



# Utility Engineering Consultants, *LLC*

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130 Southcrest Drive, Suite 100  
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P.O. Box 19218  
Birmingham, Alabama 35219

July 8, 2024

Childersburg Water Works, Sewer and Gas Board  
117 6<sup>th</sup> Avenue Southwest  
Childersburg, Alabama 35044

**RE:   ADDENDUM NO. 2  
      CHILDERSBURG WATER WORKS, SEWER AND GAS BOARD  
      WASTEWATER LAGOON UPGRADES  
      CWSRF PROJECT NO. CS010832-04 CONTRACT NO. CH23 074**

All Contractors shall acknowledge receipt of Addendum No.1 for above referenced job by signing and returning this statement by email: [ktwymon@uecllc.com](mailto:ktwymon@uecllc.com) or fax to (205) 951-3839.

Contractor: \_\_\_\_\_

Received by: \_\_\_\_\_

Date: \_\_\_\_\_



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The changes, modifications and/or additions covered by the set forth in this Addendum No. 1 shall become part of and be incorporated in the Specifications, Contract Documents and Bid Documents for the above referenced Project.

## **SPECIFICATIONS DOCUMENTS AND ELECTRICAL DRAWINGS**

- **INDEX TO SPECIFICATIONS**
- **SECTION 11600 LAGOON WASTEWATER TREATMENT EQUIPMENT SYSTEM**
- **ELECTRONIC DRAWINGS**

This Addendum No. 2 should be added to the Contract and Specifications Documents. Acknowledgment of receipt of Addendum No. 2 shall be noted in the Bid for Unit Price Contracts Section of this contract.

UTILITY ENGINEERING CONSULTANTS, LLC

Dave Bechtel

DB/kt

## **ATTACHMENTS:**

INDEX TO SPECIFICATIONS  
SECTION 11600 - LAGOON WASTEWATER TREATMENT EQUIPMENT SYSTEM  
ELECTRONIC DRAWINGS

# INDEX TO CONSTRUCTION CONTRACT DOCUMENTS AND SPECIFICATIONS

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**SECTION 11600**

**LAGOON WASTEWATER TREATMENT EQUIPMENT SYSTEM**

**PART 1 - GENERAL**

**1.1 SYSTEM DESCRIPTION**

A. Description:

1. The equipment and materials covered by these specifications are intended to be standard equipment of proven reliability and as manufactured by reputable manufacturers having experience in the production of such equipment. The equipment furnished shall be designed, constructed, and installed in accordance with the best practices and methods and shall operate satisfactorily when installed as shown on the contract drawings and operated in accordance with the manufacturer's recommendations. The lagoon wastewater treatment equipment system shall consist of the following:
  - a. **ELECTRIC HORIZONTAL-ROTOR FLOATING AERATION EQUIPMENT**
    - i. There shall be furnished Six (6) 10-HP electric horizontal-rotor floating aerator(s) for operation as shown on the plans. Aerator(s) shall be the S&N AIROFLO 2200 Series Stainless Steel Floating Brush Rotor(s), as manufactured by S&N AIROFLO, Inc., 1011 Sycamore, Greenwood Industrial Park, Greenwood, Mississippi 38930. Each aerator shall consist of an electric motor, gear reducer, flotation devices, mainframe, cradle frame, adjusting linkage, anchoring system, control panels, and access systems.
  - b. **FLOATING BAFFLE CURTAINS**
    - i. S&N Airoflo, Inc., as the Aerator Manufacturer, shall furnish all baffle curtain materials anchor forms, all hardware, and incidentals required for installing, completing, and readying for operation, the floating baffle curtains indicated on the attachments and as specified herein, to include the concrete anchors and anchor posts. The Aerator Manufacturer will coordinate with OWNER and CONTRACTOR during construction and installation of the baffle curtains.

B. Unitary Responsibility:

1. In order to unify responsibility for proper operation of the complete lagoon wastewater treatment equipment system (the system), it is the intent of these Specifications that all system components are furnished by a single supplier (unitary source). Alternate manufacturers not offering a complete system design, including biological treatment design and a performance guarantee, shall not be considered. The system must be of standard catalog design, totally warranted by one manufacturer.
2. Under no circumstances will a lagoon wastewater treatment equipment system consisting of parts compiled and assembled by a manufacturer's representative, distributor, or other third-party source/manufacturer be accepted
3. It shall be the responsibility of the system supplier to fully integrate and ensure the functionality of a complete lagoon wastewater treatment equipment system.

C. Basis of Design:

1. The basis of design for these specifications is equipment manufactured by:
  - a. S&N AIROFLO, Inc.  
1011 Sycamore  
Greenwood, MS 38930
  - b. ENGINEER approved equal
2. Any equipment manufacturers wishing to supply equipment for the purposes of this project shall propose equipment that meets or exceeds the requirements set forth through these specifications, to include design documentation by a qualified water professional whose expertise includes the design of similar sized wastewater treatment equipment systems and is a registered professional engineer. The proposed equipment and relating treatment design must be approved by the ENGINEER.

