

**Onslow Water & Sewer Authority**  
**Board of Directors' Special Meeting Jacksonville City Hall**  
**Thursday, December 19, 2024**  
**APPROVED MINUTES**

**CALL TO ORDER:** Having a quorum, Chairman Royce Bennett called the meeting to order at 6:00 pm. Board members present included Chairman Royce Bennett, Vice Chairman Paul Conner, Secretary/Treasurer Richard Grant, and Directors Jerry Bittner, Joe Brown, and Greg Hines. Absent was Director Timothy Foster and Robert Warden.

**PLEDGE OF ALLEGIANCE:** Chairman Royce Bennett led the Board and audience in the Pledge of Allegiance.

**INVOCATION:** Mr. Toby Cahoon with Blue Creek Baptist Church provided the invocation.

**CHAIRMAN'S REMARKS** –Chairman Royce Bennett provided general guidance to the audience regarding the meeting.

**1. APPROVAL OF AGENDA** – Director Greg Hines made a motion to approve the agenda as presented. Vice Chairman Paul Conner made a second. All were in favor. The agenda was approved as presented.

**2. APPROVAL OF CONSENT AGENDA**

**[A COPY OF THE PROPOSED AMENDED SCHEDULE OF BOARD OF DIRECTORS MEETINGS, WATER AND SEWER OPERATIONAL IMPROVEMENTS AMENDED PROJECT ORDINANCE AND ASSOCIATED BUDGET AMENDMENT, AND THE AMENDED CIP 006A PROJECT ORDINANCE AND BUDGET AMENDMENT MAY BE FOUND AT EXHIBIT A, AND ARE FULLY INCORPORATED HEREIN BY REFERENCE]**

A motion was made by Director Jerry Bittner to approve the consent agenda as presented. A second was made by Vice Chairman Paul Conner. The motion passed unanimously. Therefore, the September 19 2024 Regular Meeting Minutes were adopted, the September & October 2024 Finance Reports and August & September 2024 Operations Reports were accepted as presented, the Amended 2025 Schedule of Board of Directors Meetings was adopted as presented, and the Water and Sewer Operational Improvements Amended Project Ordinance and Associated Budget Amendment, Amended CIP 006 Project Ordinance and Associated Budget Amendment were adopted.

**3. BUSINESS**

**A. Award Of Bid For Valve Maintenance Trailer (RFB#2024-25VMT)**

**THE RFB#2024-25VMT BID TAB AND FORMAL REQUEST FOR BID DOCUMENT MAY BE FOUND AT EXHIBIT B, AND ARE FULLY INCORPORATED HEREIN BY REFERENCE]**

Chairman Royce Bennett called on CEO Franky Howard to present the item. Mr. Howard said two bids were received and the recommendation is to award the bid to E.H. Wachs in the amount of \$92,275.00 and went on to explain this is for a budgeted item.

Vice Chairman Paul Conner made a motion to award RFB#2024-25VMT to the lowest, responsive bidder, E.H. Wachs for the amount of \$92,275.00 and authorize the CEO to execute purchase contracts plus any other documents as may be required in connection with the action. A second was made by Secretary/Treasurer Richard Grant. All were in favor, the motion passed unanimously.

**B. Wallace Creek HDD Replacement Project**

**[ THE WALLACE CREEK FORCE MAIN PROJECT ORDINANCE AND BUDGET AMENDMENT AND THE RECOMMENDATION OF AWARD MAY BE FOUND AT EXHIBIT C, AND ARE FULLY INCORPORATED HEREIN BY REFERENCE]**

Chairman Royce Bennett called on Mr. Jeffrey T. Lohr, PE, Assoc. DBIA – Chief of Engineering, to present the item. Mr. Lohr explained that the item consists of a single prime construction contract to construct the replacement of an existing sanitary sewer transmission force main crossing Wallace Creek which is on Marine Corp Base Camp Lejeune. He went on to say the project was created due to a break in the line that occurred a couple of months ago. He said the new line will be installed by directional drilling and will include a tapping valve and sleeve to connect to the existing pipe. Mr. Lohr shared that approximately 715 linear feet of 24 inch force main will connect the new line to the existing sanitary sewer infrastructure on both sides of the creek. Mr. Lohr shared that three bids were received on December 3<sup>rd</sup> and the apparent low bidder is Military and Federal Construction Company Inc. in the amount of \$748,910.72. He shared that the design engineer, Highfill reviewed the bid submitted and determined it to be responsive and responsible and therefore we recommend the execution of the contract with Military and Federal Construction Company Inc.

Director Greg Hines asked where the money would be coming from in the budget. Mr. Howard replied it would be fund balance. Chairman Bennett said this is one of those things that we don't have a lot of choice in adding a line broke and you have to fix it.

Director Joe Brown inquired about the process of verifying the contractor is qualified to do the work. Mr. Lohr replied that they have experience doing this type of work and are fully capable to do it. He added that they have done a lot of work on the Base.

Secretary/Treasurer Rick Grant asked how big do we go with PVC adding what's the largest you would be comfortable doing in general. Staff in audience replied 36. Director Hines added that this company did work on phase 2 of the industrial park and did a really good job. Chairman Bennett said they have done a lot of work around Jacksonville. Mr. Howard said he would like to point out that they are a local company from Jacksonville.

Secretary/Treasurer Richard Grant made a motion to adopt the Wallace Creek Force Main Project Ordinance and Budget Amendment. Vice Chairman Paul Conner made a second. All were in favor, the motion passed unanimously.

Chairman Greg Hines made a motion to award the contract for the Wallace Creek HDD Force Main Replacement Project to the lowest responsible bidder, Military and Federal Construction Company, Inc in the amount of \$748,910.72 and to authorize the CEO to execute this contract and any additional documents as required in connection with this action.

Secretary/Treasurer Richard Grant asked if that means they give Mr. Howard the authority to sign the contract and legal is reviewing it and signing off. Mr. Chuck Kitchen, Authority Attorney, said the standard preapproved contract would be used adding he does not normally review it unless contractors request changes.

All were in favor, the motion passed unanimously.

**C. Camp Davis Phase III Residential Commercial Development Sewer Service Design**

**[A COPY OF THE CAMP DAVIS WASTEWATER EXTENSION PROJECT ORDINANCE AND BUDGET AMENDMENT AND SCORING MATRIX MAY BE FOUND AT EXHIBIT D, AND ARE FULLY INCORPORATED HEREIN BY REFERENCE]**

Chairman Royce Bennett called on Mr. Jeffrey Lohr to present the item. Mr. Lohr began by saying this item consists of a single prime engineering contract to plan, design, permit, and bid and construction services for two new Wastewater Pump Stations and a force main. He added we have been working on this with Camp Davis on this phase of development for several months and it is about two million square feet of light industrial space in phase three of the residential component which is north of the current Business Park where a residential developer is looking at 1500 homes and this would provide as far as wastewater another half MGD that we have to provide and treat. He went on to explain the amount of work involved in this the two pump stations is a little over ten miles of twelve inch force main with the route right now taking it from the industrial development north on 12 to 172 to 210 and then down to the North Topsail Wastewater Treatment Plant.

Director Greg Hines asked if this was a design build project. Mr. Lohr replied no it is just a design project. Director Hines asked if we had someone to do the design build would that be a better way to do it adding that seems to be the way things are going now. Mr. Lohr replied we are just now initiating work to do the design build for the expansion of the North Topsail Wastewater Treatment Plant. Mr. Lohr said with this project we didn't really consider it as we have not done design build before at ONWASA. He went on to explain we are going to hire an owner advisor to help guide us through the first project which is the treatment plant which is the highest priority because all of this flow goes to that plant and with this flow we would be at max capacity. Director Hines asked if this would be a guarantee to them that they would get this capacity because with how Sneads Ferry is growing how will that work. Mr. Lohr answered it is his understanding that we will make a commitment to them to be able to provide sewer and water for this project. Chairman Bennett added we would have to commit before they build. Vice Chairman Paul Conner asked what the timeline on something like this would be and when we commit to doing this are we committing to giving sewer to that many homes plus the two million square feet so what does that look like on paper allocation 540,000 gallons give or take. Mr. Lohr replied roughly. Vice Chairman Paul Conner asked what the timeline for all of this obviously we are trying to expand that plant down in Sneads Ferry. Mr. Lohr replied the design time is probably about two years because we have to do surveys, wetlands work adding there is a lot of preliminary work that has to be done before they can start the hard design but it is probably two years to bid. Chairman Bennett asked what do you get out of a 12 inch force main, will that be enough to handle the industrial park when it is fully developed. Mr. Lohr answered yes. Secretary/Treasurer Richard Grant said as I understand what we are doing today is the only thing you are asking for is approval to basically do the engineering behind this adding there is no firm commitment that we are going to build these facilities because right now if it is two years to design it I would bet it is going to be more expensive to build it than it would be today. He went on to ask if then at that point you would come back to the Board and with economics attached to it for a decision on actually building. Mr. Howard said yes and that is something we are working with Marks group on at economic development. Director Hines said he is concerned that if the people who want to build do not get some kind of guarantee they are not going to build.

Director Gregory Hines made a motion to adopt the Camp Davis Wastewater Extension Project Ordinance and Budget Amendment. A second was made by Vice Chairman Paul Conner. All were in favor, the motion passed unanimously.

