Building

➤ *Maintenance Building*

- The maintenance building is an approximately 4,000 square foot pole framed structure with wood trusses and concrete floor slab. This building is used to store Lakengren Water Authority trucks and equipment.



Lakengren WWTP ~ Maintenance Building

➤ *Shop Building*

- The Shop building is an approximately 850 square foot structure which provides storage for spare wastewater parts along with RAS/WAS pump station controls. It is constructed of a cast-in-place concrete foundation and CMU brick vernier walls with a concrete low slope roof.



Lakengren WWTP ~ Shop Building

➤ *Site Utilities & Driveway*

- The wastewater treatment property is enclosed with approximately 1,650 linear feet of 6' chain-link and barbed wire security fence. An electric controlled gate is located at the end of the driveway to the facility. The site also features an asphalt drive, installed during the recent upgrade in 2020. This appraisal item would include replacement costs for these items.

➤ *Standby Generator & Automatic Transfer Switch*

- The water treatment site is equipped with a 400kW Caterpillar diesel generator and automatic transfer switch. This generator provides backup power to all components on the wastewater site.

Category	Replacement Cost
<i>Influent Building & Grit Removal</i>	<i>\$1,250,000</i>
<i>Surface Aerator Oxidation Ditches</i>	<i>\$1,650,000</i>
<i>Sludge Press Building w/Press</i>	<i>\$1,750,000</i>
<i>Secondary and Tertiary Clarifiers</i>	<i>\$1,900,000</i>
<i>Flocculator & Rapid Mix Chemical Addition System</i>	<i>\$350,000</i>
<i>Non-Potable Water System</i>	<i>\$100,000</i>
<i>Sludge Digester</i>	<i>\$1,500,000</i>
<i>Equalization Basins & Return Controls</i>	<i>\$2,400,000</i>
<i>Lab Building</i>	<i>\$950,000</i>
<i>Maintenance Building</i>	<i>\$400,000</i>
<i>Shop Building</i>	<i>\$275,000</i>
<i>Site Utilities</i>	<i>\$300,000</i>
<i>Standby Generator & ATS</i>	<i>\$200,000</i>
Total Construction Appraisal	\$13,025,000
<i>Est. Engineering/Permitting (15%)</i>	<i>\$1,953,750</i>
Total Project Appraisal	\$14,978,750

Table 1.1 – Wastewater Treatment Facility Appraisal Cost Breakdown

See appendix for site aerial location of each wastewater treatment plant component. (Site Map 1- Wastewater Treatment Facility)

See appendix for Table 1.14 – Wastewater Equipment Inventory & Replacement Cost for miscellaneous tools and equipment located at the wastewater treatment facility.

Sanitary Lift Stations

The Lakengren Water Authority owns four separate lift stations, all constructed in 1976, throughout the sanitary collection system. These four lift stations share many similarities with their construction and setup. All four sanitary lift stations include Gorman Rupp fiberglass dry wells and pre-cast concrete wetwells. The fiberglass dry well houses the pumps, piping and controls. These pumps are located at the base of the fiberglass dry well and provide a “flooded suction” condition by their suction lines penetrating the base of a separate concrete wetwell. The pumped sewage is ultimately discharged to the nearest gravity manhole within the system. A few other specifics for these lift stations are detailed below:

- *Sanitary Lift Station #1 (West) – 166 Lakengren Drive*
 - The West lift station includes (2) 5 horsepower T3 flooded suction Gorman Rupp pumps capable of pumping 180 gallons per minute at 45 feet of total dynamic head. A Generac propane fired standby generator with an automatic transfer switch provides backup power for the system. The lift station is also equipped with an autodialing SCADA/alarm system.



Sanitary Lift Station #1 –Fiberglass drywell (green, right) with generator (left) & propane tank behind

Category	Replacement Cost
<i>Pre-Cast Concrete Wetwell</i>	<i>\$75,000</i>
<i>Fiberglass Drywell with Pumps, Controls & SCADA</i>	<i>\$200,000</i>
<i>Standby Generator & Automatic Transfer Switch, 40KVA</i>	<i>\$65,000</i>
<i>Total Construction Appraisal</i>	<i>\$340,000</i>
<i>Est. Engineering/Permitting (15%)</i>	<i>\$51,000</i>
<i>Total Project Appraisal</i>	<i>\$391,000</i>

Table 1.2 – Sanitary Lift Station #1 Appraisal Cost Breakdown

- *Sanitary Lift Station #2 (North) – 645 Lakengren Drive*
 - The North lift station is equipped with (2) 3 horsepower flooded suction Gorman Rupp T3 pumps capable of pumping 80 gallons of wastewater at 44 feet of total dynamic head apiece. A 20KVA Generac propane fired standby generator and automatic transfer switch provides backup power for the pump station. An autodialing SCADA system is also included for system alarm monitoring.



Sanitary Lift Station #2 – Precast Concrete Wetwell (right), fiberglass drywell (green, left) with generator & propane tank behind

Category	Replacement Cost
<i>Pre-Cast Concrete Wetwell</i>	<i>\$75,000</i>
<i>Fiberglass Drywell with Pumps, Controls & SCADA</i>	<i>\$185,000</i>
<i>Standby Generator & Automatic Transfer Switch, 20KVA</i>	<i>\$50,000</i>
<i>Total Construction Appraisal</i>	<i>\$310,000</i>
<i>Est. Engineering/Permitting (15%)</i>	<i>\$46,500</i>
<i>Total Project Appraisal</i>	<i>\$356,500</i>

Table 1.3 – Sanitary Lift Station #2 Appraisal Cost Breakdown

- *Sanitary Lift Station #3 (East) – 722 Lakengren Cove*
 - The East lift station includes (2) 7.5 horsepower Gorman Rupp flooded suction pumps capable of pumping 180 gallons per minute at 55 feet of total dynamic head. A 40KVA Generac propane fired standby generator and automatic transfer switch provides backup power to the system. Like the previous two lift stations above, this lift station is also equipped with an autodialer.



Sanitary Lift Station #3 –Fiberglass drywell (green, right) with generator & propane on left

Category	Replacement Cost
<i>Pre-Cast Concrete Wetwell</i>	<i>\$75,000</i>
<i>Fiberglass Drywell with Pumps, Controls & SCADA</i>	<i>\$225,000</i>
<i>Standby Generator & Automatic Transfer Switch, 40KVA</i>	<i>\$65,000</i>
<i>Total Construction Appraisal</i>	<i>\$365,000</i>
<i>Est. Engineering/Permitting (15%)</i>	<i>\$54,750</i>
<i>Total Project Appraisal</i>	<i>\$419,750</i>

Table 1.4 – Sanitary Lift Station #3 Appraisal Cost Breakdown

- *Sanitary Lift Station #4 (South) – 5267 Paint Creek Road*
 - The South lift station features (2) 7.5 horsepower flooded suction Gorman Rupp T3 pumps capable of pumping 250 gallons per minute at 58 feet of total dynamic head. In 2017, a Kohler 50KVA propane fired standby generator and automatic transfer switch was installed to provide backup power. This lift station is equipped with a SCADA system; however, it is currently not functioning.