## **1.2 REFERENCES**

- A. American Gear Manufacturers Association (AGMA)
- B. National Electrical Manufacturers Association (NEMA)
- C. American Society for Testing and Materials (ASTM)
- D. American Welding Society (AWS)
- E. American Society of Civil Engineers (ASCE)

## **1.3 QUALITY ASSURANCE**

- A. Manufacturer's Qualifications - Aeration Equipment:
  1. Consideration will be given only to the aerators of well-established and reliable manufacturers who are regularly engaged in such work and thoroughly experienced in the design and manufacture of aerators for the type of aeration basin geometry shown on the plans. The manufacturer shall have a basic aerator design that has thirty (30) years' experience. The manufacturer shall certify to not less than Ten (10) successful operating installations in the United States meeting the performance specifications as evidence of meeting the experience requirement.
- B. Manufacturer's Qualifications - Baffle Curtains:
  1. The manufacturer of the floating baffle curtain shall have at least ten years of experience in the construction of floating baffle curtains utilizing dielectric and / or hot wedge sealing fabrication methods. No sewn seams shall be permitted.
  2. The manufacturer of the floating baffle curtains shall have manufactured a of no less than five-thousand linear feet of baffle curtains for tanks, ponds, and open water applications.

## **1.4 SUBMMITALS**

- A. Shop drawing submittals for aeration equipment shall include at least the following:
  1. Certified shop drawings showing all details of construction, dimensions, anchor bolt location, and field connection.
  2. Descriptive literature, bulletins, and catalogs of the equipment.
  3. Installation, operation, and start-up procedures including lubrication requirements.
  4. Complete motor data.

5. Total weight of the equipment including the weight of the single largest item.
  6. A complete bill of materials for all equipment within the O&M manual along with maintenance schedules and procedures. No samples will be required.
  7. A list of spare parts that are supplied with the equipment.
  8. Aeration equipment manufacturer shall provide documentation of experience including, but not limited to, Thirty (30) years or more of aeration equipment manufacturing experience and installations treating municipal wastewater of equivalent nature. Aeration equipment manufacturer shall provide documentation of Ten (10) or more referenced aeration installations having been in continuous service for three (3) years or more.
  9. Based on motor output power and field transfer conditions, manufacturer must provide a minimum of five (5) separate installations demonstrating the desired treatment having used an SAE at field conditions of 2.3 lb O<sub>2</sub>/HP-hr in the design (See 1.4. Quality Assurance: ASCE Standard O<sub>2</sub> Transfer Rate of 3.0 lb O<sub>2</sub>/HP-hr)
- B. Submittals for the baffle curtain system must first be approved by the ENGINEER and shall include the following:
1. Shop Drawings with construction details of each of the floating baffle curtains.
  2. Floating baffle curtain manufacturer including contact name, address and telephone number.
  3. Product data and physical properties of the floating baffle curtain material along with fabric manufacturer name, contact, address, and telephone number.
  4. Product data with specifications covering all components used in the fabrication of the floating baffle curtain.
  5. Installation instructions.
  6. Operation and maintenance instructions.
- C. Submit operations and maintenance manuals for the aeration equipment in compliance with the Contract Documents, 30 day prior to shipment. Manuals shall include:
1. Name, address, and telephone number of the nearest competent service representative who can furnish parts and technical service.
  2. Pictorial illustrations of handling, installing, preventative maintenance, and major component replacement.
  3. Operating, maintenance and troubleshooting information.
  4. Complete maintenance parts list.
  5. Complete connection, interconnecting and assembly diagrams.
  6. Complete bill of materials.

## **1.5 DELIVERY, STORAGE AND HANDLING**

- A. Packing, shipping, Handling and Unloading:
1. Aeration equipment shall be transported, unloaded, handled, and stored in accordance with the manufacturer's recommendations for the equipment.
  2. Deliver materials to the Site to ensure uninterrupted progress of the Work packaging of the floating baffle curtain shall be the responsibility of the floating baffle curtain manufacturer and so that the floating baffle curtains shall not be damaged during shipment.
- B. Storage and protection:
1. Store materials to permit easy access for inspection and identification. Keep all material off the ground, using pallets, platforms, or other supports. Protect steel members and packaged materials from corrosion and deterioration.



## 1.6 PERFORMANCE REQUIREMENTS

- A. The aeration equipment, as installed, shall comply with the following:
  - 1. Each aerator shall provide an oxygenation capacity of 720 lb O<sub>2</sub> per 24-hour period of continuous operation at standard conditions (10 hp x 3.0 lb O<sub>2</sub> HP-hr x 24 hr).
  - 2. Each aerator shall develop an oxygen transfer efficiency of no less than 3.0 lb O<sub>2</sub>/HP-hr based on motor output power at standard conditions.
  - 3. The performance requirements for each aerator must be met at an amp loading no greater than 90% of full load amps.
- B. The baffle curtains, as installed, shall comply with the following:
  - 1. See Part 2 Products - Baffle Curtains

## PART 2 - PRODUCTS

### 2.1 MOTORS

- A. Each aerator shall be driven by single speed, Premium efficiency, minimum 1.25 SF (at full load amps, not to be confused with operational loads) horizontal shaft electric motor. The electric motor shall be an induction motor 10 HP, 3-phase, 1800 RPM, 60 Hertz, 230/460 Volt, TEFC, NEMA premium efficiency. Motor shall operate at 90% or less of its rated full load during normal operation. The aerator manufacturer shall provide certification that the nameplate data affixed to the aerator's electric motor is valid, specific data applicable to that particular motor. The motor shall carry a manufacturer's warranty from the date of installation.