Vice Chairman Paul Conner made a motion to award the single prime engineering contract to Highfill Infrastructure Engineering, PC in the amount of \$1,864,725 with a 15% contingency for the Camp Davis Wastewater Expansion Project and authorize the Chief Executive Officer to execute the contract and any additional documents as required in connection with this action. A second was made by Director Gregory Hines. All were in favor, the motion passed unanimously.

**D. Summerhouse WWTP Interim Improvements Equipment Acquisition Phase 2 [A COPY OF SUMMERHOUSE WWTP INTERIM CAPACITY IMPROVEMENTS AND BUDGET AMENDMENT, KUBOTA MEMBRANE PROPOSAL, AND THE TROJAN TECHNOLOGIES PROPOSAL MAY BE FOUND AT EXHIBIT E, AND ARE FULLY INCORPORATED HEREIN BY REFERENCE]**

Chairman Bennett called on Mr. Jeffrey T. Lohr, PE, Assoc. DBA – Chief of Engineering to present the item. Mr. Lohr began by explaining that this expansion would allow us to max out the plant's permitted capacity for the treatment plant which is 400,000 gallons a day. He added the current Phase 1 takes it to 200,000 gallons a day and Phase 2 will take it to the 400,000 gallons a day which is what we are permitted to do. Mr. Lohr said this item includes a request to declare the two listed firms as Sole Source Vendors and that will allow us to purchase the equipment and have it there by the time we are ready to bid and construct phase 2. He explained Phase 1 is currently under construction. He added this is the same equipment we purchased for Phase 1 the Kubota Membrane System and the Trojan UV Systems which is also consistent with other equipment we have in our wastewater system. Director Hines asked if this would max out that plant and we would not be able to add anymore on to it. Mr. Lohr said we have to be able to discharge what we treat and right now as far as our permits are concerned 400,000, this phase, would take us up to what we are allowed to treat and capable of treating. Director Hines said so we could go further with this plant if we got permitted to do it. Mr. Lohr said yes it gives us some flexibility to have some additional capacity over what we need today and we are expanding the North Topsail Treatment Plant from 1 ½ to 3 MGD so this will give us a little more comfort zone to have the ability to treat more flow here. Director Hines asked what the time frame on doing this. Mr. Lohr said from the time it is awarded probably nine months or eight to nine months. Mr. Lohr said the current phase should be done by the end of June. Secretary/Treasurer Richard Grant said he notices this is Sole Source so he assumes we will be doing our due diligence. Mr. Lohr said yes. Mr. Kitchen said all of them are done this way it is just the way you have to do them or otherwise they would cost you significantly more money.

A motion was made by Secretary/Treasurer Richard Grant to adopt the Amended Project Ordinance for the Summerhouse WWTP Interim Capacity Improvements and Budget Amendment. A second was made by Vice Chairman Paul Conner. All were in favor, the motion passed unanimously.

A motion was made by Director Gregory Hines to proceed with the acquisition of the referenced equipment from Kubota Membrane USA in the amount of \$1,934,700 with a 20% contingency and Trojan Technologies in the amount of \$140,860 as Sole Source Vendors and to authorize the Chief Executive Officer to execute purchase agreements and any additional documents as required in connection with this action. A second was made by Vice Chairman Paul Conner. All were in favor, the motion passed unanimously.

#### **4. PUBLIC COMMENT**

No members of the public wished to make comments.

#### **5. CHIEF EXECUTIVE OFFICER COMMENTS**

Chairman Royce Bennett called on CEO, Franky Howard for comments. Mr. Howard began by thanking Leadership Team for being in attendance. He explained that he had hoped to have the Southeast Force Main Project on the agenda for tonight but unfortunately only one bid was received and it exceeded the budget. He shared that the project would be rebid next week with a due date at the end of January and would likely necessitate a Special Meeting to be called for February. Mr. Howard shared the holiday closure information. He announced that employees raised over \$5,000 worth of toys and gift cards for the Christmas Cheer program. Mr. Howard said the next Regular Meeting of the Board is scheduled for January 16<sup>th</sup> and there would be likely a special called meeting for February 20<sup>th</sup> to consider the Southeast Force Main Project and reminded the Board that is the project they hoped to spend the 10 million earmarked State funds on adding it has a requirement to be spent by December 2026. Mr. Howard shared that the Engineering Department hosted a Design-Build session with Crowder Construction, a potential bidder for upcoming projects. He commended that the design-build approach is gaining interest among contractors, potentially leading to better pricing and participation. He concluded by emphasizing the importance of contractor engagement and maintaining financial oversight as these major projects move forward.

#### **6 BOARD OF DIRECTOR'S COMMENTS**

Director Jerry Bittner said no comments other than wishing everyone a Happy Holidays and particularly the ONWASA Staff for all of their good work.

Director Brown expressed that he is happy to be here and wished everyone Happy Holidays.

Director Greg Hines expressed appreciation to the Staff for inviting him to the dinner adding it was very enjoyable, and we have the best employees there are. He also wished everyone a Merry Christmas.

Secretary/Treasurer Richard Grant thanked everyone and wished everyone a Merry Christmas.

Vice Chairman Paul Conner wished everyone a Merry Christmas and expressed appreciation to Mr. Howard and Staff.

Chairman Royce Bennett welcomed Director Brown and said he looks forward to working with him. He also thanked the employees for the Christmas luncheon adding it was a lot of fun and good to see everyone in one room. He also wished everyone a Merry Christmas and Happy New Year.

Chairman Bennett adjourned the meeting at 6:32 PM.

The minutes were approved on March 20, 2025.

Onslow Water & Sewer Authority Board of Directors



  
\_\_\_\_\_  
Michael Royce Bennett, Chairman

ATTEST:

  
\_\_\_\_\_  
Heather Norris, Clerk



## **2025 ONWASA BOARD OF DIRECTORS APPROVED SCHEDULE OF REGULAR MEETINGS**

All Board of Directors Regular Meetings shall be held at Jacksonville City Hall, 815 New Bridge Street Jacksonville, 6:00 PM unless otherwise advertised.

Thursday, January 16, 2025

Thursday, March 20, 2025

Thursday, May 15, 2025

Wednesday, June 18, 2025

~~Thursday, June 19, 2025~~

Thursday, September 18, 2025

Thursday, November 20, 2025

Amended the 19<sup>th</sup> day of December 2024

Approved the 19<sup>th</sup> day of September 2024.

**ONslow WATER & SEWER AUTHORITY  
WATER AND SEWER OPERATIONAL IMPROVEMENTS  
PROJECT NUMBER CIP-035**

**AMENDED PROJECT ORDINANCE**

**BE IT ORDAINED** by the Board of Directors of Onslow Water & Sewer Authority (ONWASA) that, pursuant to Section 13.2 of Chapter 159 of the General Statutes of North Carolina, the following Water and Sewer Operational Improvements project is hereby adopted:

**Section I.**

The Water and Sewer Operational Improvements project shall consist of the design, permitting and construction necessary to complete smaller-scope capital improvement projects with an estimated cost greater than \$5,000 and which take more than a single fiscal year to complete. This includes local distribution and collection system upgrades/relocations/extensions and replacement of critical capital equipment (pumps, motors and control systems). Projects will be completed on a priority basis once a need is identified. This project is being amended for an additional \$1.5 million to cover necessary improvements throughout the system.

**Section II.**

The officers of Onslow Water & Sewer Authority are hereby directed to proceed with the Water and Sewer Operational Improvements project.

**Section III.**

The following revenue is anticipated to be available to complete the project:

Fund Balance	\$ 6,085,000
Total	<u>\$ 6,085,000</u>

**Section IV.**

The following amounts are appropriated for the project:

Professional Services, Admin, Permits	\$ 700,000
Construction	\$ 5,385,000
Total	<u>\$ 6,085,000</u>

**Section V.**

The Finance Officer is hereby directed to maintain within the Water & Sewer Fund sufficient specific detailed accounting records to provide the accounting required by federal and state regulations and in accordance with generally accepted accounting procedures.

**Section VI.**

The Finance Officer is directed to report monthly on the financial status of the project and on the total revenues received.

**Section VII.**

The Budget Officer is directed to include an analysis of past and future cost and revenues on this project as a part of every budget submission made to this Board.

**Section VIII.**

Copies of this Water and Sewer Operational Improvements Amended Project Ordinance shall be made available to the Budget Officer for direction in carrying out these projects.

Adopted this 19th day of December 2024.



ON SLOW WATER & SEWER  
AUTHORITY BOARD OF  
DIRECTORS

A handwritten signature in black ink, appearing to read "Michael Royce Bennett".

Michael Royce Bennett, Chairman

A handwritten signature in black ink, appearing to read "Heather Norris".