Sanitary Lift Station #4 –Fiberglass drywell (green, right) with generator & propane on left

Category	Replacement Cost
<i>Pre-Cast Concrete Wetwell</i>	<i>\$75,000</i>
<i>Fiberglass Drywell with Pumps, Controls & SCADA</i>	<i>\$225,000</i>
<i>Standby Generator & Automatic Transfer Switch, 50KVA</i>	<i>\$70,000</i>
<i>Total Construction Appraisal</i>	<i>\$370,000</i>
<i>Est. Engineering/Permitting (15%)</i>	<i>\$55,500</i>
<i>Total Project Appraisal</i>	<i>\$425,500</i>

Table 1.5 – Sanitary Lift Station #4 Appraisal Cost Breakdown

Water Treatment Facility – 5306 Paint Creek Road, Eaton, OH

The Lakengren Water Treatment Facility is capable of treating 780,000 gallons of water from their drinking water wells per day. The facility was constructed in 2006, with their prior treatment facility on the same property converted into Maintenance Shop #1. The property also includes another maintenance shop with 2 offices, which is named Maintenance Shop #2 for the sake of this report. The appraisal is broken down into the following components:

- *Water Treatment Plant Building*
 - The water treatment plant building is an approximately 2,100 square foot pre-engineered metal building with cast-in-place concrete foundation and split faced CMU wainscot façade. The water treatment building is broken into two separate appraisal items. This appraisal item includes the main building components, HVAC, plumbing and miscellaneous building items.
- *Water Treatment Equipment (located inside building)*
 - The water treatment plant consists of an aerator at the head of the plant, which oxidizes iron and other contaminants, prepping for the removal within the gravity filters. The cast-in-concrete gravity filters in this facility are 8'x8' and there are four in total. These filters are the primary removal for the water treatment system. At completion of filtration, water heads to the clearwell (not included in this item) for chlorination before being pumped into the distribution system by the high service pumps. This appraisal item includes the water treatment equipment, filter equipment and filter media, concrete tankage, high service pumps and related process piping and controls.



WTP – High Service Pumps & Piping



WTP – Cast-in-Place Concrete Gravity Iron filter

➤ *Filter Backwash Equalization Basin*

- The filter backwash equalization basin is a cast-in-place concrete tank which simply holds filter backwash water prior to pumping to the sanitary system. Since the filters backwash at a high flow rate, the tanks temporarily store backwash water so it can be pumped to the sanitary system at a much slower rate. This appraisal item includes the concrete cast-in-place tankage along with associated gates and pumping equipment.



WTP – Cast-in-Place Concrete Backwash EQ Basin

➤ *Water Treatment Plant Clearwell*

- Like described in the water treatment equipment section, the clearwell provides 30-minute chlorine contact time prior to pumping into the distribution system. This ensures that the drinking water is properly disinfected prior to reaching the customer. This item includes the concrete clearwell and associated hardware.



WTP – Post Filtration Clearwell

➤ *Maintenance Shop #1 (West)*

- Maintenance shop #1 housed water treatment equipment prior to the construction of the new water plant in 2006. This building has been repurposed as a shop for equipment. The structure, approximately 1,020 square feet, is a pre-engineered building with a cast-in-place concrete foundation. A second-floor mezzanine encompasses approximately one-third of the interior of the structure. The Kohler diesel standby generator is located next to this building; however, it is included in a separate line item below.



WTP – Maintenance Shop #2 (East)

- *Maintenance Shop #2 (East)*
 - Maintenance Shop #2 is an approximately 1,200 square foot pole framed building with a two-bay garage. The building is used mainly for storage of maintenance equipment along with providing two office spaces for facility personnel.



WTP – Maintenance Shop #1 (East)

- *Site Utilities & Driveway*
 - The entire water treatment property is enclosed with approximately 1,700 linear feet of 6' chain-link and barbed wire security fence, with the south security fence up against the well field property. The site also features an asphalt drive. This appraisal item would include replacement costs for these items.
- *Standby Generator & Automatic Transfer Switch*
 - The water treatment site is equipped with a 150kW Kohler diesel generator and automatic transfer switch. This generator provides backup power to all three buildings onsite.



WTP - Kohler 150kW Diesel Generator

Category	Replacement Cost
<i>Water Treatment Plant Building</i>	<i>\$600,000</i>
<i>Water Treatment Equipment</i>	<i>\$750,000</i>
<i>Water Treatment Clearwell</i>	<i>\$425,000</i>
<i>Filter Backwash Equalization Basin</i>	<i>\$400,000</i>
<i>Maintenance Shop #1 (West)</i>	<i>\$145,000</i>
<i>Maintenance Shop #2 (East)</i>	<i>\$170,000</i>
<i>Site Utilities & Driveway</i>	<i>\$125,000</i>
<i>Standby Generator & Auto Transfer Switch</i>	<i>\$150,000</i>
<i>Total Construction Appraisal</i>	<i>\$2,765,000</i>
<i>Est. Engineering/Permitting (15%)</i>	<i>\$414,750</i>
<i>Total Project Appraisal</i>	<i>\$3,179,750</i>

Table 1.6 – Water Treatment Plant Appraisal Cost Breakdown

See appendix for site aerial location of each water treatment plant component. (Site Map 2- Water Treatment Facility)

See appendix for Table 1.15 – Water Equipment Inventory & Replacement Cost for miscellaneous tools and equipment located at the water treatment facility.

Drinking Water Wells

Lakengren Water Authority owns three drinking water wells, located within 1,000 feet of the water treatment facility. These drinking water wells are powered and controlled from the water treatment plant building and provide 200 gallons per minute of ground water to the plant. The drinking wells are as follows:

- *Well #1*
 - This drinking water well was constructed in 1969 and is the closest well to the treatment facility (approximately 300' away). The well is approximately 35' deep and was constructed with a 12" diameter casing. Electrical pump disconnects are stationed near the casing of the pump.



Well #1 - Lakengren Water Treatment Facility

Category	Replacement Cost
<i>12" Well Casing & Drilling w/Pitless Adapter</i>	<i>\$50,000</i>
<i>Pump & Associated Electrical</i>	<i>\$18,000</i>
<i>Geological Evaluation</i>	<i>\$17,500</i>
<i>Total Construction Appraisal</i>	<i>\$85,500</i>
<i>Est. Engineering/EPA Permitting (15%)</i>	<i>\$12,825</i>
<i>Total Project Appraisal</i>	<i>\$98,325</i>

Table 1.7 - Well #1 Appraisal Cost Breakdown

- Well #2 was decommissioned after construction of well #4
- Well #3
 - This drinking water well, constructed in 2004, is located on a separate tract further south on Paint Creek Road. This well is also approximately 35 feet deep, however, was constructed with a 16" diameter casing. Electrical pump disconnects are positioned next to the casing of the pump.



Well #3 - Lakengren Water Treatment Facility (note well #2 casing was reused, thus marked #2)

Category	Replacement Cost
<i>16" Well Casing & Drilling w/Pitless Adapter</i>	<i>\$60,000</i>
<i>Pump & Associated Electrical</i>	<i>\$18,000</i>
<i>Geological Evaluation</i>	<i>\$17,500</i>
<i>Total Construction Appraisal</i>	<i>\$95,500</i>
<i>Est. Engineering/EPA Permitting (15%)</i>	<i>\$14,325</i>
<i>Total Project Appraisal</i>	<i>\$109,825</i>

Table 1.8 - Well #3 Appraisal Cost Breakdown

➤ *Well #4*

- This drinking water well is the newest water well in the well field, having been constructed in 2016. The well is located on the southwest side of the property, just south of the decommissioned well #2. The well is approximately 37' feet deep and has a 16" diameter casing. As like the other pumps in the well field, the electrical disconnects are located near the casing.