### 2.2 GEAR REDUCERS

- A. Each aerator shall have a new constant-duty AGMA class III gear reducer possessing a minimum 2.0 service factor based on manufacturer's recommended loading. The gear reducer shall connect directly to the rotor shaft by a twin tapered bushing. The gear reducer shall be connected inline to the electric motor and driven by a coupling with an elastomeric element. The coupling shall be attached to the motor and gear shafts by a taper lock bushing. Gear reducer shall be manufactured by Dodge and shall include a Dodge® Raptor elastomeric coupling.
- B. Each gear reducer shall be equipped with a Vented Breather modified to attach to the gear reducer to extend the life of the gear oil and reduce maintenance costs. As the thermals change in the cavity of the gear reducer, moisture vapor is trapped in the proprietary media to be released through the bottom of the breather housing. This prevents the accumulation of moisture in the cavity of the gear reducer reservoir. The Modified Vented Breather lowers and stabilizes the relative humidity inside the reservoir leading to a lower dew point. Lower dew point means no condensation, even when the machine is shut down. These Vent Breathers shall provide protection from moisture for a minimum of two years before replacement is required.
- C. Each gear reducer shall be fitted by the aerator manufacturer with external seal guards to provide a labyrinth of protection to the gear reducer seals. Protection of the seal must include not only protection from splashed water but also protection from atmospheric moisture. The seal guards consist of a Teflon seal plate with an additional barrier of grease over the seal area for extra protection from atmospheric moisture. Each gear reducer shall be drilled and tapped to accept a UHMW hold down ring to stabilize the seal plate. Gear reducers without external seal guards shall not be acceptable.

- D. Gear reducers shall be mounted in an open area. Location of gear reducers shall allow convenient access for maintenance and for free-flowing air to prevent heat buildup and the possible need for external cooling devices.

### **2.3 DRIVE ASSEMBLY, SHIELDS AND MOTOR COVER**

- A. The drive design employed shall be "Flex Drive" as approved by Dodge Engineering. Drive assemblies with "bolt on" or "locked mounted" gear reducers shall not be acceptable. A shaft mounted gear using a face mounted plate, is attached to the frame with heavy pins to allow tri-axial movement. The movement allowed by the pin and plate arrangement eliminates critical alignment issues, thus eliminating misalignment pressure on the bearings in the gear reducer. Further reduction of possible alignment issues is greatly reduced through the use of an elastomeric coupling between the motor and the gear.
- B. The Extended Vertical Shield (EVS) on the drive end of the aeration equipment rotor consists of an 8' wide shield and a structural framework, attached to the main frame. The EVS is sized and designed to provide a clean dry area around the motor and gear reducer. The shield system construction shall incorporate protection of the seal and bearing area of the gear. The construction shall not allow wastewater to be transmitted along the rotor shaft by use of a floating rotor shaft seal.

### **2.4 HORIZONTAL ROTOR ASSEMBLY AND TAIL BEARING**

- A. The Rotor assembly shall consist of an 8-5/8" O.D. flanged torque tube with a 41 1/2" overall diameter. The flanges shall be indexed to fit the stub shaft hub. The rotor stub shafts shall consist of a fabricated hub stress relieved to 1200 degrees Fahrenheit and fitted with a 1045 carbon steel shaft. The shaft to hub fit shall be a heavy shrink fit, performed as the final step of the fabrication. A specific combination of rotor length and number of blades will provide the required HP to meet the performance requirements of the aerators called for in this specification.
- B. All blades shall be C-shaped, reduced-impact blade design. The blades for a 41 1/2" diameter rotor shall be attached in banks of four blades of the same length, with the length of the blades in each bank alternating between 16-3/4" and 13-3/4". Rotor assembly shall be balanced to prevent vibration. Each bank of blades shall be welded to the torque tube using a specific off set to form a helix design to eliminate shock loadings. The vertical sides of the C-shaped rotor blade shall serve as gussets to reinforce the vertical strength of the blade and to relieve pressure on welded connections. Bolt-on blades are not acceptable.
- C. Rotor and blades shall be constructed from 304 stainless steel.
- D. The Rotor shall be supported by a tail end stub shaft and a face mounting plate designed in conjunction with an elastomeric coupling to allow tri-axial movement of the gear to avoid undue misalignment pressure on the bearings in the gear reducer
- E. Each unit shall possess a wastewater lubricated tail bearing, requiring no greasing or any other source of additional lubrication. The body of the bearing is constructed of UHMW polyethylene. The shrink fitted bronze bushing is designed to wear against the ultra-high molecular weight (UHMW) polyethylene. The inside of the bi-metallic bushing, also shrink fitted to the shaft is carbon steel and serves as a visual indicator of wear and as additional mass to extend the normal wear process and to protect the stub shaft. The manufacturer shall supply instructions for the replacement of the bi-metallic wear bushings. The bearing shall be constructed of UHMW polyethylene, with a minimum bearing surface width of 4". The top

side, of the outboard side, of the bearing is cut away for easy visual inspections. Mechanical bearings requiring greasing, either manual or automatic, will not be accepted.