Heather Norris, Clerk to the Board

Amended Project Ordinance  
 Water and Sewer Operational Improvements  
 Budget Amendment  
 December 19, 2024

Budget Amendment Fund 61

Department Number	General Ledger Name	General Ledger Number	Amount
	Fund Balance Appropriated	3919940	\$6,085,000
9910	Transfer to Capital Projects	8000040	\$6,085,000

Budget Amendment Fund 40

Department Number	General Ledger Name	General Ledger Number	Amount
	Revenue – Transfer from Operating	3709982	\$6,085,000
8789	Expenditure – Professional Services	8790400	\$ 700,000
8789	Expenditure - Construction	8795800	\$5,385,000

**ONFLOW WATER & SEWER AUTHORITY  
HWY 24 UTILITY IMPROVEMENTS – WASTEWATER FORCE MAIN  
PROJECT NUMBER CIP-006A**

**AMENDED PROJECT ORDINANCE**

**BE IT ORDAINED** by the Board of Directors of Onslow Water & Sewer Authority (ONWASA) that, pursuant to Section 13.2 of Chapter 159 of the General Statutes of North Carolina, the following Hwy 24 Utility Improvements - Wastewater Force Main Project is hereby adopted:

**Section I.**

The Hwy 24 Wastewater Force Main project consists of the completion of design, permitting, and construction of a new 18-inch diameter sewer force main and associated pumping station(s) to connect the Town of Swansboro area collection system to an existing ONWASA pump station located at the Piney Green Gate of Marine Corps Base Camp Lejeune (MCBCL). The total estimated length of the force main is approximately 36,000 linear feet(lf) and two new pumping stations will be constructed along with the rehabilitation of two existing pump stations. This project will provide additional wastewater treatment capacity necessary to address anticipated growth in the Swansboro area by sending all wastewater flow to MCBCL for treatment under an existing service agreement with ONWASA. Bids have been received on the two phases of the construction portion of this project. Phase 1A bids were received for the completion of the wastewater force main at approximately 9.6 million and Phase 1B bids were received for the completion of the pump stations at approximately 19.4 million. ONWASA with LGC approval sold revenue bonds in September to generate funding for construction of this project.

**Section II.**

The officers of Onslow Water & Sewer Authority are hereby directed to proceed with the Hwy 24 Utility Improvements - Wastewater Force Main, Project Number CIP-006A.

**Section III.**

The following revenue is anticipated to be available to complete the project:

Revenue Bond Proceeds	\$31,000,000
Total	<u>\$31,000,000</u>

**Section IV.**

The following amounts are appropriated for the project:

Professional Services, Admin, Permits	\$ 1,125,000
Bond Issuance Costs 2024	\$ 375,000
Construction	\$ 29,500,000
Total	<u>\$ 31,000,000</u>

**Section V.**

The Finance Officer is hereby directed to maintain within the Water & Sewer Fund sufficient specific detailed accounting records to provide the accounting required by federal and state regulations and in accordance with generally accepted accounting procedures.

**Section VI.**

The Finance Officer is directed to report monthly on the financial status of the project and on the total revenues received.

**Section VII.**

The Budget Officer is directed to include an analysis of past and future costs and revenues on this project as a part of every budget submission made to this Board.

**Section VIII.**

Copies of this Hwy 24 Wastewater Force Main Project Ordinance shall be made available to the Budget Officer for direction in carrying out these projects.

Adopted this 19th day of December 2024.



ON SLOW WATER & SEWER  
AUTHORITY BOARD OF  
DIRECTORS

Michael R. Bennett, Chairman

Heather Norris, Clerk to the Board

Amended Project Ordinance  
 Hwy 24 Utility Improvements - Wastewater Force Main  
 Project Number CIP-006A  
 Budget Amendment  
 December 19, 2024

Budget Amendment

Department Number	General Ledger Name	General Ledger Number	Amount
	Revenue Bond Proceeds – 2024	3809330	\$29,100,000
	Revenue Bond Premium – 2024	3809335	\$ 1,900,000
8212	Expenditure – Bond Issuance Costs 2024	6007515	\$ 375,000
8212	Expenditure – Professional Services	8209700	\$ 1,125,000
8212	Expenditure - Construction	8305800	\$29,500,000

Valve Maintenance Trailer #2024-25VMT BID TABULATION	
Monday, October 7, 2024 2:00 pm	
BIDDER	UNIT PRICE
E.H. WACHS	\$ 92,275 <sup>00</sup>
SOUTHERN VAC	\$ 100,886 <sup>00</sup>

**Present:**

Eric Adams, CFO JEA

Amanda Ramirez, Finance and Purchasing Administrator





onwasa.com

228 Georgetown Rd  
Jacksonville, NC 28540

REQUEST FOR BID

TITLE:

**Valve Maintenance Trailer**  
Formal Request for Bid #2024-2025VMT

**FORMAL RFB**

**Date of Issue: September 16, 2024**

**Bids Due: September 30, 2024**

For more information contact:

J. Eric Adams

Chief Financial Officer

228 Georgetown Road

Jacksonville, NC 28540

Phone (910) 937-7567

Email: eadams@onwasa.com

**Onslow Water and Sewer Authority  
Valve Maintenance Trailer  
Formal Request for Bid #2024-2025VMT**

**Instructions to Bidders**

**Bids will be received by the Onslow Water & Sewer Authority (ONWASA) to provide one (1), valve maintenance trailer as specified in this Request for Bids (RFB) until 2:00 pm on September 30, 2024.**

**Bids must be submitted with a completed Bid Form, Vendor Form, and E-Verify Affidavit. Sealed bids must be addressed to the Bid Opening, RFB #2024-2025VMT Onslow Water & Sewer Authority, attention J. Eric Adams, 228 Georgetown Road, Jacksonville NC 28540,**

**The equipment must meet all minimum specifications for the kind and type specified or an approved equivalent. All equivalents must be listed.**

**All bids shall be valid for sixty (60) days pending the purchase award and Board approval.**

**Bid price should not include any sales or use taxes.**

**All bids will be for new equipment.**

**All bids shall include delivery to ONWASA and estimated time of delivery.**

**Complete specifications shall be included on all equipment bids.**

ONWASA reserves the right to reject any or all bids, to waive informalities, and to accept any bid which, in the opinion of ONWASA, appears to be in its best interest.

All bids shall include a completed Onslow Water and Sewer Authority Vendor Form (Exhibit 1) and shall also comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes by filling out the E-Verify Affidavit (Exhibit 2). By acceptance of this Bid, the Bidder affirms they are not listed on the Final Divestment List created by the North Carolina State Treasurer pursuant to N.C.G.S. 143-6A-4, Iran Divestment Act Certification.

This RFB and all Bidder responses are considered public information, except for trade secrets specifically identified in writing by the Bidder, which will be handled according to North Carolina State Statute or other laws. Any section of the Bidder's response package that is deemed to be a trade secret by the Bidder shall be submitted in a separate envelope clearly marked "TRADE SECRET INFORMATION - DO NOT DISCLOSE."

For any questions regarding this bid, please contact J. Eric Adams at [eadams@onwasa.com](mailto:eadams@onwasa.com).

**Specification**

Quantity – One (1)

General Description:

Valve Maintenance Trailer (minimum requirements)

1. 750 Ft/lb extended reach valve operator
2. Ruggedized handheld tablet controller/datalogger with GPS
3. Tier 4F compliant, minimum 1.1L, 4-stroke, liquid-cooled, IDI diesel engine
4. Auxiliary HTMA Class II circuit (10-gallon reservoir, fan-cooled heat exchanger, continuous duty rated for 8 GPM @ 1,800 PSI).
5. 500 CFM-11-inch positive displacement blower
6. 250-gallon spoils containment tank
7. Power hydraulic slide, dump, and latching rear door
8. 2.5 GPM @ 3000 psi pressure washer system
9. 7-gallon anti-freeze tank
10. 95-gallon water tank
11. 2-1/2in, 1-1/4in & 7/8" suction wands
12. One (1) short and one (1) long wash-down gun
13. Trailer must be adequate for the quoted equipment

**Options (please include in the equivalents section below)**

1. Lightbar
2. Auxiliary hydraulic hose reel
3. Bluetooth tether
4. Lockable watertight job boxes
5. Magnetic valve box cover lifter

The equipment I have priced meets the minimum specifications or equivalents stated in the specifications. State the equivalent details below referencing the specification by number.

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Signature of Bidder

**Equivalents For Valve Maintenance Trailer**

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

### Bid Form

To: Onslow Water and Sewer Authority

The undersigned, as the bidder, hereby declares that this bid is made without connection to any other person, company, or parties making a similar bid or proposal and that the bid is in all respects fair and in good faith, without collusion or fraud.

The bidder has carefully examined the specifications and instructions to bidders and hereby declares that bidder will furnish the equipment called for in the manner prescribed in the specifications and instructions to bidders for the following price:

General Description	Qty	Year	Make/Model	Unit Price
Valve Maintenance Trailer	1			

Estimated Delivery Date \_\_\_\_\_

\_\_\_\_\_  
Name of Business Submitting Proposal

\_\_\_\_\_  
Signature of Authorized Representative/Title

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
Email Address of Representative

**Exhibit 1**  
**Onslow Water & Sewer Authority**  
**Vendor Form**  
**Finance Office**  
**228 Georgetown Road**  
**Jacksonville, NC 28540**

Name (as reported on your income tax return) \_\_\_\_\_  
Business Name \_\_\_\_\_ Vendor# \_\_\_\_\_ (to be assigned)  
Federal ID# \_\_\_\_\_ or SS# \_\_\_\_\_

Check one of the following:

Corporation  Sole Proprietorship  Partnership  Other \_\_\_\_\_

Order Address

Payment Address

Street \_\_\_\_\_  
PO Box \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_  
Zip Code \_\_\_\_\_  
Contact Person \_\_\_\_\_  
Phone Number \_\_\_\_\_  
Fax Number \_\_\_\_\_  
Terms \_\_\_\_\_

Street \_\_\_\_\_  
PO Box \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_  
Zip Code \_\_\_\_\_  
Contact Person \_\_\_\_\_  
Phone Number \_\_\_\_\_  
Fax Number \_\_\_\_\_  
Discount \_\_\_\_\_  
E-Mail Address \_\_\_\_\_

Are you related to or have a professional relationship with any ONWASA employee?  Yes  No  
(If you answered yes, a Relationship Vendor form will have to be completed before any payments can be made.)