Well #4 - Lakengren Water Treatment Facility

Category	Replacement Cost
<i>16" Well Casing & Drilling w/Pitless Adapter</i>	<i>\$60,000</i>
<i>Pump & Associated Electrical</i>	<i>\$18,000</i>
<i>Geological Evaluation</i>	<i>\$17,500</i>
Total Construction Appraisal	\$95,500
<i>Est. Engineering/EPA Permitting (15%)</i>	<i>\$14,325</i>
Total Project Appraisal	\$109,825

Table 1.9 - Well #4 Appraisal Cost Breakdown

See appendix for site aerial location of wells #1 & #3, location of well #4 is shown on overall site map at the beginning of this report. (Site Map 2- Water Treatment Facility)

Elevated Water Storage Tanks

The Lakengren Water Treatment distribution system has two elevated water storage tanks, both 200,000 gallons in capacity. These towers are located on Lakengren Water Authority owned lots and have perimeter security fencing. Additional details of each water tower are detailed below:

- *East Elevated Water Storage Tank – 750 Brande Drive*
 - The East tank was constructed in 1995, and manufactured by Phoenix Fabricators and Erectors, Inc. In 2021, the tank was repainted on both the inside and outside. The East elevated water storage tank is the tallest of the two tanks, standing at 149’-6” above grade. A security fence surrounds the perimeter of the property, approximately 725’ in total length. This water tower site also includes a standby generator and switchgear for data transmission hardware that is mounted on the tower, however, this equipment is owned by the local cable utility. Replacement of cable utility owned equipment is not included in the replacement appraisal shown in the table below.



East Elevated Water Storage Tank – 200,000 gallons

Category	Replacement Cost
<i>200,000 Gallon Elevated Water Storage Tank and Related Appurtenances</i>	<i>\$1,100,000</i>
<i>Perimeter Security Fencing ~ 725 LF</i>	<i>\$72,500</i>
Total Construction Appraisal	\$1,172,500
<i>Est. Engineering/EPA Permitting (15%)</i>	<i>\$175,875</i>
Total Project Appraisal	\$1,348,375

Table 1.10 – East Elevated Water Storage Tank Appraisal

➤ *West Water Tower – 67 Viking Drive*

- The West Water tower is newer than the east tower, having been constructed in 1998. The tower was manufactured by Caldwell Tanks Inc. and stands 120 feet above grade. Like the East tower, the property includes approximately 560 feet of perimeter security fencing. The local cable utility also has a similar setup as the East tower, with hardware mounted to the tower along with a standby generator and switchgear on the surface (not included in this appraisal).



West Water Tower – 200,000 gallons

Category	Replacement Cost
<i>200,000 Gallon Elevated Water Storage Tank and Related Appurtenances</i>	<i>\$1,050,000</i>
<i>Perimeter Security Fencing ~ 560 LF</i>	<i>\$56,000</i>
<i>Total Construction Appraisal</i>	<i>\$1,106,000</i>
<i>Est. Engineering/EPA Permitting (15%)</i>	<i>\$165,900</i>
<i>Total Project Appraisal</i>	<i>\$1,271,900</i>

Table 1.11 – West Elevated Water Storage Tank Appraisal

See appendix for site aerial location both elevated water storage tanks.
 (Site Map 5- East Elevated Water Storage Tank, Site Map 4 -West Elevated Water Storage Tank)

LWA Administrative Offices – 24 Lakengren Drive, Eaton, Ohio

The Lakengren Water Authority’s administrative offices is a 3,800 square foot complex, constructed in 2008, located near the main entrance to the Lakengren community. The building is composed of a CMU foundation, wood frame walls, pre-engineered wood truss system, stone veneer and engineered wood siding with a standing seam metal roof. This building provides offices for administrative staff, financial office workers and meeting areas for board meetings. The site includes an asphalt driveway and parking for visitors and personnel.



LWA – Administrative Offices

Category	Replacement Cost
<i>3,800 Square Foot Office Building</i>	<i>\$850,000</i>
<i>Site Driveway, Parking, & Landscaping</i>	<i>\$75,000</i>
<i>Total Construction Appraisal</i>	<i>\$925,000</i>
<i>Est. Engineering/EPA Permitting (15%)</i>	<i>\$138,750</i>
<i>Total Project Appraisal</i>	<i>\$1,063,750</i>

Table 1.12 – LWA Administrative Offices Appraisal

See appendix for site aerial location of LWA administrative offices.
(Site Map 3 – LWA Administrative Offices)

See appendix for Table 1.16 – LWA Administrative Office Equipment Inventory & Replacement Costs for equipment located within the building.

Compilation of Infrastructure Replacement Costs

Table 1.13 combines all the Lakengren Water Authority infrastructure detailed within this report. Also included within this table is the miscellaneous equipment located at the wastewater treatment facility, water treatment facility and administrative offices building. The itemized breakdown of the miscellaneous equipment for each facility is located within the appendix of this report.

Category	Replacement Cost
<u>Sanitary Treatment Infrastructure (inc. eng. & permitting)</u>	
<i>Wastewater Treatment Facility</i>	\$14,978,750
<i>Wastewater Facility Miscellaneous Equipment</i>	\$696,445
<i>Sanitary Lift Station #1 (166 Lakengren Dr)</i>	\$391,000
<i>Sanitary Lift Station #2 (645 Lakengren Dr)</i>	\$356,500
<i>Sanitary Lift Station #3 (722 Lakengren Cove)</i>	\$419,750
<i>Sanitary Lift Station #4 (5267 Paint Creek Rd)</i>	\$425,500
<i>Total Sanitary Treatment Infrastructure</i>	\$17,267,445
<u>Water Treatment Infrastructure (inc. eng. & permitting)</u>	
<i>Water Treatment Facility</i>	\$3,179,750
<i>Water Treatment Facility Miscellaneous Equipment</i>	\$222,140
<i>Drinking Water Well #1</i>	\$98,325
<i>Drinking Water Well #3</i>	\$109,825
<i>Drinking Water Well #4</i>	\$109,825
<i>East Elevated Water Storage Tank (750 Brande Dr)</i>	\$1,348,375
<i>West Elevated Water Storage Tank (67 Viking Dr)</i>	\$1,271,900
<i>Total Water Treatment Infrastructure</i>	\$6,340,140
<u>LWA Administrative Offices (inc. engineering & permitting)</u>	
<i>LWA Administrative Offices Building</i>	\$1,063,750
<i>LWA Administrative Offices Building Equipment</i>	\$116,375
<i>LWA Administrative Offices Infrastructure</i>	\$1,180,125
<u>Combined LWA Infrastructure (inc. engineering & permitting)</u>	
<i>Sanitary Treatment Infrastructure</i>	\$17,267,445
<i>Water Treatment Infrastructure</i>	\$6,340,140
<i>LWA Administrative Offices</i>	\$1,180,125
<i>Total Combined LWA Infrastructure</i>	\$24,787,710