## **2.5 FLOTATION DEVICES**

- A. Each unit shall contain Two (2) Stainless Steel flotation devices capable of floating and stabilizing the unit. Each float shall be fabricated from Type 304 stainless steel having a minimum thickness of 0.0625 inches. All seams shall be welded for strength. Flotation devices shall be internally reinforced and filled with high-density polyurethane foam and completely sealed from the environment. Flotation stability is mandatory. Prior to assembly, flotation devices shall be sealed and pressure tested at 3.0 psig.

## **2.6 MAIN FRAME**

- A. The horizontal beams of the main frame shall be constructed from 2" x 3" 304 stainless steel structural tubing. All frame connections shall be welded for strength. The main frame shall have lift brackets sufficient for handling purposes. Each end of the frame shall have a non-skid platform, welded in place for added structural integrity and to provide convenient platforms for inspections and maintenance. A splash guard shall be welded to the main frame and extend downward into the water to help protect the drive assembly from splash created by the rotor.

## **2.7 CRADLE FRAME**

- A. A cradle frame shall attach the Flotation devices to the main frame and provide adjustment points to allow adjustments to rotor blade operating depth and respective motor operating amperage. Cradle frames shall 304 stainless steel. The frame shall be connected to the anchoring system in a way that the forces resulting from wave action and other movement are not transferred to the Flotation system. Rubber pads shall also be provided for isolation of the floats from the cradles.

## **2.8 ADJUSTING LINKAGE**

- A. Each unit shall have adjusting linkage attached to each corner of the main frame. Adjusting linkage shall be capable of changing the operating depth of the horizontal-rotor blades, the horsepower requirements, and amp draw, and provide leveling of the aerator. Adjusting linkage shall be fabricated from 304 stainless steel rods with brass adjusting nuts to prevent seizing. Adjusting linkage shall not be connected directly to the anchoring system nor shall it mechanically depend on the anchoring system for it to be effective. These adjusting points shall adjust rotor submergence, thus operating the rotor at the performance levels for oxygen transfer and mixing, as prescribed by the specification. Floating rotors without these adjustments shall not be acceptable.

## **2.9 ANCHORING SYSTEM**

- A. The custom anchoring system shall secure the main frame of the aerator in the desired position and limit its lateral movement potential. It shall not restrict the unit's flotation and shall allow for continuous aerator operation with fluctuations in water surface elevation required by the specific application. This system will be supplied with a Levee Anchoring System (LAS); Thirty (30) feet in extension length. The 30' LAS will allow the unit to float level and operate at the various water levels required for the lagoon application.

## **2.10 AERATOR CONTROL PANEL**

- A. The Aerator Manufacturer shall furnish One (1) Aerator Control Panel for the 10 HP, 3 phase,

230 volts, supplied with the following for each aerator:

1. Thermal Magnetic Breakers for each rotor
  2. Motor Starters with ambient compensated overload relays for each rotor
  3. 24 Hour Time Clocks for each rotor
  4. Thermal Transformer circuit breaker
  5. Transformer with primary and secondary fusing properly sized by the manufacturer
  6. Oil-tight HOA Switches for each rotor
  7. Control relays for each rotor
  8. NEMA4 SS Enclosure
- B. Aerator Manufacturer shall furnish each aerator with type SO electrical cable along with flexible conduit to a bank mounted disconnect adjacent to the motor end of the levee anchoring. Aerator manufacturer shall determine cable gauge size and length of cable required per unit. Contractor is to install aerator control panel as shown on the plans. All electrical to be installed according to the National Electric Code with require main disconnect and electrical power metered drop from the existing service.
- C. Materials of construction for the aforementioned control panels shall comply with all more stringent requirements which may exist in the electrical section of these specifications.

## **2.11 SPARE PARTS AND HANDLING TOOLS**

- A. Includes one (1) spare elastomeric element for the coupling on the rotor.
- B. One (1) Lifting Bar to ensure the safe and proper handling of the aerators during unloading and installation.