Are you a minority business enterprise?  Yes  No

If you answered yes, please check the appropriate box:

- African American  Hispanic
- American Indian  Female
- Asian American
- Socially and economically disadvantaged as defined in 15 U.S .C. 637

Product(s) and/or Service(s)

Please list the type of product(s) and/or service(s) that your company can provide:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

**Onslow Water & Sewer Authority**  
**Finance Office**  
**Relationship Form**  
228 Georgetown Road  
Jacksonville, NC 28540

If you are related to or have a professional relationship with any employee of Onslow Water and Sewer Authority, this form must be completed and returned to the finance office before any payments will be made.

Vendor Information:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Related ONWASA employee: \_\_\_\_\_

Relationship to employee: \_\_\_\_\_

We agree that our relationship will not hinder or corrupt our professional relationship with Onslow Water & Sewer Authority.

\_\_\_\_\_  
Vendor Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
ONWASA Employee Signature

\_\_\_\_\_  
Date

Onslow Water and Sewer Authority is aware and understands these parties have a relationship with each other. The decision to authorize the use of this vendor was not influenced in any manner by the relationship referenced above.

\_\_\_\_\_  
Department Head

\_\_\_\_\_  
Date

\_\_\_\_\_  
Finance Officer

\_\_\_\_\_  
Date

**Exhibit 2  
E-Verify Affidavit**

I, \_\_\_\_\_ (the individual attesting below), being duly authorized by and on behalf of \_\_\_\_\_ (the entity identified as the "Employer") after first being duly sworn hereby swears or affirms as follows:

1. Employer understands that E-Verify is the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law in accordance with NCGS §64-25(5).
2. Employer understands that Employers Must Use E-Verify. Each employer, after hiring an employee to work in the United States, shall verify the work authorization of the employee through E-Verify in accordance with NCGS§64-26(a).
3. Employer is a person, business entity, or other organization that transacts business in this State and that employs 25 or more employees in this State.

Employer employs the following number of employees in this State (check which is applicable):

- |                        |       |                       |       |
|------------------------|-------|-----------------------|-------|
| a. Less than 25        | _____ | b. Between 25 and 100 | _____ |
| c. Between 100 and 500 | _____ | d. 500 or more        | _____ |

4. Employer will ensure compliance with E-Verify by any subcontractors subsequently hired by Employer for specified contracts subject to E-Verify entered into with the Onslow Water & Sewer Authority Employer.

This \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Signature of Affiant

Print or Type Name: \_\_\_\_\_

State of \_\_\_\_\_ County of \_\_\_\_\_

Signed and sworn to (or affirmed) before me, this the \_\_\_ day

of \_\_\_\_\_, \_\_\_\_\_.

My Commission Expires:

\_\_\_\_\_

Notary Public

(Affix Official/Notarial Seal)

**ONSLow WATER & SEWER AUTHORITY  
WALLACE CREEK FORCE MAIN PROJECT**

**PROJECT ORDINANCE**

**BE IT ORDAINED** by the Board of Directors of Onslow Water & Sewer Authority (ONWASA) that, pursuant to Section 13.2 of Chapter 159 of the General Statutes of North Carolina, the following Wallace Creek Force Main Project is hereby adopted:

**Section I.**

This item consists of a single-prime construction contract to replace an existing sanitary sewer transmission force main crossing Wallace Creek. This project is necessary due to a line break in this section of the force main which resulted in a spill into Wallace Creek. Temporary repairs were made to the line and this project will construct the permanent repair of the force main with a new 24-inch fusible C900 PVC line.

**Section II.**

The officers of Onslow Water & Sewer Authority are hereby directed to proceed with the Wallace Creek Force main Project.

**Section III.**

The following revenue is anticipated to be available to complete the project:

Fund Balance Appropriation	\$750,000
Total	<u>\$750,000</u>

**Section IV.**

The following amounts are appropriated for the project:

Construction	\$750,000
Total	<u>\$750,000</u>

**Section V.**

The Finance Officer is hereby directed to maintain within the Water & Sewer Fund sufficient specific detailed accounting records to provide the accounting required by federal and state regulations and in accordance with generally accepted accounting procedures.

**Section VI.**

The Finance Officer is directed to report monthly on the financial status of the project and the total revenues received.

**Section VII.**

The Budget Officer is directed to include an analysis of past and future costs and revenues on this project as a part of every budget submission made to this Board.

**Section VIII.**

Copies of this Wallace Creek Force Main Project Ordinance shall be made available to the Budget Officer for direction in carrying out these projects.

Adopted this 19th day of December 2024.

ONSLOW WATER & SEWER  
AUTHORITY BOARD OF  
DIRECTORS



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Michael R. Bennett, Chairman

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Heather Norris, Clerk to the Board

Project Ordinance  
Wallace Creek Force Main  
Budget Amendment  
December 19, 2024

Budget Amendment – Fund 61 and Fund 40

Department Number	General Ledger Name	General Ledger Number	Amount
	Fund Balance Appropriation	3919940	\$750,000
9910	Transfer to Capital Projects	8000040	\$750,000
	Transfer from Operating – Wallace Creek	3709997	\$750,000
8793	Construction – Wallace Creek	8925800	\$750,000



**HIGHFILL**

Highfill Infrastructure Engineering, P.C.  
3804 Park Avenue, Unit A  
Wilmington, North Carolina 28403  
Tel 910-313-1516 | NC Firm License No. C-2586

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December 5, 2024

Mr. Jeffrey T. Lohr, PE  
Chief of Engineering  
Onslow Water and Sewer Authority  
228 Georgetown Road  
Jacksonville, NC 28540

RE: Recommendation of Award  
Wallace Creek HDD Replacement  
Onslow County, NC  
HIGHFILL Project No.: ONW2405

Dear Mr. Lohr:

Attached is the certified bid tabulation for the three sealed bids opened on December 3, 2024, for the Wallace Creek HDD Replacement project. Military and Federal Construction Company, Inc. submitted the lowest bid in the amount of \$748,910.72. We have reviewed all bids and believe them to be competitive and fair.

Military and Federal Construction Company, Inc. has demonstrated sufficient qualifications, experience, and manpower to complete the project. It is our understanding that the low bid is within the project budget. With the project being within budget, the bid responsive, and the contractor deemed responsible, we recommend award of the referenced project to Military and Federal Construction Company, Inc. The contract will need to be awarded within the 60-day bid holding period.

Upon your direction, we will deliver the contract documents to you for execution and routing. Let us know if you have any questions or need more information regarding this recommendation.

Sincerely,

HIGHFILL INFRASTRUCTURE ENGINEERING, P.C.

Chad Easter, PE  
Project Manager

enclosures

**WALLACE CREEK HDD REPLACEMENT  
ONSLow WATER AND SEWER AUTHORITY  
HIGHFILL INFRASTRUCTURE ENGINEERING  
ONWASA OFFICES - JACKSONVILLE, NC**

**BID DATE/TIME:** December 3, 2024 @ 2:00 P.M. EDT

PROJECT No. ONW2405

CONTRACTORS	LICENSE NO.	CLASSIFICATION	BID BOND	TOTAL BID PRICE	REMARKS
State Utility Contractors, Inc. P.O. Box 5019 Monroe, NC 28111-5019	17793	UL;UC	5%	\$1,624,910.00	Alternate 1: Add \$10,000.00
Jymco Construction 1586 Yelverton Grove Rd. Smithfield, NC 27577	76371	UL;UC	5%	\$1,232,611.00	Alternate 1: Add \$223,675.00
Military and Federal Construction Company, Inc. 846 Bell Fork Road Jacksonville, NC 28540	54890	UL;PU	5%	\$748,910.72	Alternate 1: Add \$180,055.24 Apparent Low Bidder (Total reflects sum of calculated extended totals using submitted unit prices.)

The bids tabulated herein were opened and read aloud at 2:00 P.M., EDT on December 3, 2024 at the office of the Onslow Water and Sewer Authority, Jacksonville, NC. The Bid Tabulation is correct in that it contains the unit prices as presented on the original bid schedule of each bidder.

**HIGHFILL INFRASTRUCTURE ENGINEERING**

3804 Park Avenue, Unit A  
Wilmington, NC 28403  
910-313-1516  
License No. C-2586




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Chad D. Easter, P.E.