Table 1.13 – LWA Combined Infrastructure Replacement

Appendix

Table 1.14 - LWA Wastewater Equipment Inventory & Replacement Cost

Item Type	Room/Area	Item Description	Quantity	Total Estimated Replacement Cost	Notes
Computer	Lab	Dell OptiPlex 350	1	\$1,200	
Printer	Lab	Brother Mfc - L2740dw	1	\$250	
Furniture	Lab	Desk	3	\$6,000	
Montor	Lab	Dell Monitors 20"	1	\$150	
Furniture	Office/Plant	Chairs	12	\$1,600	Office Max
Furniture	Office/Plant	Big And Tall Leather Desk Chairs	3	\$1,350	Office Max
Furniture	Lab	2 Drawer File Cabinet	2	\$500	Office Max
Furniture	Office	5 Drawer File Cabinet	3	\$870	Office Max
Lab Equipment	Lab	Analytical Balance	1	\$2,000	Bluebook
Lab Equipment	Lab	Vacuum Pump	1	\$1,800	Bluebook
Lab Equipment	Lab	Convection Oven 2.3 Cu Ft	1	\$2,700	Bluebook
Lab Equipment	Lab	Benchtop Muffle Furnace	1	\$3,600	Bluebook
Lab Equipment	Lab	Shel Lab 62 Bottle BOD Incubator	1	\$3,400	Bluebook
Lab Equipment	Lab	Heratherm Compact Incubator	1	\$800	Bluebook
Lab Equipment	Lab	Thermo Sci. Dual Star Ph/ Ise	1	\$2,800	Bluebook
Lab Equipment	Lab	Stirrer	1	\$600	Bluebook
Lab Equipment	Lab	YSI Pro 20 DO Meter	1	\$950	Bluebook
Lab Equipment	Lab	YSI Multi-lab Multiparameter DO Meter	1	\$1,600	Bluebook
Lab Equipment	Lab	Desiccator	1	\$980	Bluebook
Lab Equipment	Lab	Miscellaneous Lab		\$15,000	Miscellaneous
Lab Equipment	Lab	Marble Balance Table	1	\$2,500	One Pointe Solutions
Lab Equipment	Lab	Portable Autoclave	1	\$1,200	Bluebook
Lab Equipment	Office	Hach Sampler	1	\$10,000	Bluebook
Safety Equipment	Restroom	Safety Harness And Lanyard	3	\$400	Bluebook
Appliance	Lab	50 Inch Tv	1	\$500	Online
Appliance	Restroom	Washer And Dryer	1	\$1,400	Online
Safety Equipment	Lab	Gas Detector	1	\$1,500	Bluebook
Safety Equipment	Barn	Ventilation Blower	1	\$800	Bluebook

LAKENGREN WATER AUTHORITY FACILITIES APPRAISAL

Safety Equipment	Barn	Sala lift Tripod System	2	\$8,000	Bluebook
Safety Equipment	Restroom	Safety Harness and Lanyard	3	\$400	Bluebook
Equipment	Barn	2" Gas Powered Pump	1	\$800	Northern Tool
Equipment	Barn	2" Hose 50 Feet	6	\$700	Northern Tool
Equipment	Barn	3500-Watt Honda Generator	1	\$1,600	Northern Tool
Equipment	Barn	Traffic Cones	10	\$160	Online
Equipment	Shop	Tool Chest And Hand Tools	1	\$5,000	Harbor Fright
Equipment	Barn	Misc. Shovels, Rakes, Hand Tools		\$1,200	Miscellaneous
Equipment	Shop	20 Shop Press	1	\$700	Northern Tool
Appliance	Shop	Refrigerator	1	\$700	Lowes
Equipment	Shop	760 Skat Blast Sand Blasting Cabinet	1	\$2,300	TP Tools
Equipment	Shop	Mi-T-M 3500 Psi Hot Water Pressure Washer	1	\$5,000	Grainger
Equipment	Shop	Bosch Core Drill	1	\$3,500	Grainger
Equipment	Shop	Core Drill	1	\$2,800	Grainger
Equipment	Shop	Work Bench	2	\$1,400	Uline
Tool	Shop	Bench Vise	1	\$350	Northern Tool
Tool	Shop	Bench Grinder	1	\$200	Northern Tool
Furniture	Shop	Metal Shelves	6	\$4,500	Uline
Furniture	Shop	Bolt Bens	3	\$1,500	Uline
Equipment	Shop	Hammer Drill	1	\$400	Northern Tool
Equipment	Shop	Short Jack Stands	2	\$100	Northern Tool
Equipment	Shop	DeWalt Chop Saw	1	\$240	Northern Tool
Equipment	Shop	3/4 Drive Socket Set	1	\$200	Northern Tool
Equipment	Shop	Tap And Die Set	1	\$250	Northern Tool
Equipment	Shop	Lincoln 216 Wire Welder	1	\$4,500	Northern Tool
Equipment	Barn	Miller Gas Powered Welder/ Generator	1	\$8,000	Grainger
Equipment	Shop	Drain Cleaner	1	\$400	Northern Tool
Equipment	Shop	18 Gallon Shop Vac	1	\$150	Northern Tool
Equipment	Shop	Set Of Torches	1	\$600	Northern Tool
Equipment	Shop	Horizontal Rotary Laser	1	\$1,200	Grainger
Equipment	Shop	Saw Horses	2	\$150	Northern Tool
Equipment	Shop	Miller Plasma Cutter	1	\$3,200	Grainger
Equipment	Shop	20' Ladder	1	\$300	Lowes
Equipment	Shop	Weed Sprayer 12 Volt	1	\$150	Northern Tool
Equipment	Shop	4 Inch Grinder	1	\$150	Northern Tool
Furniture	Shop	Cordless Sawzall DeWalt	1	\$200	Northern Tool
Equipment	Shop	Sawzall	1	\$150	Northern Tool