## **2.12 BAFFLE CURTAIN SYSTEM**

- A. Description:
  1. The baffle curtains shall consist of a fabric wall that is anchored at the bottom by a galvanized chain in a sealed pocket and is floated at the top by buoyant logs that are also in a sealed pocket. The floating baffle curtains shall be constructed in multiple sections resulting in the specified dimension of each curtain. Weight and ease of handling at the job site shall be taken into account when determining the lengths of the prefabricated floating baffle sections. The floating baffle curtains shall be delivered to the jobsite ready to install and the only fabrication required at the jobsite shall be the connection of the floating baffle sections. The floating baffle curtains shall be floated into position for installation.
- B. Design Criteria:
  1. A total of Two (2) floating baffle curtains are required:
    - a. Both floating baffle curtains shall be Six (6) ft deep by approximately 600 ft long (OWNER to verify pond dimensions) floating baffle curtain with tapered end to fit a 1 to 1 slope, and the other end vertical to terminate in the pond. Ballast chain and / or cable connections to the shore anchor posts shall be constructed to a sufficient length to allow for installation. Baffle curtain to separate lagoon into aeration chamber and ammonia polishing contact area.
    - b. OWNER and ENGINEER to verify with CONTRACTOR and MANUFACTURER that an average depth of six (6) feet exists within the lagoon treatment basin prior to installation of any treatment equipment.

C. Details of Construction:

1. Flotation:

- a. The flotation shall consist of 6-inch diameter (minimum) flotation logs made of closed cell polyfoam logs, having the buoyancy of at least 60 pounds per cubic foot.
- b. The flotation shall be completely enclosed inside the floating baffle curtain by means of a thermal seal. Each flotation log shall be sealed in its own chamber along the top of the floating baffle curtain.

D. Anchoring:

1. Bottom Ballast:

- a. The floating baffle curtain shall be anchored in position by a galvanized chain thermally sealed into a pocket along the bottom of the curtain.
- b. The chain shall be continuous from berm through each floating baffle curtain section, connected to each other with a stainless steel rapid link. The ballast shall be 1/4" (minimum) galvanized proof coil chain.

2. Concrete Anchors:

- a. Concrete anchors shall be placed along the upstream side of the ballast chain at 18' intervals beginning at the toe of the levee. The concrete anchors shall be attached to the ballast chain using a stainless steel rapid link or marine grade rope. The connection shall be secured to the ballast chain through cutouts in the ballast chain pocket forming an opening exposing the ballast chain for attachment of the concrete anchors. The concrete anchors shall be made using a five-gallon bucket, filled with concrete with a 3/8" x 9-inch-long or greater galvanized eyebolt, flat washer and two nuts, inserted into the concrete at least 6" to 7" to form an attachment. The eyebolt shall be of a size to accept a 3/8" stainless steel rapid link thru the eye of the eyebolt.

3. Retrieval Rope:

- a. The concrete anchors shall be made retrievable by securing one end of a 3/8" diameter marine grade rope through the ballast chain and the other end of the rope secured to a stainless steel grommet paced in the flotation collar located at the top of the floating baffle curtain.

4. Shore Anchor Post:

- a. The shore anchors shall consist of a 4" diameter by 8' long 304 stainless steel schedule 20 pipe buried a minimum of six feet in concrete. Concrete should encase the post at a minimum diameter of 2'. The shore anchor post shall also be filled with concrete. The shore anchor posts shall be located on the levee side slope approximately 1' off the top of the levee.

E. Cable

1. Tension Cable:

The cable shall be 1/4" diameter, stainless steel sealed in a pocket on the lower side of the flotation collar and shall be continuous from berm through each floating baffle curtain section, connected to each other with 3/8" stainless steel rapid links. The cable shall have the breaking strength of at least 12,000 lb.

F. Connections:

1. End Connection:

- a. The end connections shall consist of 1/4" x 4" x 12" stainless steel predrilled plates that shall be attached to the floating baffle curtain with 3/8" diameter by 1-1/2" long stainless-steel bolts to "sandwich" the end of the floating baffle curtain between the end plates. The tension cable or connection chain shall connect the anchor posts to the stainless steel predrilled plates at both top and bottom of the curtain. No grommets shall be used for the connections to the shore anchor posts.

2. Baffle Connection:

- a. The floating baffle curtain sections shall be joined with the use of 3/16" x 1-1/2" x 10" long stainless steel predrilled plates and 3/8" diameter by 1-1/2" long stainless-steel bolts. The plates shall be applied to the outside of each floating baffle curtain section, then bolted together to "sandwich" the joining sections together.

3. Miscellaneous Hardware:

- a. All hardware provided for the floating baffle curtains shall be type 304 stainless steel. The galvanized ballast chain shall be the only exception.

G. Baffle Curtain Material

- 1. The baffle material shall be a reinforced synthetic material. The material supplied under these specifications shall be a first quality product specifically designed and manufactured for this application and demonstrated to be suitable and durable for the construction of floating baffle curtains.

2. Physical Specifications:

- a. Color: Black
- b. Base Type: Polyester
- c. Fabric weight: 7 oz/yd<sup>2</sup>
- d. Finished Coated Weight: 30.0 +/- 2.0 oz/yd<sup>2</sup>
- e. Grab Tensile: 550/525 lbs/in
- f. Minimum Adhesion: 10 lbs/in
- g. Minimum Hydrostatic Resistance: 500 psi

- 3. The material shall be 6730 XR-5 as manufactured by the Seaman Corporation of Wooster, Ohio.