**SUMMARY BID TAB**  
**WALLACE CREEK HDD REPLACEMENT**  
**ONSWLOW WATER AND SEWER AUTHORITY**  
**Onslow County, North Carolina**  
**HIGHFILL Project No.: ONW2405**

EXHIBIT C

**HIGHFILL INFRASTRUCTURE ENGINEERING, P.C**  
**License No. C-2586**  
**BID DATE: December 3, 2024**

				LOW BIDDER					
				State Utility Contractors, Inc. P.O. Box 5019 Monroe, NC 28111-5019 License No. 17793		JYMCO Construction 1586 Yelvertone Grove Rd. Smithfield, NC 27577 License No. 76371		Military and Federal Construction Company, Inc. 846 Bell Fork Road Jacksonville, NC 28540 License No. 54890	
Pay Item No.	Item Description	Est. Qty.	Unit	UNIT PRICE	EXTENDED TOTAL	UNIT PRICE	EXTENDED TOTAL	UNIT PRICE	EXTENDED TOTAL
1	Mobilization (Max 3% of Total Bid)	1	LS	\$ 75,000.00	\$ 75,000.00	\$ 50,000.00	\$ 50,000.00	\$ 4,581.93	\$ 4,581.93
2	Select Backfill	50	CY	\$ 125.00	\$ 6,250.00	\$ 100.00	\$ 5,000.00	\$ 123.56	\$ 6,178.00
3	24-inch Force Main Installed by HDD	575	LF	\$ 1,600.00	\$ 920,000.00	\$ 1,111.00	\$ 638,825.00	\$ 703.47	\$ 404,495.25
4	24-inch RJ DIP Installed by Trenching	140	LF	\$ 1,200.00	\$ 168,000.00	\$ 663.00	\$ 92,820.00	\$ 541.12	\$ 75,756.80
5	Ductile Iron Fittings	4,530	LBS	\$ 22.00	\$ 99,660.00	\$ 25.00	\$ 113,250.00	\$ 10.61	\$ 48,063.30
6	Connect to Ex. 24-inch Force Main	2	EA	\$ 43,500.00	\$ 87,000.00	\$ 17,875.00	\$ 35,750.00	\$ 9,857.29	\$ 19,714.58
7	Concrete Thrust Collart	2	EA	\$ 19,500.00	\$ 39,000.00	\$ 8,083.00	\$ 16,166.00	\$ 10,356.55	\$ 20,713.10
8	24-inch Line Stop	2	EA	\$ 78,000.00	\$ 156,000.00	\$ 79,400.00	\$ 158,800.00	\$ 23,747.71	\$ 47,495.42
9	Temporary Bypass	1	LS	\$ 55,000.00	\$ 55,000.00	\$ 110,000.00	\$ 110,000.00	\$ 80,825.15	\$ 80,825.15
10	Erosion Control and Stie Stabilization	1	LS	\$ 19,000.00	\$ 19,000.00	\$ 12,000.00	\$ 12,000.00	\$ 41,087.19	\$ 41,087.19
				<b>Total</b>	<b>\$ 1,624,910.00</b>	<b>Total</b>	<b>\$ 1,232,611.00</b>	<b>Total</b>	<b>\$ 748,910.72</b>
Alternate 1	30-inch HDPE by HDD in Lieu of 24-inch FPVC	1	LS	Add	\$ 10,000.00	Add	\$ 223,675.00	Add	\$ 180,055.24
				<b>Total w/ Alt. 1</b>	<b>\$ 1,634,910.00</b>		<b>\$ 1,456,286.00</b>		<b>\$ 928,965.96</b>

**ONSLow WATER & SEWER AUTHORITY  
CAMP DAVIS WASTEWATER EXTENSION**

**PROJECT ORDINANCE**

**BE IT ORDAINED** by the Board of Directors of Onslow Water & Sewer Authority (ONWASA) that, pursuant to Section 13.2 of Chapter 159 of the General Statutes of North Carolina, the following Camp Davis Wastewater Extension Project is hereby adopted:

**Section I.**

The Camp Davis Wastewater Extension project consists of the extension of the existing sewer system to include two new duplex submersible pump stations that will operate in series through a total of approximately 57,000 linear feet of force main.

**Section II.**

The officers of Onslow Water & Sewer Authority are hereby directed to proceed with the Camp Davis Wastewater Extension Project.

**Section III.**

The following revenue is anticipated to be available to complete the project:

Future Financing	\$2,000,000
Total	<u>\$2,000,000</u>

**Section IV.**

The following amounts are appropriated for the project:

Professional Services, Admin, Permits	\$ 2,000,000
Total	<u>\$2,000,000</u>

**Section V.**

The Finance Officer is hereby directed to maintain within the Water & Sewer Fund sufficient specific detailed accounting records to provide the accounting required by federal and state regulations and in accordance with generally accepted accounting procedures.

**Section VI.**

The Finance Officer is directed to report monthly on the financial status of the project and the total revenues received.

**Section VII.**

The Budget Officer is directed to include an analysis of past and future costs and revenues on this project as a part of every budget submission made to this Board.

**Section VIII.**

Copies of this Camp Davis Wastewater Extension Project Ordinance shall be made available to the Budget Officer for direction in carrying out these projects.

Adopted this 19th day of December 2024.



ON SLOW WATER & SEWER  
AUTHORITY BOARD OF  
DIRECTORS

A handwritten signature in black ink, appearing to read "M. R. Bennett", written over a horizontal line.

Michael R. Bennett, Chairman

A handwritten signature in black ink, appearing to read "Heather Norris", written over a horizontal line.

Heather Norris, Clerk to the Board

Project Ordinance  
Camp Davis Wastewater Extension  
Budget Amendment  
November 21, 2024

Budget Amendment – Fund 61 and Fund 42

Department Number	General Ledger Name	General Ledger Number	Amount
	Revenue – Fund Balance Appropriation	3919940	\$2,000,000
9910	Expenditure – Transfer to Capital Projects	8000040	\$2,000,000
	Revenue – Transfer from Operating	3709991	\$2,000,000
8213	Expenditure – Professional Services	8209800	\$2,000,000

# Camp Davis Sewer Extension RFQ

## Firm: Highfill

General Information and Project Understanding	25%											SCORE
		Lowest									Highest	
Firm name, address, contact person(s), telephone number, and email address		1	2	3	4	5	6	7	8	9	10	9.3
Understanding or project scope and drivers		1	2	3	4	5	6	7	8	9	10	8.7
Approach for the work and to keep the project on schedule		1	2	3	4	5	6	7	8	9	10	9
<b>TOTAL CATEGORY SCORE</b>											<b>6.75</b>	
<b>Relevant Firm Experience with Design-Build</b>	<b>50%</b>											
Projects of similar size and scope		1	2	3	4	5	6	7	8	9	10	8.3
Record of project success as an owner's advisor		1	2	3	4	5	6	7	8	9	10	8.7
Development of Owner's project criteria and RFQ		1	2	3	4	5	6	7	8	9	10	8.7
Cost evaluation and techniques to review 60% GMP proposals		1	2	3	4	5	6	7	8	9	10	8.7
Vast knowledge of wastewater treatment plant design		1	2	3	4	5	6	7	8	9	10	9
Firms proven history and understanding of the design-build process		1	2	3	4	5	6	7	8	9	10	8.7
<b>TOTAL CATEGORY SCORE</b>											<b>26</b>	
<b>Overall Staff Experience Proposed for this Project</b>	<b>25%</b>											
Adequate staffing/resources to perform the work		1	2	3	4	5	6	7	8	9	10	9
Qualification and experience of the personnel who will be performing the owner's advisor services		1	2	3	4	5	6	7	8	9	10	8.7
Organization chart		1	2	3	4	5	6	7	8	9	10	8.7
<b>TOTAL CATEGORY SCORE</b>											<b>6.58</b>	

**OVERALL TOTAL 39.333**

**ONslow WATER & SEWER AUTHORITY  
SUMMERHOUSE WWTP INTERIM CAPACITY IMPROVEMENTS  
PROJECT NUMBER CIP-005**

**AMENDED PROJECT ORDINANCE**

**BE IT ORDAINED** by the Board of Directors of Onslow Water & Sewer Authority (ONWASA) that, pursuant to Section 13.2 of Chapter 159 of the General Statutes of North Carolina, the following Summerhouse WWTP Interim Capacity Improvements project is hereby adopted:

**Section I.**

The Summerhouse WWTP Interim Capacity Improvements project shall consist of the design, permitting and construction necessary to temporarily increase the treatment and effluent disposal capacities at the Summerhouse WWTP, in order to meet anticipated system demand. The design and permitting have been completed and the construction work was recently bid out to install a new membrane system. This will include, but not limited to, a high efficiency membrane system, a new UV system/equipment, new influent screening, improved platforms, refurbishment of the Administration building and a new concrete foundations and groundworks to support Phase II MBR and UV systems. It was previously amended to cover construction of Phase I. It is now being amended for an additional \$6.3 million to include Phase II membranes, UV systems and construction.

**Section II.**

The officers of Onslow Water & Sewer Authority are hereby directed to proceed with the Summerhouse WWTP Interim Capacity Improvements project, Project Number CIP-005.

**Section III.**

The following revenue is anticipated to be available to complete the project:

Fund Balance	\$ 10,132,000
Total	\$ <u>10,132,000</u>

**Section IV.**

The following amounts are appropriated for the project:

Professional Services, Admin, Permits	\$ 515,000
Construction	\$ 9,617,000
Total	\$ <u>10,132,000</u>

**Section V.**

The Finance Officer is hereby directed to maintain within the Water & Sewer Fund sufficient specific detailed accounting records to provide the accounting required by federal and state regulations and in accordance with generally accepted accounting procedures.

**Section VI.**

The Finance Officer is directed to report monthly on the financial status of the project and on the total revenues received.

**Section VII.**

The Budget Officer is directed to include an analysis of past and future cost and revenues on this project as a part of every budget submission made to this Board.

**Section VIII.**

Copies of this Summerhouse WWTP Interim Capacity Improvements Project Ordinance shall be made available to the Budget Officer for direction in carrying out these projects.

Adopted this 19th day of December 2024.



ON SLOW WATER & SEWER  
AUTHORITY BOARD OF  
DIRECTORS

A handwritten signature in black ink, appearing to read "Michael R. Bennett".

Michael R. Bennett, Chairman

A handwritten signature in black ink, appearing to read "Heather Norris".