LAKENGREN WATER AUTHORITY FACILITIES APPRAISAL

Equipment	Shop	Cordless Drill And Driver	1	\$250	Northern Tool
Equipment	Shop	6 Ft Step Ladder	1	\$125	Lowes
Equipment	Shop	Air Hose 50 Ft	2	\$300	Northern Tool
Equipment	Shop	Stihl Km 91 Combo Weed Eater And Pole Saw	1	\$700	Stihl
Equipment	Shop	5 Hp Air Compressor	1	\$2,000	Northern Tool
Equipment	Barn	3 Hp Air Compressor	1	\$800	Northern Tool
Equipment	Barn	Ingersoll-Rand 125 Towable Air Compressor	1	\$25,000	Online
Equipment	Shop	Misc. Chains		\$800	Miscellaneous
Equipment	Shop	3 Ton Floor Jack	1	\$400	Northern Tool
Equipment	Shop	5 Gallon Air Tank	1	\$100	Northern Tool
Equipment	Shop	Creeper	1	\$150	Northern Tool
Equipment	Shop	Battery Charger	1	\$400	Northern Tool
Equipment	Shop	Camera And Locater Kit For Sewer Lines	1	\$8,000	Grainger
Appliance	Shop	Microwave	1	\$150	Lowes
Equipment	Shop	Parts Washer Tank	1	\$300	Northern Tool
Equipment	Shop	Chain Saw	1	\$450	Northern Tool
Equipment	Barn	100,000 BTU Heater	1	\$400	Northern Tool
Equipment	Barn	Cement Mixer	1	\$500	Northern Tool
Equipment	Barn	Gas Powered Walk Behind Concrete Mixer	1	\$3,500	Northern Tool
Equipment	Barn	61" Simplicity Zero Turn Mower Citation	1	\$8,000	Quaker Trace
Equipment	Barn	Hand Truck	1	\$120	Lowes
Equipment	Barn	Large Spill Kit	1	\$900	Newpig
Equipment	Outside	500 Gallon Fuel Tank With Pump	2	\$12,000	Beoddy Oil
Equipment	Barn	100 KW Stateline Towable Generator	1	\$45,000	Online
Equipment	Barn	John Deere 755 Tractor/Loader And Attachments	1	\$28,000	John Deere
Equipment	Barn	New Holland C227 Skid Steer And Attachments	1	\$60,000	New Holland
Equipment	Barn	Case 580L Backhoe And Attachments	1	\$110,000	Case
Equipment	Press Building	2006 Chevy 7500 Dump Truck	1	\$100,000	Chevy
Equipment	Outside	2004 Chevy 1500 4x4 Pickup	1	\$42,000	Chevy
Equipment	Outside	2013 Chevy 2500 4x4 Pickup	1	\$46,000	Chevy

LAKENGREN WATER AUTHORITY FACILITIES APPRAISAL

Equipment	Barn	5x10 Trailer	1	\$2,500	Online
Equipment	All Areas	Miscellaneous	1	\$15,000	Miscellaneous
Parts	All Areas	Service Parts For All Field Equipment	1	\$55,000	
Total Equipment Appraisal				\$696,445	

Table 1.15 - LWA Water Equipment Inventory & Replacement Cost

Item Type	Room/Area	Item Description	Quantity	Total Estimated Replacement Cost	Notes
Computer	Office	Dell OptiPlex 350	2	\$2,400	
Printer	Office	Hp Office Jet Pro 8025	1	\$250	
Computer	Water Plant	Acer Spin 3 Laptop 15"	1	\$800	
Montor	Office	Dell Monitors 20"	2	\$300	
Furniture	Office/Plant	Single Wood Desk	3	\$6,000	Office Max
Furniture	Office/Plant	Big And Tall Leather Desk Chairs	3	\$1,350	Office Max
Appliance	Office/Plant	Dehumidifiers	3	\$900	Lowes
Furniture	Office/ Shop	5 Drawer File Cabinet	3	\$870	Office Max
Furniture	Office	Printer Stands	2	\$280	Office Max
Tablet	Office	Samsung 10" Tablet	1	\$800	Verizon
Tablet	Office	Panasonic Tough Tablet	1	\$2,200	Online
Appliance	Office	5000 Btu A/C Unit	1	\$180	Lowes
Furniture	Office	Dry Erase Board	1	\$100	Office Max
GIS	Office	Complete GIS System with R1 And R2	1	\$8,000	
Tool	Office	Sweeper	1	\$150	Lowes
Tool	Plant	8' Step Ladder	1	\$150	Lowes
Tool	Plant	6 Drawer Toolbox with Hand Tools	1	\$2,500	Harbor Freight
Equipment	Garage	61" Simplicity Zero Turn Mower Citation	1	\$8,000	Quaker Trace
Equipment	Garage	Hand Truck	1	\$120	Lowes
Equipment	Garage	Western 8.5' V Plow	1	\$8,000	Online
Equipment	Garage	Buyers Salt Spreader	1	\$1,040	Northern Tool
Equipment	Garage	Walk Behind Salt Spreader	1	\$250	Northern Tool
Equipment	Garage	19" Walk Behind Snapper Snow Blower	1	\$800	Northern Tool
Equipment	Garage	5.5 HP Snapper Tiller	1	\$1,000	Northern Tool
Equipment	Garage	Kawasaki Weed Eater	1	\$300	Northern Tool

LAKENGREN WATER AUTHORITY FACILITIES APPRAISAL

Equipment	Garage	Road Closed Signs	6	\$900	Online
Equipment	Garage	2" Electric Pumps	2	\$600	Northern Tool
Equipment	Garage	2" Gas Powered Pump	1	\$800	Northern Tool
Equipment	Garage	2" Hose 50 Feet	3	\$350	Northern Tool
Equipment	Garage	Kawasaki Leaf Blower	1	\$250	Northern Tool
Equipment	Garage	Stihl Cut Off Saw	1	\$1,200	Stihl
Equipment	Garage	Misc. Shovels, Rakes, Hand Tools		\$1,200	
Equipment	Garage	Snapper Hedge Trimmers Gas	1	\$300	Northern Tool
Refrigerator	Main Office	Frigidaire Ffps45l3qm	1	\$250	Lowes
Supplies	Garage	Bags Of Salt	60	\$420	TSC
Supplies	Garage	Bags Of Blasting Sand	10	\$120	TSC
Equipment	Garage	Traffic Cones	10	\$160	Online
Equipment	Shop	Tool Chest And Hand Tools	1	\$5,000	Harbor Freight
Equipment	Shop	Work Bench	2	\$1,400	Uline
Tool	Shop	Bench Vise	1	\$350	Northern Tool
Tool	Shop	Bench Grinder	1	\$200	Northern Tool
Furniture	Shop	Metal Shelves	2	\$1,000	Uline
Furniture	Shop	Parts Bins 40 Compartment	2	\$400	Uline
Tool	Shop	Tall Jack Stands	2	\$300	Northern Tool
Tool	Shop	Short Jack Stands	2	\$100	Northern Tool
Tool	Shop	8" Drill Press	1	\$400	Northern Tool
Appliance	Shop	24000 A/C Unit	1	\$850	Lowes
Equipment	Shop	Miller Wire Welder	1	\$1,500	Northern Tool
Equipment	Shop	Wire Welder	1	\$800	Northern Tool
Equipment	Shop	Delta Table Saw 10"	1	\$500	Northern Tool
Equipment	Shop	Arc Welder	1	\$800	Northern Tool
Tool	Shop	18 Gallon Shop Vac	1	\$150	Northern Tool
Equipment	Shop	Set Of Torches	1	\$600	Northern Tool
Equipment	Shop	3500-Watt Inverter Generator	1	\$900	Harbor Freight
Tool	Shop	Saw Horses	2	\$150	Northern Tool
Equipment	Shop	Sandblasting Pot	1	\$4,000	
Tool	Shop	20' Ladder	1	\$300	Lowes
Tool	Shop	Weed Sprayer	2	\$100	Northern Tool
Equipment	Shop	3100 Psi Pressure Washer	1	\$1,000	Northern Tool
Furniture	Shop	Table And 4 Chairs	1	\$800	Online
Equipment	Shop	7 Hp Air Compressor	1	\$2,500	Northern Tool
Equipment	Shop	5 Gallon Oil Drain Tanks	2	\$300	Northern Tool
Equipment	Shop	2 Post 9000lb Vehicle Lift	1	\$4,000	Northern Tool
Tool	Shop	Air Hose 50 Ft	2	\$300	Northern Tool

