



354-RFB-25-04

## REQUEST FOR BIDS

for

### Return Activated Sludge (RAS) & Waste Activated Sludge (WAS) Submersible Pumps

To be opened 11:00 AM ET, Wednesday, January 29, 2025

Pursuant to General Statutes of North Carolina, as amended, sealed bids, subject to the conditions and specifications herein, are invited for furnishing the following apparatus, supplies, materials, equipment. All bids will be received by the Town of Cary Purchasing Division electronically until the date and time stated above, at which time the sealed bids will be publicly opened virtually and read.

BY: Kathryn McMillan, Procurement Consultant

DATE: January 10, 2025

#### POSITIVELY NO BIDS CONSIDERED UNLESS SUBMITTED ON THIS DOCUMENT

Please provide pricing subtotals and grand total for the option (or options) you are submitting for evaluation.

Quantity (Each)	Item Description	SUBTOTAL
1	<b>RAS Submersible Pump</b> as per attached Specifications, terms & conditions.	
1	<b>WAS Submersible Pump</b> as per attached Specifications, terms & conditions.	
	Freight	
	On-Site Installation, Startup, & Training	
	<b>GRAND TOTAL (ALL GOODS, SHIPPING, &amp; FEES)</b>	

ESTIMATED DATE ALL GOODS DELIVERED	_____
MINIMUM NUMBER OF YEARS REPAIR PARTS AND SUPPORT OF THE UNIT WILL BE AVAILABLE (IF ANY)?	_____

Do the products submitted for bid meet the exact specifications listed herein?

☐ YES

☐ NO

This company is a certified Historically Underutilized Business (HUB) by the North Carolina Department of Administration HUB Office.

☐ YES

☐ NO

COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

AUTHORIZED SIGNATURE: \_\_\_\_\_ TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

NOTICE TO BIDDERS: Do not include taxes in your bid proposal pricing. Any and all tax imposed upon any article on which you are bidding are only to be shown as separate line items on invoices, and in no case are taxes to be included with your bid price. Failure to comply with these conditions will be considered grounds for rejection.

In compliance with the above request for bids and subject to all the conditions thereof, the undersigned offers and agrees, if this bid be accepted within \_\_\_\_\_ days from the date of the opening, to furnish any or all of the items upon which prices are quoted at the price set opposite each item within \_\_\_\_\_ days after receipt of order, unless otherwise specified.

COMPANY: \_\_\_\_\_ ADDRESS: \_\_\_\_\_

TOWN: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

AUTHORIZED SIGNATURE: \_\_\_\_\_ TITLE: \_\_\_\_\_

NAME PRINTED OR TYPED: \_\_\_\_\_

CONTACT NAME (if different than above): \_\_\_\_\_

TELEPHONE NO.: \_\_\_\_\_ EMAIL: \_\_\_\_\_

### ***BIDDER'S CHECKLIST***

- ☐ Be aware of the virtual bid opening date and time as indicated on the first page of this proposal.
- ☐ You must submit **bids in electronic format via eVP**. No hard copy bids will be accepted.
- ☐ All signatures must be by a company officer or agent who is authorized to enter and sign bid documents.
- ☐ Have you read and understood the "Terms and Conditions" and the "Instructions to Bidders" for submitting a bid to the Town?
- ☐ Have you read and do you completely understand all the specifications of this bid proposal?
- ☐ If an addendum to the specifications was issued, has it been returned with this bid proposal (indicating acceptance of the information contained within)? Failure to do so may result in your submittal being deemed unresponsive.
- ☐ Have you enclosed statements explaining any exceptions made to the specifications? (If applicable)
- ☐ Have you enclosed your Itemized Quote?
- ☐ If your bid included 5 references? (Attachment 1)

# ***INSTRUCTIONS TO BIDDERS***

## **1. PURPOSE:**

The purpose of this document is to provide general and specific information for the use by suppliers in submitting a bid to supply the Town of Cary with apparatus, supplies, material and equipment, and/or services listed above. All bids and contracts are governed by Town policy, and /or by Section 143-129 of the North Carolina General Statutes.

## **2. BID SCHEDULE:**

Listed below are the dates and times by which stated actions must be taken or completed. The Town may determine, in its sole discretion, that it is necessary to change any of these dates and times. All listed times are Eastern standard times.