Heather Norris, Clerk to the Board

Amended Project Ordinance  
 Summerhouse WWTP Interim Capacity Improvements  
 Project Number CIP-005  
 Budget Amendment  
 December 19, 2024

## Budget Amendment Fund 61

Department Number	General Ledger Name	General Ledger Number	Amount
	Fund Balance Appropriated	3919940	\$10,132,000
9910	Transfer to Capital Projects	8000040	\$10,132,000

## Budget Amendment Fund 40

Department Number	General Ledger Name	General Ledger Number	Amount
	Revenue – Transfer from Operating	3709983	\$10,132,000
8783	Expenditure – Professional Services	8830400	\$ 515,000
8783	Expenditure - Construction	8835800	\$ 9,617,000

# For Earth, For Life



Firm Proposal for  
Summerhouse, NC Phase 2  
Membrane Package System



December 13, 2024



Prepared By:

Kubota Membrane USA

Damone Supica, PE

[damone.supica@kubota.com](mailto:damone.supica@kubota.com)

425-248-7897

December 13, 2024

Jeffrey Lohr, PE  
Engineering Manager  
ONWASA  
228 Georgetown Rd  
Jacksonville, NC 28540

Subject: Updated Firm Proposal for Phase 2 Project at Summerhouse, NC Facility.

Dear Jeff,

Thank you again for your interest in Kubota membranes for your MBR system at Summerhouse, NC. Attached is our updated proposal for your review and consideration.

We added additional scope to account for some equipment and control panel deficiencies in the existing MBR 3 and MBR 4 trains including additional biological process equipment, instrumentation for process control of the new process blowers, flow meters and controls for the RAS pumping system, VFDs and enclosures and updated final freight cost to the job site.

The scope has been selected to be consistent with the previously supplied Phase 1 scope of supply. One area that will need further investigation will be the condition and needs of the existing process zone equipment. It may be that additional equipment or instruments may be required. Kubota is happy to investigate these needs and supply the other parts and pieces as a change order at a later date.

**Firm price for the attached scope of supply, inclusive of engineering support, freight to the job site, and startup services is \$1,934,700.00.**

Please let us know if you have any questions or if we can provide additional information.

Regards,

**Damone Supica, PE**  
Product Engineer | Kubota Membrane USA Corporation  
Cell: 425-686-2727  
Email: [damone.supica@kubota.com](mailto:damone.supica@kubota.com)

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## 1 Introduction

KUBOTA Membrane USA (KMU) appreciates the opportunity to present the enclosed proposal to supply a packaged membrane system for the project in Summerhouse, North Carolina. Included below is a description of the proposed system, along with a scope of supply and price.

## 2 Design Overview

The proposed packaged membrane system is designed to replicate the system delivered by KMU as part of the Phase 1 project. The Phase 1 package system supplied by Kubota is currently operating with the first two existing process trains (Train 1 and Train 2). The new package plant included in this proposal will be installed as part of the two remaining process trains (Train 3 and Train 4).

The design criteria used to size the proposed system are presented below.

### 2.1 Influent Design Flow

The flow conditions used for the preliminary design are shown in the table below.

*Table 1: Design Flow Conditions*

Condition	Flow (each train)	Unit
Average Day Flow (ADF)	100,000	GPD
Max Month Flow (MMF)	150,000	GPD
Peak Day Flow (PDF)	250,000	GPD

### 3 Scope of Supply

KMU’s scope of supply is limited to the equipment and services outlined in this proposal. The equipment will be supplied by KUBOTA Membrane USA and is included in the proposal price as listed in Section 5. This section details equipment supplied as part of the package system. KMU is proposing this equipment based on our current understanding of the needs for the existing process train. Additional equipment, if required to repair the existing trains, can be provided under a separate scope.

#### 3.1 Package System Equipment and Instrumentation

Table 2: Major Equipment and Instrumentation in KMU's Scope of Supply

Name	Type	Size	Motor HP	QTY
<b>Anoxic (AX) Equipment</b>				
AX1 Mixer	Submersible	13,300 gal/tank	4.7	2
AX1 Mixer Guiderail Assembly	Floor Mount			2
<b>Pre-Aeration (PA) Equipment</b>				
PA Diffuser	Fine Bubble	300 scfm		2
PA Level Transmitter	Hydrostatic			2
PA DO Probe	Digital			2
PA pH/DO Transmitter				2
Pole				2
<b>MBR Equipment</b>				
MBR SMU	Flat Plate			6
MBR Air Isolation Valve	Manual Butterfly	3 inch		6
MBR PRMT Isolation Valve	Manual Butterfly	3 inch		6
MBR Level Switch	Float			2
MBR Level Sensor	Pressure			2

Name	Type	Size	Motor HP	QTY
<b>Permeate (PRMT) Control Equipment</b>				
PRMT Pump	Self-Priming Centrifugal	155 gpm	7.5	3 (2 duty + 1 standby)
PRMT Vent Valve	ON/OFF Ball	1 inch		2
PRMT Flow Control Valve	Modulating Butterfly	3 inch		2
PRMT Pump Isolation Valve	Manual Butterfly	3 inch		12
PRMT Pump Check Valve	Check Valve	3 inch		3
PRMT Pump Pressure Gauge				3
PRMT Pump Gauge Isolation Valve	Ball Valve			3
PRMT Pump Pressure Transmitter	Diaphragm			2
PRMT Flow Meter	Electromagnetic	3 inch		2
PRMT Sampling Pump	Peristaltic			1
PRMT Turbidity Meter	Laser			1
PRMT Turbidity Transmitter				1
Turbidity Meter Maintenance Kit				1
<b>Feed Forward (FF) Control Equipment</b>				
FF Pump	End Suction	530 gpm	7.5	3 (2 duty + 1 shelf spare)
FF Pump Pressure Gauge	FF Pump Pressure Gauge with Diaphragm Seal			2
FF Pump Gauge Isolation Valve	Ball Valve			4
FF Channel Level Switch	Float			2
Anoxic Tank Level Transmitter	Hydrostatic			2
FF Flow Meter	Electromagnetic	6 inch		2
WAS Flow Meter	Electromagnetic	4 inch		2
WAS Control Valve	Modulating Plug Valve	4 inch		2

Name	Type	Size	Motor HP	QTY
<b>Return Activated Sludge (RAS) Control Equipment</b>				
RAS Pump	End Suction	530 gpm	7.5	2 duty
RAS Pump Pressure Gauge	RAS Pump Pressure Gauge with Diaphragm Seal			2
RAS Flow Meter	Electromagnetic			2
<b>MBR Blower</b>				
MBR Blower with pressure kit	Regenerative	295 scfm	20	3 (2 duty + 1 standby)
MBR Blower Sound Enclosure				3
MBR Blower Pressure Gauge				3
MBR Blower Pressure Transmitter	Diaphragm			2
MBR Blower Pressure Relief Valve				3
MBR Blower Silencer				3
MBR Blower Flow Meter	Thermal Mass	4 inch		2
<b>PA Blower</b>				
PA Blower with pressure kit	Regenerative	295 scfm	20	2
PA Blower Pressure Gauge				2
PA Blower Pressure Transmitter	Diaphragm			2
PA Blower Pressure Relief Valve				2
PA Blower Silencer				2
PA Blower Flow Meter	Thermal Mass	4 inch		2
<b>Clean-In-Place Equipment</b>				
SMU CIP System				1

Name	Type	Size	Motor HP	QTY
<b>Package System</b>				
Membrane Tank Painted Carbon Steel	KUBOTA SMU Package, Carbon Steel	28'8" x 10' x 12'		1
<b>System Control Equipment</b>				
Control System	Convert Existing MBR 3 and MBR 4 Panels to Remote I/O Panels			1
Motor Control Panel with VFDs - 2 NEMA 4X Enclosures	Allen Bradley Powerflex 525, NEMA 4X 316SS Enclosure			1
PLC Wire Terminations	PLC Wire Terminations			1

## 3.2 Control System Design

The control system for Phase 2 consists of a new remote IO control panel to be installed in the existing electrical room of one of the existing MBR 3 or MBR 4 trains and conversion of the existing PLC control panels to Ethernet remote IO slaves to the new PLC processor.

The new remote IO panel will be used for new I/O not already connected to the existing PLC panels. A new touchscreen PC assembly will be installed in the existing MBR#4 control panel and will replace the existing PanelView Plus OIT.

In this phase, MBR #3 and MBR #4 will be converted to the new system utilizing standard Kubota PLC and HMI programming and incorporated into the Phase I PLC and HMI program. Existing MBR 3 and 4 Control Panel I/O modules and control panel parts were removed prior to Phase 2, new modules and parts will be provided to restore control panel functionality.

The MBR motor control panels will be 316 Stainless Steel enclosures with Allen Bradley Powerflex VFDs which will conserve limited wall space in the existing package plant electrical/mechanical rooms.