LAKENGREN WATER AUTHORITY FACILITIES APPRAISAL

Tool	Shop	4 Foot Chain Tugs	2	\$1,000	Online
Tool	Shop	Wagner Paint Sprayer	1	\$150	Northern Tool
Tool	Shop	Cordless Sawzall DeWalt	1	\$200	Northern Tool
Tool	Shop	20 Volt Cordless Drill DeWalt	1	\$300	Northern Tool
Tool	Shop	12 Volt Cordless Drill DeWalt	1	\$200	Northern Tool
Tool	Shop	3 Ton Floor Jack	1	\$400	Northern Tool
Tool	Shop	5 Gallon Air Tank	1	\$100	Northern Tool
Equipment	Shop	Set Of Water Tower Climbing Equipment	1	\$1,500	Online
Equipment	Outside	12 Ft 12000 Lb Dump Trailer	1	\$12,000	Online
Equipment	Outside	10x7 Utility Trailer	1	\$2,500	Online
Equipment	Outside	9x5 Utility Trailer	1	\$1,800	Online
Equipment	Outside	2006 GMC 3/4 Ton	1	\$46,000	GMC
Equipment	Outside	2019 Dodge Ram 1500	1	\$42,000	Dodge
Miscellaneous	All Areas		1	\$10,000	
Parts	All Areas	Service Parts For Field Equipment	1	\$22,000	
Total Equipment Appraisal				\$222,140	

Table 1.16 - LWA Administrative Office Equipment Inventory & Replacement Cost

Item Type	Room/Area	Item Description	Quantity	Total Estimated Replacement Cost	Notes
Computer	Main Office	Dell OptiPlex 350	1	\$1,200	Megan's
Computer	Main Office	Hp Elite Desk 805 G6 Small	1	\$900	Kellie's
Computer	Justin's Office	Dell Precision 582	1	\$4,400	
Computer	Server Room	Dell Power Edge T640	1	\$11,000	Server
Computer	Server Room	Dell Power Edge T420	1	\$11,000	Backup Server
Computer?	Server Room	Amcrest Security Camera Viewer (With Dell Monitor)	1	\$8,500	Per E. Comp
Computer	Justin's Office	Acer Spin 3 Laptop 15"	1	\$800	
Printer	Main Office	Hp Color Laser Jet Pro Mfp M477fnw	1	\$700	Megan's
Printer	Main Office	Epson Receipt Printer	1	\$350	Megan's
Printer	Main Office	Hp LaserJet Pro Mfp M428fdw	1	\$600	Kellie's
Printer	Main Office	Hp Office Jet Pro 8025	1	\$250	Kellie's

LAKENGREN WATER AUTHORITY FACILITIES APPRAISAL

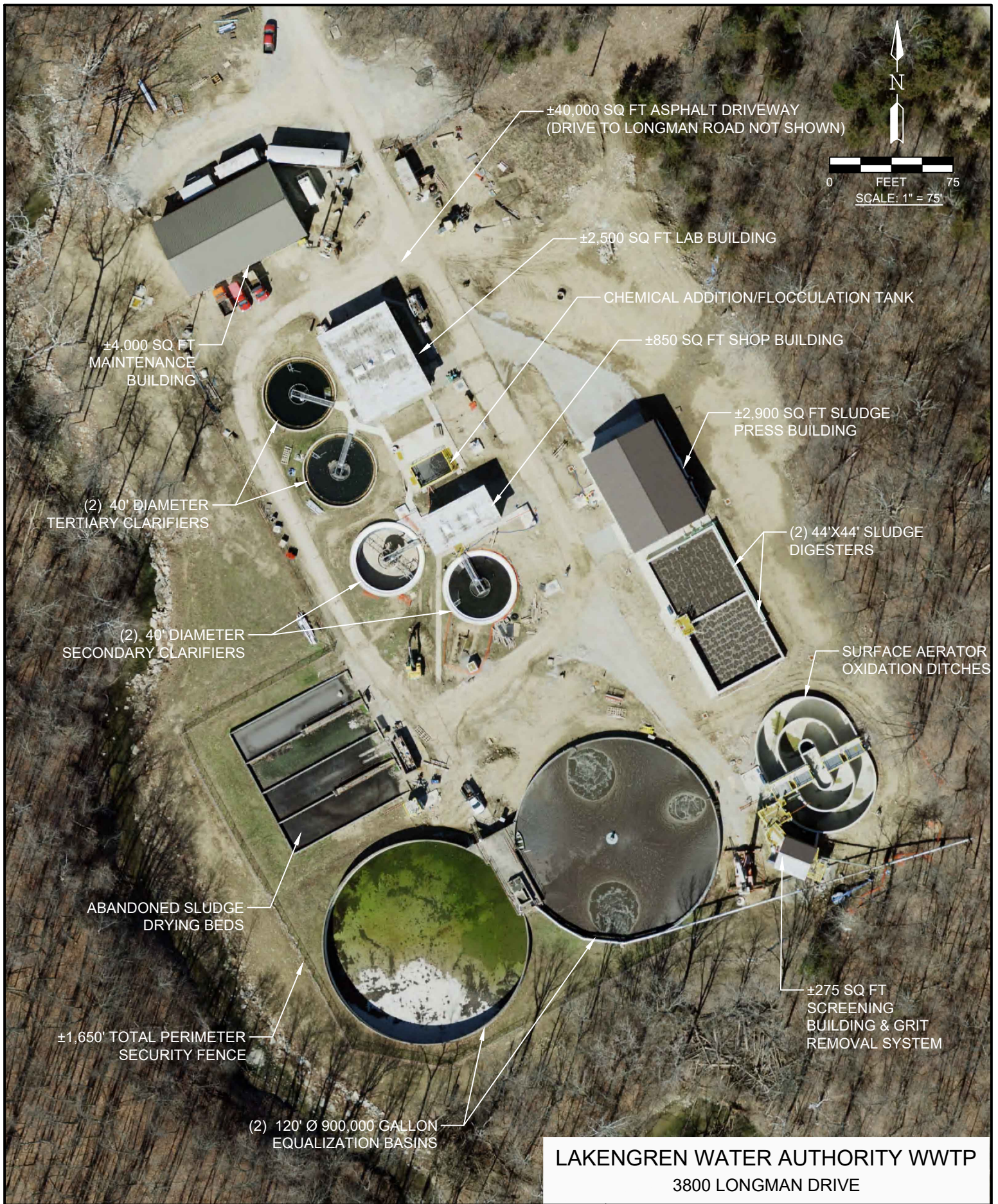
Printer	Justin's Office	Brother Mfc - L2740dw	1	\$250	
Monitor	Main Office	Dell Monitors 20"	2	\$300	Megan's
Monitor	Main Office	Dell Monitor 22"	1	\$175	Kellie's
Monitor	Main Office	Hp Monitor 23"	1	\$250	Kellie's
Monitor	Justin's Office	Dell Monitor 24"	2	\$400	
Copier	Main Office	Sharp Mx-M365	1	\$10,000	
Furniture	Main Office/ Justin's	Large Wood Desks With Cabinets	4	\$16,000	
Furniture	Sheriff's Office /Main	Single Wood Desk	3	\$6,000	
Furniture	Main Office/ Justin's	Big And Tall Leather Desk Chairs	2	\$900	Kellie And Justin's
Furniture	Main Office	Ergonomic Chair	1	\$400	Megan's
Furniture	Main Office	Cloth Desk Chairs	3	\$900	
Furniture	Justin's/ Sheriff's/ Supply Room	Metal Bookcases, 35" X 72"	3	\$500	2 Justin's, 1 Sheriff's
Furniture	Justin's Office	Metal Flat Filing Cabinet, 47" X 16"	2	\$1,350	With 1 Base
Furniture	Justin's/ Sheriff's/ Supply Room	Metal 2 Door Cabinet, 36" X 66"	3	\$2,400	1 Each Room
Furniture	Sheriff's Office	Metal 2 Door Cabinet, 36" X 72"	1	\$850	
Furniture	Sheriff's/ Main /Supply	4 Drawer Lateral Metal Filing Cabinet, 36" X 54"	7	\$5,200	1 Sheriff's, 4 Main, 2 Supply
Furniture	Sheriff's Office	Metal Mobile Filing Cabinet, 36" X 36.75"	1	\$600	
Furniture	Sheriff's Office	Metal Vertical Filing Cabinet 2 Drawer, 15" X 29"	1	\$250	
Furniture	Sheriff's/ Supply Room	Metal Vertical Filing Cabinet 4 Drawer, 15" X 52"	5	\$1,450	1 Sheriff's, 4 Supply
Furniture	Supply	Metal Shelving With Wood Shelves, 36" X 72"	3	\$600	
Furniture	Supply	Fireproof Vertical Filing Cabinet 4 Drawer, 18" X 53"	4	\$5,600	
Furniture	Board Room	Rectangular Conference Tables, 72" X 30"	4	\$4,700	
Furniture	Board Room	1/2 Circle Meeting Tables	2	\$1,200	
Furniture	Kitchen	Round Lunch Room Table	1	\$550	
Furniture	Kitchen	Plastic Stacking Chairs with Metal Base	5	\$350	