H. Manufacturers:

- 1. S&N Airoflo, Inc./Engineered Textile Products, Inc

**PART 3 - EXECUTION**

**3.1 EXECUTION - AERATION AND NITRIFICATION EQUIPMENT**

- A. The floating aerators shall be installed by the contractor. The Manufacturer shall be responsible for providing proper installation instructions to assure proper alignment and tolerances.
- B. Upon completion of installation, the manufacturer shall conduct installation certification,

start-up, O&M review, and the initial inspection of the unit(s). It will be the on-site personnel's responsibility to conduct the 60 day inspection and return a completed inspection form (inspection form can be found in Part 2 of the O&M manual) to S&N Airoflo. The 60 day inspection and completed inspection form returned to S&N Airoflo is required in order to execute warranty.

C. S&N Airoflo warrants their equipment to be free from defects in material and workmanship for a period of one (1) year following operation start-up and acceptance. During this one (1) year period, S&N Airoflo will replace or repair (F.O.B., factory) any part (or parts) returned that have failed under normal use and service. The electric motor and gear reducer warranties shall be as stated by the manufacturers.

1. The S&N warranty period ends twelve (12) months after the start-up date or eighteen (18) months after delivery, whichever comes first.
2. Any damages resulting from acts of God, vandalism, animals, or high or low voltage will not be covered under warranty.

### **3.2 EXECUTION - BAFFLE CURTAINS**

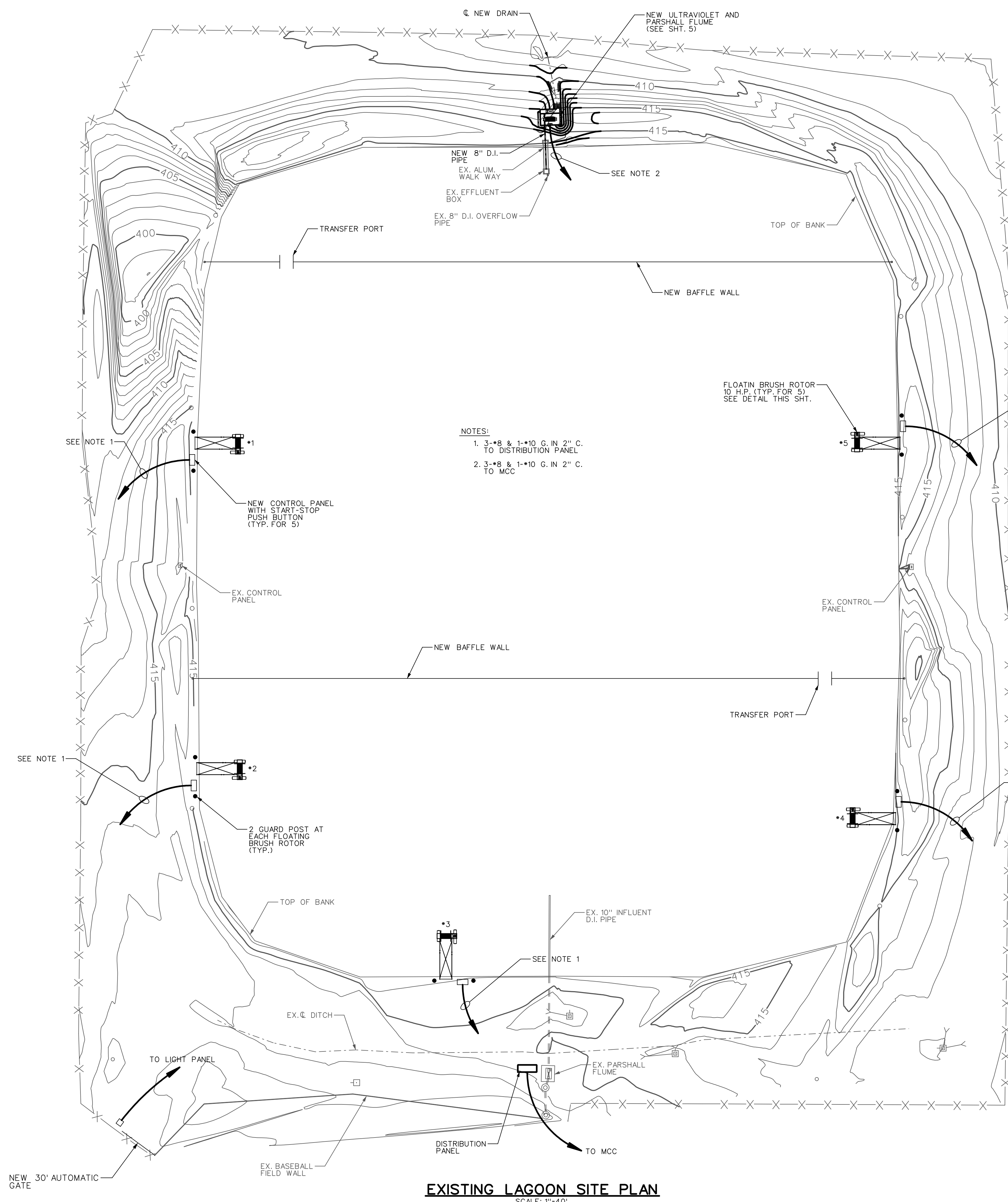
A. OWNER to verify dimensions of the lagoon and to determine exact location of the shore anchor posts prior to ordering floating baffle curtains.