### PLC Control Panel Features

- NEMA 12, 42" x 36" x 13" wall mount enclosure
- Managed Ethernet Switch with fiber optic transceivers to connect to new motor control panel, remote I/O panels and plant SCADA network.
- Allen Bradley 1769-AENTR remote IO adapter connected to Phase I processor (sized for future expansion)
- Redundant 24 VDC power supply for field devices
- All I/O points wired to terminal blocks
- Surge Suppressor on AC mains
- Surge Suppression on all analog and digital channels the same as added to the Phase I panels
- LED Panel Light
- Convenience power outlet
- 3-point latching door handle
- UPS allowing operation through power losses of up to ten minutes
- Fabricated and listed per UL 508a requirements
- Complete, documented control panel functionality test, including point-to-point testing of all I/O channels.
- Detailed panel drawings and loop interconnects
- Submittals as required

### SCADA System Hardware and Software Features:

- Hope Industrial Touchscreen Operator Interface, with Dell SFF PC, Windows 10 LTSC
- VTSCADA client software (licensing provided by owner)

PLC and HMI Programming:

- PLC Programming following Kubota Control Narratives and using PLC Programming Standards
- HMI Programming following Kubota Control Narratives using HMI Programming Standards
- PLC/HMI programming FAT at Control Engineers office in Boise, Idaho or Remotely witnessed

Wiring Terminations Scope Included:

- Ethernet cable termination
- Instrument power terminations on field and control panel sides for Kubota supplied equipment
- Valve power and control signals sourced for valves sourced from PLC panel
- Instrument power and control signals for Kubota supplied equipment
- UV control terminations
- Motor control signal terminations
- Confirmation that equipment is ready to be terminated must be made prior to CE travel to site
- It is assumed that all wires will have some identification labelling on each end

Wiring Terminations Scope Excluded:

- Motor Power connections
- UV Power connections or ballast connections
- Power terminations from any equipment sourced external to the PLC Panel
- Power or control terminations from any equipment not provided by Kubota
- Demo of existing conductors or raceways

Engineering:

- Control panel design, drawings, and wiring schematics in AutoCAD
- Loop wiring (point-to-point) drawings in AutoCAD
- Submittal documents
- 100% design documentation
- As-delivered documentation
- As-built documentation

Startup:

- 7 site visit trips included
- Three days on-site to reinstall 1769 parts in MBR 3 & 4 Control Panels and restore functionality
- Three Separate one-week trips for wire terminations
- Five days on-site for I/O checkout and loop testing (Terminations by electrical contractor)
- Five days onsite for clean water testing and plant operational verification
- Five days onsite for tuning and plant operational verification

### Motor Control Panel (MCP) Features

- NEMA 4X 316 SS 60" x 60" x 18" Floor Mount Disconnect Enclosure
- 3400 BTU side mount 316 SS Air Conditioner
- Cisco 3100 Managed Ethernet Switch for connection to all VFDs
- Redundant 480V:24 VDC power supplies
- Allen Bradley Powerflex 525 VFDs for all motors
- Surge Suppressor on AC mains
- LED Panel Lights
- Flange mounted 480V disconnect with 35KA Main Circuit Breaker
- Fabricated and listed per UL 508a requirements
- Complete, documented control panel functionality test, including point-to-point testing of all I/O channels.
- Detailed panel drawings and loop interconnects
- Submittals as required

### MCP Engineering:

- Control panel design, drawings, and wiring schematics in AutoCAD
- Submittal documents
- 100% design documentation
- As-delivered documentation
- As-built documentation

The motor control panel motor lists are shown in the tables below.

MBR3 Motor Control Panel				
Tag Name	Description	qty	HP	Voltage
VFD-1704	MBR Blower 4 (20 HP HD)	1	25.0	480
VFD-1706	MBR Blower 6 (20 HP HD)	1	25.0	480
VFD-1300	Treatment Plant Blower #3 (20 HP HD)	1	25.0	480
VFD-0160	NPW Booster Pump	1	7.5	480
VFD-1100	Existing Treatment Tank #3 Anoxic Recycle Pump	1	2.0	480
VFD-1200	Feed Forward Pump #3	1	7.5	480
VFD-1504	Permeate Pump #4 (7.5 HP HD)	1	10.0	480
VFD-1506	Permeate Pump #6 (7.5 HP HD)	1	10.0	480
VFD-1600	RAS Pump #4	1	10.0	480

MBR4 Motor Control Panel				
Tag Name	Description	qty	HP	Voltage
VFD-4100	Treatment Tank 4 Anoxic Recycle Pump	1	2.0	480
VFD-4200	Feed Forward Pump #4	1	7.5	480
VFD-1502	Permeate Pump #5 (7.5 HP HD)	1	10.0	480
VFD-4600	RAS Pump #4	1	10.0	480
VFD-1705	MBR Blower #5 (20 HP HD)	1	25.0	480
VFD-4300	Treatment Tank Blower #4 (20 HP HD)	1	25.0	480

### 3.3 Direct Services Information

The following services are included in Kubota’s scope of supply:

#### Design and Installation Support

- Design support including submittal drawings and P&IDs.
- Delivery coordination with the site contractor.
- 10 days of on-site support during system installation including final equipment placement, and dry/wet mechanical checks.

#### Commissioning and Operating Support

- Preparation and submittal of a system O&M manual for Kubota supplied systems and equipment.
- 10 days of on-site support during system start-up and commissioning including clean water testing and support during seeding.
- Additional days are available as needed at an additional cost.

#### Training

- 3 days of on-site, hands-on operator training using a mix of classroom and field time. See Table 4 below for list of training topics.

Table 4: Training and Workshops included in Kubota's Scope of Supply

Training/workshop	Brief summary
HMI	<ol style="list-style-type: none"> <li>1. Navigation of all HMI screens and menus.</li> <li>2. Review of automatic operations and controls.</li> <li>3. Changing process set points.</li> <li>4. Overriding controls from the HMI.</li> <li>5. Manual operation of the system in the event of a power failure.</li> </ol>
CIP training	<ol style="list-style-type: none"> <li>1. Navigation of CIP (Clean-In-Place), in-situ chemical cleaning (maintenance cleaning).</li> <li>2. Control from HMI and operation of manual valve.</li> <li>3. Adjust set points of chemical flow.</li> </ol>
Troubleshooting	<ol style="list-style-type: none"> <li>1. Case study of troubleshooting</li> <li>2. Recovery from trouble</li> <li>3. “Fish bone” approach</li> </ol>
Daily testing	<ol style="list-style-type: none"> <li>1. Filterability test</li> <li>2. Viscosity measurement</li> </ol>

#### Workshop/Additional Training Available (No Charge)

- In addition to our standard training at commissioning, KUBOTA Membrane USA will host an annual regional operator workshop in which operators meet to exchange ideas and learn about the latest developments in MBR technology.
- Customized individual training, such as membrane disassembling training, is also available upon request.

### Remote Monitoring Available (No Charge for First Year)

- Support by Remote Monitoring

The Kubota membrane system as proposed includes an HMI system that can be remotely monitored and controlled, provided wireless connectivity is available. Technical support staff can monitor the status of your system to proactively address potential problems. Whenever a call is placed to our service staff, that person will be able to log in to the HMI system and easily see what is happening at the plant.

### 3.4 Exclusions to KMU’s Scope of Supply

The following items are not currently included in the KMU scope of supply:

- Performance and payment bond costs.
- Site preparation including preparation of a suitable foundation for the package treatment system.
- Heat tracing and/or freeze protection.
- Equipment unloading and installation at the site.
- Electrical site work and piping outside of the skid (i.e., connecting to main power, backup power, influent and effluent connections, etc.)
- Installation, piping, and wiring of items shipped loose including the fine screen.
- Coarse screening, grit removal, oil and grease removal (if needed).
- Equalization system (pump, mixer, level transmitters, etc.).
  - ✓ Compatible equalization system equipment can typically be controlled by the main Kubota control panel. Kubota can provide equalization system equipment at an additional cost.
- Building construction.
- Treated water holding tank.
- Sludge holding tank and sludge treatment (dewatering, etc.).
- Effluent disinfection system (A separate power supply and control panel will also be required.)
- Carbon addition and alkalinity addition systems (if needed).
- Alum storage facilities, instrumentation and piping.
- Covers on the package plant tanks or overhead walkways and stairs (available at an additional cost)
- Odor control.
- Seismic bracing for equipment, if needed.
- Any civil engineering (including seismic), permits, or inspection required.
- HVAC systems, fire protection, or other building systems.
- Cranes or overhead lifting equipment for the MBR basin.
- Any systems for operation in a classified area. All supplied systems will be “unclassified” in accordance NFPA Standard 820.

## 4 Warranty

Kubota’s optional 10-year membrane warranty, and 1-year mechanical equipment warranty is included in the firm price proposed (Table 5) and goes into effect at the commencement date of commissioning. The warranty included is a guarantee that the products supplied by Kubota are free from defect in material or workmanship.

### 5 Firm Price

The firm price for the package treatment system described herein is shown below in Table 5.