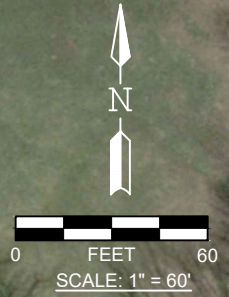
LAKENGREN WATER AUTHORITY FACILITIES APPRAISAL

<i>Furniture</i>	<i>Entire Building</i>	<i>Cloth Stacking Chairs</i>	<i>52</i>	<i>\$3,000</i>	<i>5 With Arm Rests</i>
<i>Television</i>	<i>Board Room</i>	<i>Lg 65"</i>	<i>1</i>	<i>\$2,500</i>	
<i>Refrigerator</i>	<i>Main Office</i>	<i>Frigidaire Ffps45l3qm</i>	<i>1</i>	<i>\$250</i>	
<i>Phone System</i>	<i>Entire Building</i>	<i>Vertical Edge 700</i>	<i>10</i>	<i>\$4,500</i>	
<i>Fire Extinguisher</i>	<i>Entire Building</i>		<i>2</i>	<i>\$250</i>	
<i>Misc</i>	<i>Entire Building</i>	<i>Office Supplies and Smaller Office Equipment</i>		<i>\$5,000</i>	
Total Equipment Appraisal				\$116,375.00	

Table 1.17 – Water & Wastewater Distribution & Collection Infrastructure Pipelines

Category	Replacement Cost
<i>Water Main Distribution – 4" (avg 5' depth)</i>	<i>\$9,500 per 100'</i>
<i>Water Main Distribution – 6" (avg 5' depth)</i>	<i>\$10,500 per 100'</i>
<i>Water Main Distribution – 8" (avg 5' depth)</i>	<i>\$11,500 per 100'</i>
<i>Sanitary Collection – 8" (avg 8' depth)</i>	<i>\$12,000 per 100'</i>
<i>Sanitary Collection – 10" (avg 8' depth)</i>	<i>\$13,500 per 100'</i>
<i>Sanitary Collection – 12" (avg 8' depth)</i>	<i>\$15,000 per 100'</i>





WTP PERIMETER FENCE, ±1,075 LF

FILTER
BACKWASH
EQUALIZATION
BASIN

WATER
TREATMENT
PLANT
CLEARWELL

PAINT CREEK ROAD

ASPHALT DRIVE
& PARKING,
±6,500 SQ FEET

±2,100 SQ FT
WATER
TREATMENT
BUILDING

±1,200 SQ FT
MAINTENANCE SHOP #1
(EAST)

±1,020 SQ FT
MAINTENANCE
SHOP #1 (WEST)

WTP PERIMETER FENCE

DRINKING WATER
WELL #1

DRINKING WATER
WELL #3

LAKENGREN WATER AUTHORITY WTP
5306 PAINT CREEK ROAD

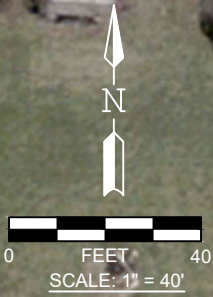
PROJ. NO: PC10011622		DWG. NO: 1A251	
DRAWN: CMB	CHECKED: JLM	DATE: 3/2022	
SCALE: 1" = 60'		SHEET NO: 1 OF 1	