B. The floating baffle curtains shall be installed into position as shown on the project plans. The floating baffle curtains shall be installed in accordance to manufacturer's shop drawings, instructions and recommendations.

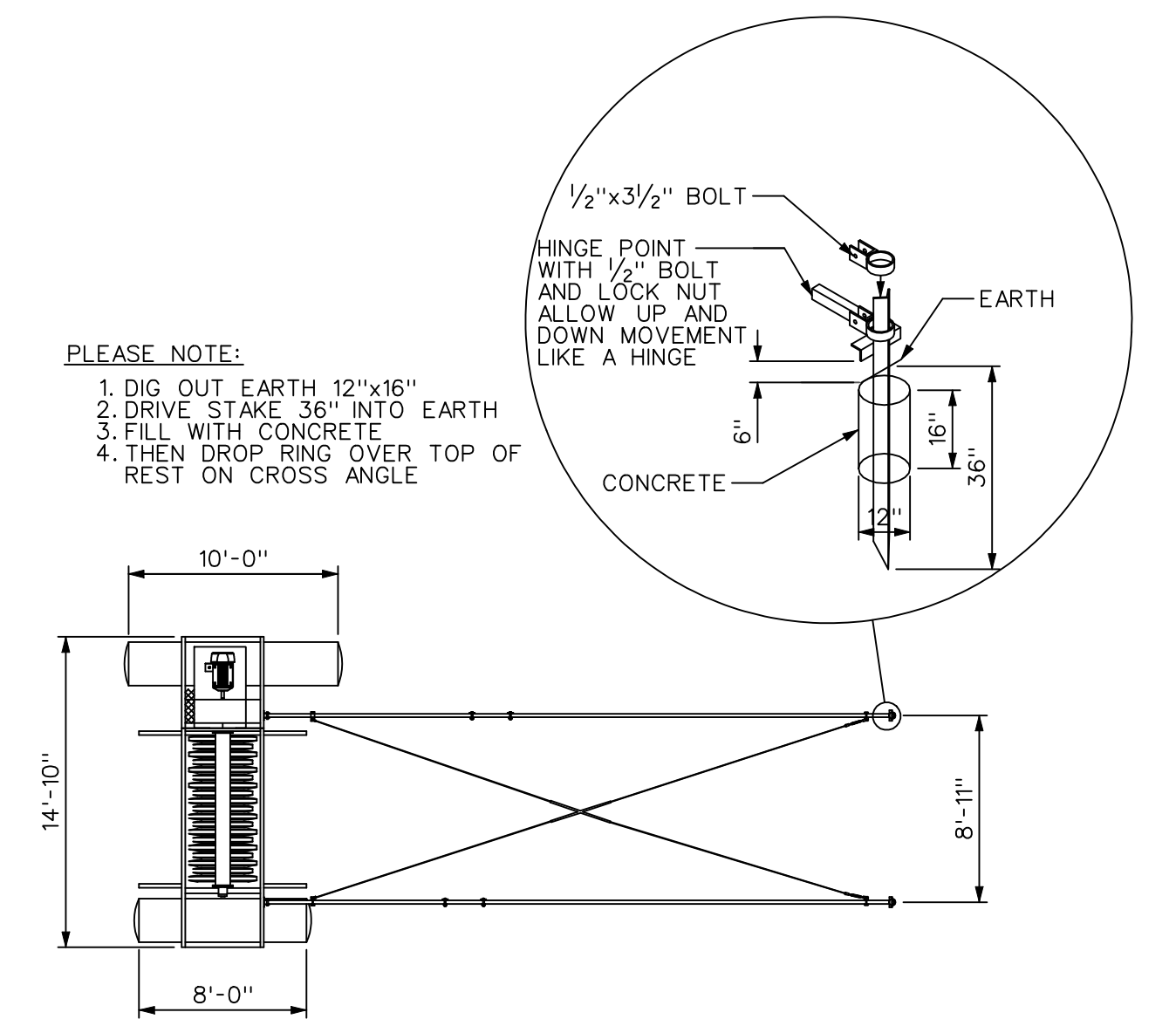
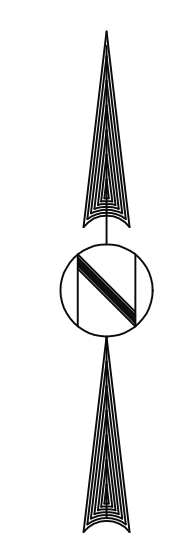
C. MANUFACTURER to provide to ENGINEER Certification that the floating baffle curtains were installed in accordance with the Contract Documents.