Action	Time	Date
Bid issued	----	January 10, 2025
Deadline for Questions & Approved Equals	1:00 PM	Tuesday, January 21, 2025
Bids Due	11:00 AM	Wednesday, January 29, 2025
Anticipated Award	----	February 2025

## **3. BIDDER QUESTIONS:**

The Town is not liable for interpretations/misinterpretations or other errors or omissions made by the Bidder in responding to this bid. The Bidder shall examine this bid to determine if the Town's requirements and terms and conditions are clearly stated. If, after examination of the various requirements and terms and conditions of this bid, the Bidder believes there are any requirements or terms and conditions which remain unclear or which restrict competition, the Bidder may request, in writing, that the Town clarify the requirement(s) and terms(s) and condition(s) specified by the Bidder. The Bidder must provide the Section(s), Subsection(s), Paragraph(s), and page number(s) that identify the requirements or conditions questioned by the Bidder.

Requests for clarification, technical questions and approval of alternate products to this bid must be received by the Town no later than the date shown above in Section 2, entitled "Bid Schedule", under *Deadline for Questions*. The Bidders' failure to request clarification and submit questions by the date in the bid schedule above shall be considered to constitute the Bidders' acceptance of all Town's requirements and terms and conditions. The Town shall issue addenda reflecting questions and answers to this bid, if any, and shall be posted to the eVP website at [North Carolina electronic Vendor Portal](#).

## **4. BID CONTACT:**

Any and all questions, concerns, request for additional information, and alternate product considerations shall be directed to the Town of Cary, Utilities Department to the attention of:

Jamie Bissonnette, PE  
[jamie.bissonnette@carync.gov](mailto:jamie.bissonnette@carync.gov)

## **5. HOW TO PREPARE BID PROPOSALS:**

Bidders are encouraged to carefully review all provisions and attachments of this document prior to completion. Each bid constitutes an offer and may not be withdrawn except as provided herein. Also, prices are to remain firm for the period stated herein.

- a) **PROPOSAL FORM:** Submit prices and offers on the **BID PROPOSAL FORM(s)** provided herein. All bid proposals must be submitted and signed by the supplier or their authorized representative with all erasures or corrections initialed and dated by the authorized representative of the proposal.
  - i. The bidder shall indicate an approximate delivery date for each line-item listed on Proposal Form.
  - ii. The bidder shall submit the subtotal of all goods on the bid proposal form and attach a

quote with the line item details for each line.

- b) **SIGNATURE**: All bids must be signed by an authorized official of the company on the **Bidders Signature Page**. A bid may be rejected if it shows omissions, alterations of form, additions not called for, conditional bid, or any irregularities.
- c) **TAXES**: Do not include taxes in your bid prices. Taxes must be itemized and added to invoices separately when invoicing the Town. The Town is required to pay sales tax. The Town is exempt from Federal Excise Tax and has a Federal Tax number.
- d) **MINORITY WOMEN BUSINESS ENTERPRISES (MWBE) POLICY**: The Town invites and encourages participation in this procurement process by certified Minority and Women-Owned Business Enterprises (MWBE) in accordance with North Carolina General Statute 143-129.
- e) **SUSTAINABILITY**: As stated in the 2017 Cary Community Plan, the Town has a commitment to promoting green practices that will promote an environmentally safe and desirable community for future generations. As such, we recognize our responsibility to minimize negative impacts on human health and the environment while supporting a diverse, equitable, and vibrant community and economy. The Town recognizes that the types of products and services the Town buys have inherent social, human health, environmental and economic impacts, and asks that all vendors and bidders providing and proposing products and services to the Town, be mindful of the Town's commitment to sustainability and provide and propose products and services that embody this commitment whenever possible.
- f) **NONDISCRIMINATION POLICY**: It is the policy of the Town of Cary to promote the fair treatment of all individuals and provide them freedom from discrimination. No member of a protected class shall be excluded from participation in, be denied the benefits of, or be otherwise subject to discrimination under any program or activity administered by Cary, including programs or activities that are funded in whole or in part with State or Federal funds, such as Coronavirus State and Local Fiscal Recovery Funds.

## 6. **HOW TO SUBMIT BID PROPOSALS**:

- a) Upload a complete set of your bid on the **BID PROPOSAL FORM** provided herein to the NC eVP website at [North Carolina electronic Vendor Portal](#).
- b) **NO PHYSICAL, EMAIL OR FAX BIDS WILL BE ACCEPTED.**

## 7. **BID OPENING**:

- a) The bid opening shall be held virtually via Webex. The meeting is scheduled for 1:55 PM EST (5 minutes prior to the bid opening). If planning to attend, please join the meeting early in case you have trouble connecting.
- b) All bidders are welcome to attend the bid opening virtually and can be accessed via the following credentials:

**Meeting link:**

[354-RFB-25-04 Bid Opening](#)

**Meeting number:**

2346 369 8905

**Password:**

bP3DmfKsP26

## More ways to join

Join by video system

Dial 23463698905@carync.webex.com

You can also dial 173.243.2.68 and enter your meeting number.