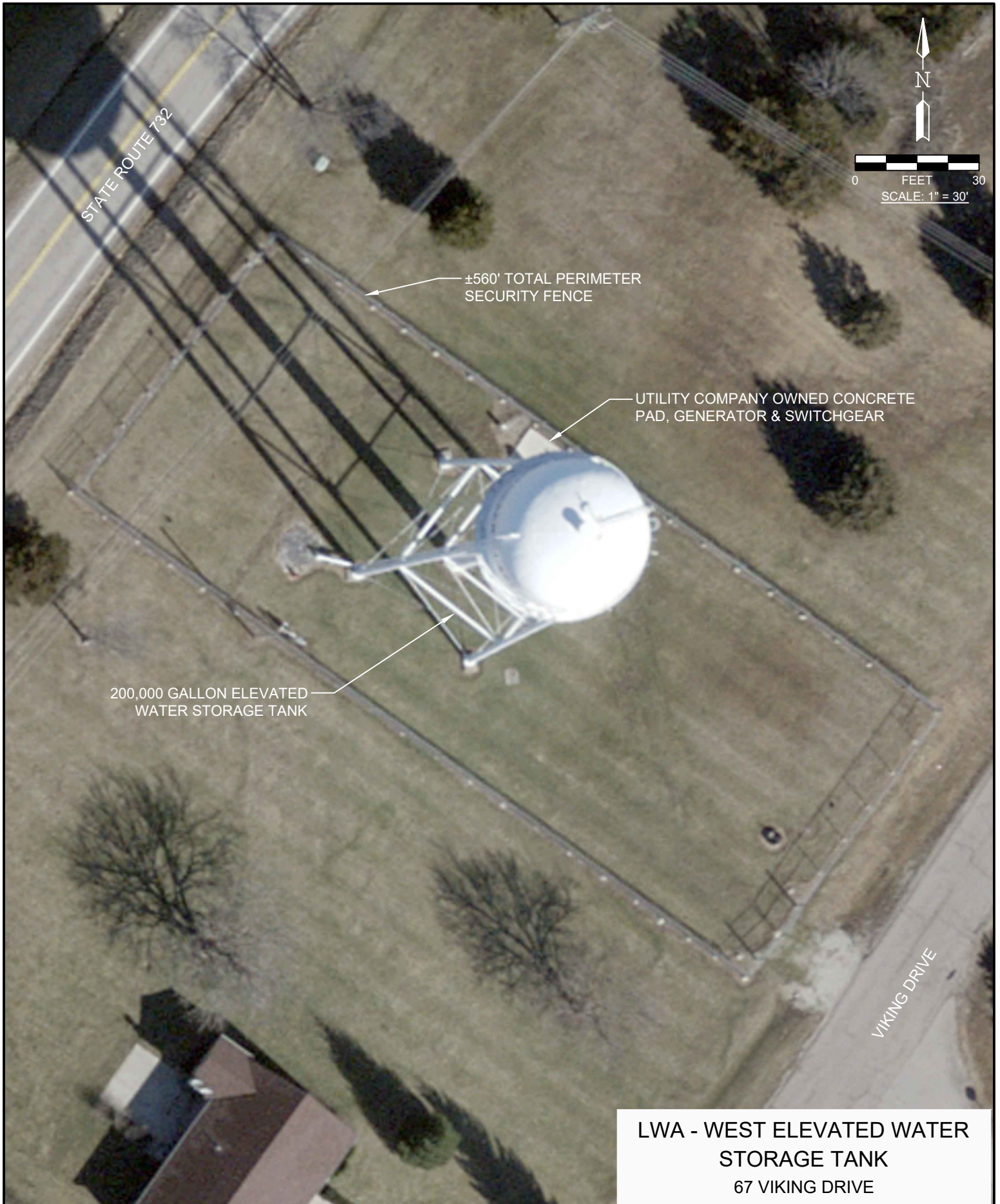
LAKENGREN DRIVE

ASPHALT DRIVE & PARKING LOT, ±20,000 SQ FEET

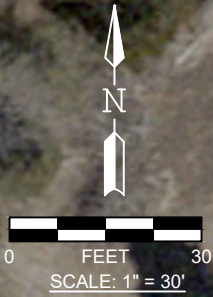
±3,800 SQ FT LAKENGREN WATER AUTHORITY ADMINISTRATIVE OFFICES BUILDING



LAKENGREN WATER AUTHORITY
 ADMINISTRATIVE OFFICES
 24 LAKENGREN DRIVE



STATE ROUTE 732



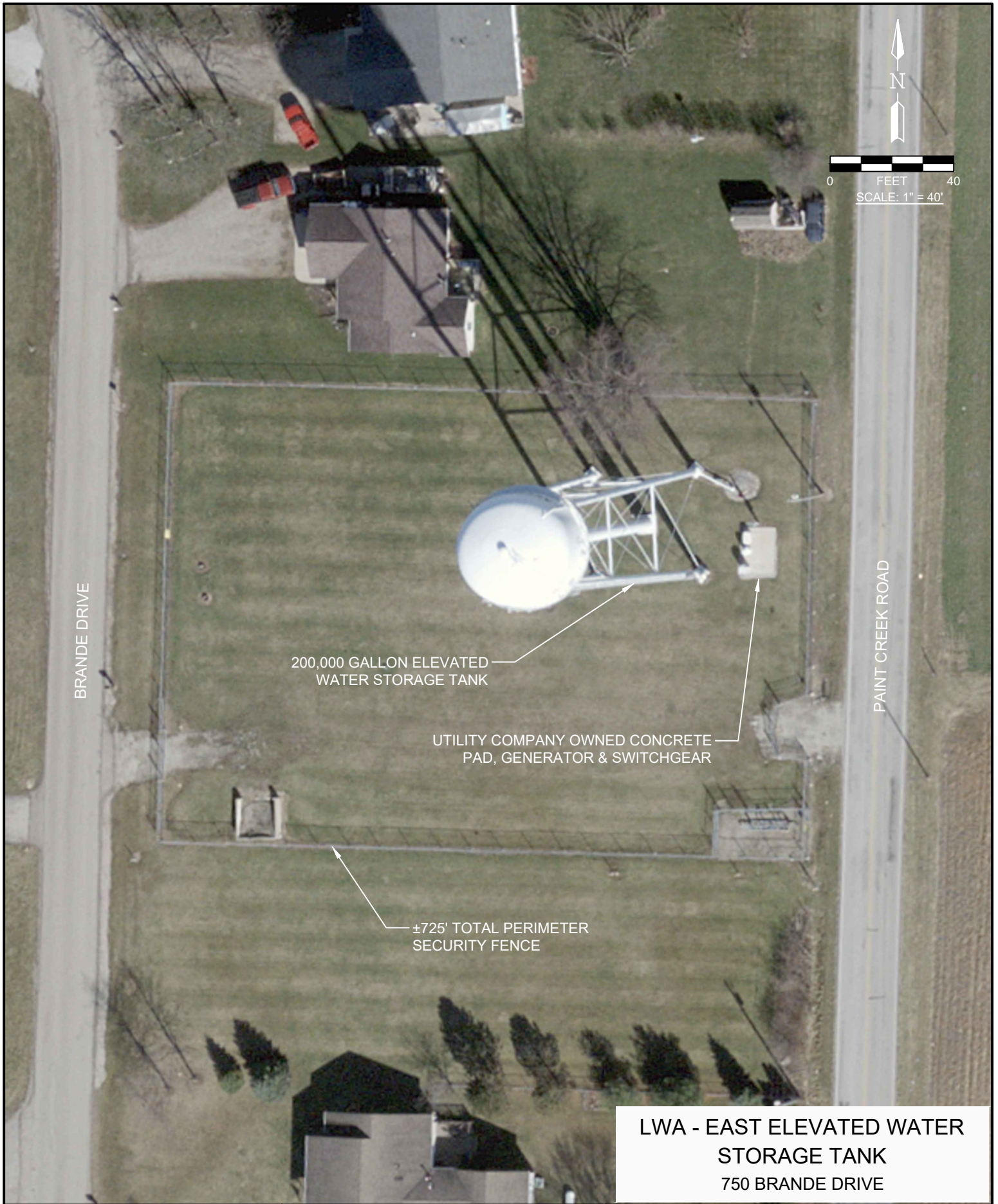
±560' TOTAL PERIMETER SECURITY FENCE

UTILITY COMPANY OWNED CONCRETE PAD, GENERATOR & SWITCHGEAR

200,000 GALLON ELEVATED WATER STORAGE TANK

VIKING DRIVE

LWA - WEST ELEVATED WATER STORAGE TANK
67 VIKING DRIVE



BRANDE DRIVE

PAINT CREEK ROAD

200,000 GALLON ELEVATED
WATER STORAGE TANK

UTILITY COMPANY OWNED CONCRETE
PAD, GENERATOR & SWITCHGEAR

±725' TOTAL PERIMETER
SECURITY FENCE

**LWA - EAST ELEVATED WATER
STORAGE TANK**
750 BRANDE DRIVE