D. Warranty

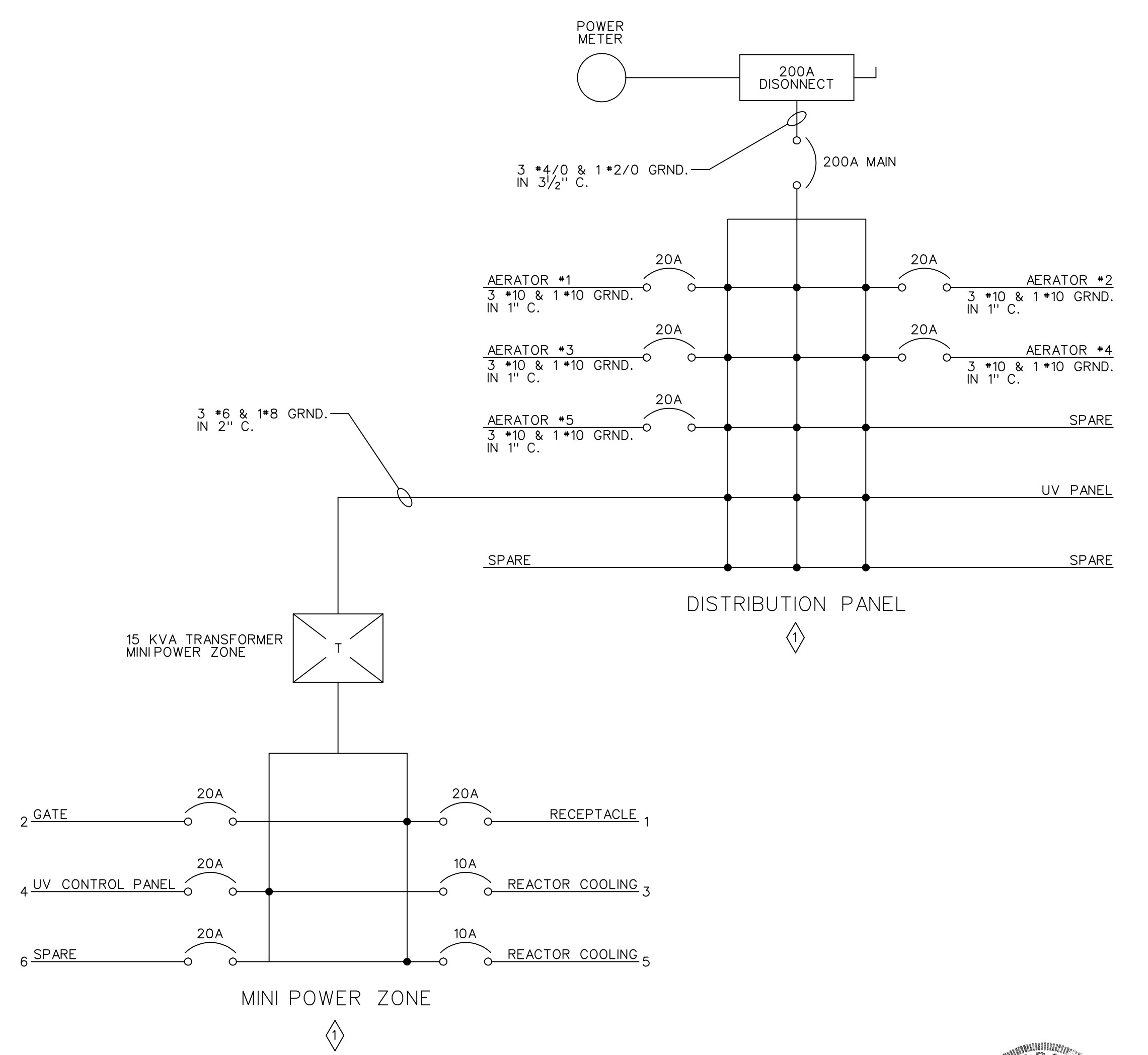
1. The baffle manufacturer shall warrant the floating baffle curtain against defects in workmanship and materials for a period of two years from the date of delivery.
2. The floating baffle curtain material shall be warranted by the manufacturer against weathering for a period of ten years, prorated.



- NOTES:**
- 3-#8 & 1-#10 G. IN 2" C. TO DISTRIBUTION PANEL
  - 3-#8 & 1-#10 G. IN 2" C. TO MCC



**FLOATING BRUSH ROTOR PLAN**  
NO SCALE



**EXISTING LAGOON SITE PLAN**  
SCALE: 1"=40'

THE CITY OF  
**CHILDERSBURG, ALABAMA**  
WATER WORKS, SEWER & GAS BOARD  
**PINECREST LAGOON UPGRADE**  
**EXISTING LAGOON SITE PLAN ELECTRICAL**

**JEC Utility Engineering Consultants, LLC**  
130 Southwest Drive  
Suite 100  
Homewood AL 35209

DESIGNED DBB	DRAWN LTH	SCALE AS NOTED	DATE MAY, 2024
APPROVED <i>Don B. Beutte</i>		REFERENCE CH23074L008.DGN	DESIGN NO. CH23 074
NO.		SHEET 8 OF 9	

NO.	DATE	REVISIONS	BY
7/8/24	ADDENDUM #1		DBB