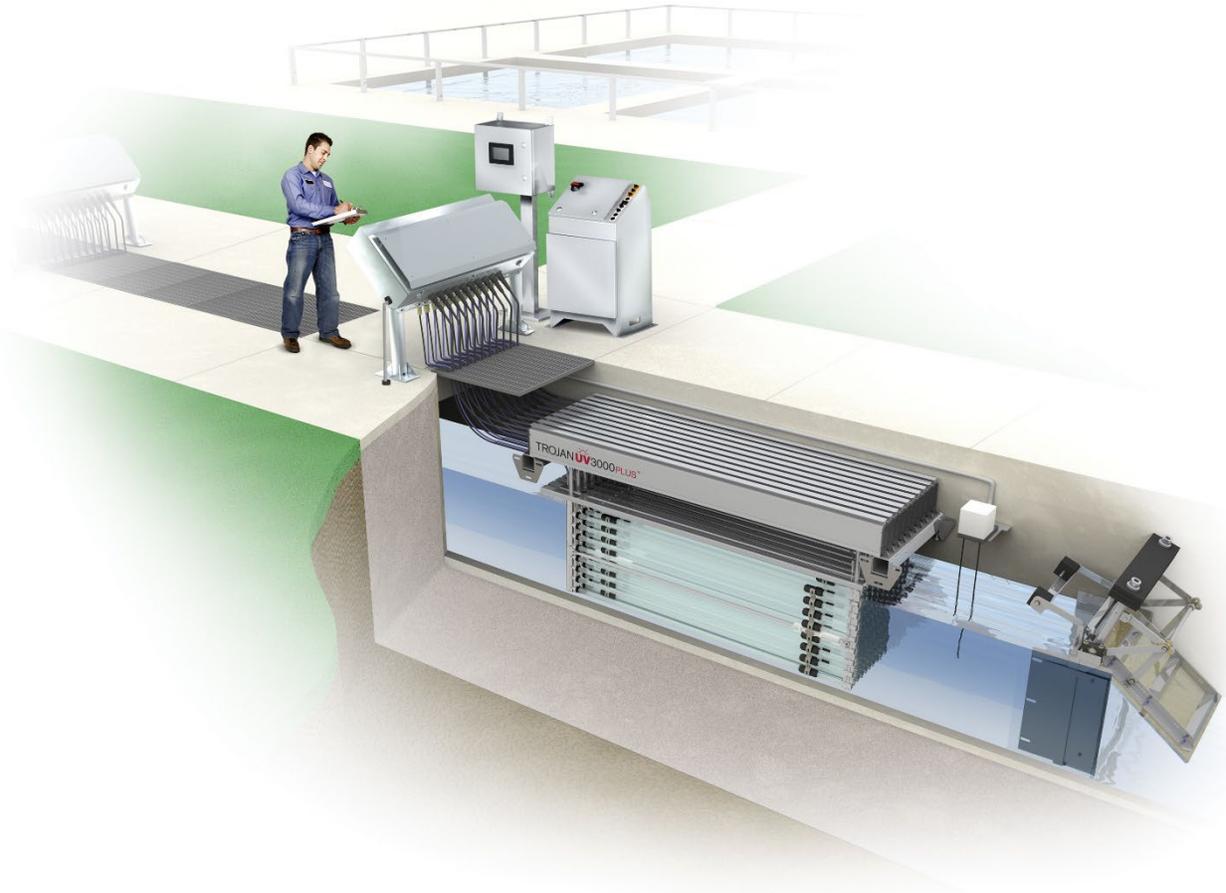
Local, State, and Federal Taxes (if required) are not included and must be added to P.O. amount if required. Performance/payment bonds are not included, but may be supplied for a cost adder based on amount/duration required.

Payment Terms:

- 10% with Purchase Order
- 30% upon completion of project submittals
- 50% due net 30 days after equipment delivery
- 10% upon completion of startup and commissioning services

Table 5: Firm Price

Price	
<u>Firm Price</u>	\$1,934,700.00



# TROJAN **UV**3000**PLUS**®

PROPOSAL FOR: SUMMERHOUSE WRF PHASE II, NORTH CAROLINA  
QUOTE: 247577  
11/06/2024

**Mari Burgess, Trojan Technologies**  
3020 Gore Road  
London, ON, N5V 4T7  
(519) 457 – 3400  
[mburgess@trojantechnologies.com](mailto:mburgess@trojantechnologies.com)

**Local Representative:**  
Shane Eckley, EW2 Environmental  
7245 Pineville-Matthews Road, Suite 100  
Charlotte, NC US  
(704) 542-2444

We are pleased to submit this design and quote for the **SUMMERHOUSE WRF PHASE II** project. This quotation is based on the **TrojanUV3000Plus**<sup>®</sup> system, which offers dependable performance, superior electrical efficiency, and simplified maintenance, meeting your UV treatment needs

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**TrojanUV3000Plus:** for over 25 years, has been continuously refined to incorporate innovative features, enhancing operation ease and reducing O&M costs. The latest generation, released in 2022, continues to focus on these valued features, making the TrojanUV3000Plus a trusted solution in over 3,000 sites globally. Each system includes the following highlighted features:

**Validated Performance and Lifetime Performance Guarantee:** Real-world microbial testing and validated data, combined with our extensive experience, enable us to provide a Lifetime Performance Guarantee. Independently validated to USEPA and NWRI guidelines, the system maintains 98% UV output after 12,000 hours of use. The ActiClean<sup>®</sup> system helps maintain 95% sleeve transmittance, ensuring dependable treatment performance over time.

**Automatic Lamp Sleeve Cleaning:** Featuring the ActiClean dual-action chemical and mechanical cleaning system, the TrojanUV3000Plus provides 50% more effective cleaning than mechanical wiping alone. This reduces fouling, ensuring uninterrupted operation and consistent UV dose delivery.

**Integra Lamp Assembly:** The latest Integra<sup>®</sup> lamp technology reduces the complexity of lamp replacement by more than 50%. The preassembled, factory-sealed 250 Watt amalgam lamp and quartz sleeve unit minimizes the chance of damage during maintenance, providing fewer parts to manage and ensuring maximum UV light transmission to the water. The Integra assembly simplifies maintenance while increasing overall system reliability.

**Modular Design:** The system's modular architecture offers scalability and easy maintenance, ensuring reliable performance. The pre-assembled and factory-tested UV modules simplify installation, reduce costs, and protect essential components from environmental damage.

**Stream Remote Monitoring:** With the integrated Stream<sup>™</sup> platform, operators can remotely monitor system performance, receive real-time alerts, and access diagnostics. This remote capability minimizes on-site intervention, reducing operational costs and maximizing system uptime.

**Support and Services:** As your UV treatment partner, Trojan Technologies provides 24/7 technical assistance, guided troubleshooting, in-stock replacement parts, and access to a global network of certified technicians.

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We look forward to working with you on this exciting project. We hope that our expertise, combined with the reliable TrojanUV3000Plus system, will enable you to provide Water Confidence<sup>™</sup> to your customers and community.

## DESIGN CRITERIA

### SUMMERHOUSE WRF PHASE II

Peak Design Flow:	<b>0.50 MGD</b>
UV Transmittance:	<b>65 % (minimum)</b>
Total Suspended Solids:	<b>5 mg/l (Maximum, grab sample)</b>
Treatment Limit:	<b>14 Fecal Coliform per 100 ml</b> , based on a 30-day geometric mean of consecutive daily grab samples <b>25 Fecal Coliform per 100 ml</b> , daily maximum
Design Dose:	<b>60 mJ/cm<sup>2</sup> MS2 RED UV Dose</b> (bioassay validated)
Redundancy:	<b>1 Redundant Bank at Peak Design Flow</b>

## DESIGN SUMMARY

**QUOTE: 247577**

Based on the above design criteria, the TrojanUV3000Plus proposed consists of:

<b>CHANNEL</b> (Please reference Trojan layout drawings for details.)	
Number of Channels:	<b>1</b>
Approximate Channel Length Required:	<b>25 ft 4 in</b>
Channel Width Based on Number of UV Modules:	<b>16 in</b>
Channel Depth Recommended for UV Module Access:	<b>46 in</b>
<b>UV MODULES</b>	
Total Number of Banks:	<b>2 (1 Duty + 1 Redundant)</b>
Number of Modules per Bank:	<b>4</b>
Number of Lamps per Module:	<b>4</b>
Total Number of UV Lamps:	<b>32 (Including 16 Redundant)</b>
Maximum Power Draw:	<b>4.10 kW</b>
<b>UV PANELS</b>	
Power Distribution Center Quantity:	<b>2</b>
System Control Center Quantity:	<b>1 (Existing)</b>
Hydraulic System Center Quantity:	<b>1 (Existing)</b>
<b>MISCELLANEOUS EQUIPMENT</b>	
Level Controller Type Quantity:	<b>1 Fixed Weir</b>
Automatic Chemical / Mechanical Cleaning:	<b>Included</b>
UV Module Lifting Device:	<b>Davit Crane</b>
Standard Spare Parts / Safety Equipment:	<b>Included</b>

Start Up / Freight to Site:	<b>Included</b>
<b>ELECTRICAL REQUIREMENTS</b>	
1.	Each Power Distribution Center requires an electrical supply of one (1) 480/277V 60Hz, 3 Phase, 4 Wire + Ground, 8 Amps, 4.10 kVA
2.	The Hydraulic System Center requires an electrical supply of one (1), 480V 60Hz, 3 Phase, 3 Wire + Ground, 2.5 kVA.
3.	The System Control Center requires an electrical supply of one (1) 120V 60Hz, 1 Phase, 2 Wire + Ground , 15 Amps.
4.	Electrical disconnects required per local code are not included in this proposal.

## COMMERCIAL INFORMATION

<b>Total Capital Cost: \$ 140 860 (USD)</b>
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This price excludes any taxes that may be applicable and is valid for 90 days from the date of this letter.

## EQUIPMENT WARRANTIES

**System Components:** Trojan Technologies warrants all system components (excluding UV lamps) against defects in workmanship and materials for a period of 12 months from the date of start-up or 18 months after shipment, whichever comes first.

**UV Lamps:** UV lamps are warranted for 12,000 hours of operation or 3 years from shipment, whichever comes first. The warranty is pro-rated after 9,000 hours of operation, meaning if a lamp fails before 9,000 hours, a new lamp will be provided at no charge.

**Electronic Lamp Drivers:** Electronic lamp drivers are warranted for 5 years, pro-rated after 1 year.