Join by phone

+1-408-418-9388 United States Toll

Access code: 23463698905

- c) All bids will be opened and read at the time shown on the enclosed Bid Proposal Form. No official award will be made during the Bid Opening. **LATE BIDS WILL NOT BE OPENED OR ACCEPTED.**
- d) Bidders may not review or request copies of bids at the Bid Opening. A request must be submitted to the purchasing supervisor via email.
- e) If you have difficulty joining or trouble with sound contact Webex and provide them the Meeting number.
- f) Bids will be examined by the Purchasing Supervisor and/or Bid Agent of the using department promptly after the opening and an award made as early as possible. No bids may be withdrawn after bid opening.

## 8. AWARD OF BID:

- a) Standard of Bid Award Acceptance: The Town reserves the right to reject any or all bids and to waive any irregularities or technicalities in bids received whenever such rejection or waiver is in the best interest of the Town of Cary. The award shall be made to the lowest, responsive, responsible bidder, or bidders, taking into consideration quality, performance and the time specified in the bid for the performance of the contract.
  - i. Bids prices received will be viewed per option (a group of materials outlined in Attachment 1) total. The lowest price package that is received by a responsive, responsible bidder, as outlined by North Carolina State Statute, will be awarded the bid.
- b) Bid Prices: All items and products proposed in response to this Bid are to be new, in un-used condition unless otherwise noted in the Minimum Specifications. All prices proposed in response to this Bid are to include all transport, freight, fuel surcharges and other fees if applicable and be delivered **FOB destination, freight prepaid and allowed** to the location provided on the Town Purchase Order if not otherwise instructed within the specifications section. All items are to be packaged, and shipped or delivered safely in a protective carton, fully assembled and serviced, ready for use and operation where applicable or otherwise described within the specifications. All supplies, equipment, and apparatus must meet all Federal, State, and Local safety regulations, requirements, and guidelines, such as OSHA, EPA, US DOT, NC-DOT, NFPA, UL, etc., if so regulated.
- c) Order of Precedence: In cases of conflict between sections and provisions within the Bid document, the Order of Precedence will be 1) the Special Conditions section specific to the Bid (if present); 2) the Minimum Specifications section specific to the Bid, 3) the Town of Cary Terms and Conditions; and 4) the Instructions to Bidders section of the Bid document.
- d) Payment Terms: Payment terms of Net 30 days from the date of receipt of correct invoice, or upon acceptance of goods whichever is later, will apply to all invoices. Payment term discounts will be allowed for prompt payments but will not be a consideration for award. All invoices are to be emailed to your Town of Cary Project Manager or delivered to **Town of Cary, Accounts Payable Division, PO Box 8005, Cary, NC 27512.**

- e) Bid Award Approval: The Town Manager has delegated authority from the Town Council to award bids for supplies, equipment, and apparatus greater than \$90,000. Bids will be approved and awarded by the Town Manager or designee upon the recommendation by the Procurement Department.

**9. OBJECTION TO THE SPECIFICATIONS:**

It is not the intent of the bid specifications to exclude or limit competition or favor any supplier. If there is an objection to any of the specifications or requirements listed herein, the bidder must notify the Town of Cary Purchasing Supervisor, in writing, stating and listing the specifications and objections, no later than five (5) working days prior to the bid opening date. If a pre-bid meeting has been scheduled, any objections must be presented in writing at that time. The objections stated must pertain both to form and substance of the bid document. Failure to object in accordance with the above procedure shall constitute a waiver on the part of the bidder to protest the solicitation. All concerns, questions, clarifications, or other correspondence must be directed only to the Town of Cary Assistant Manager of Purchasing & Contracts. Information obtained from other sources will not be considered in the evaluation and award of this bid.

**10. ERRORS IN BIDS:**

Bidders or their authorized representatives are expected to understand the conditions, requirements and specifications before submitting bids. Failure to do so will be at the bidders' own risk. In case of an error in the extension of prices on the bid, the unit price shall govern.

**11. BID OPTIONS:**

The Town reserves the right to request pricing on optional equipment or additional items along with the pricing for the main or primary product or items when applicable. At the discretion of the Town, some or all the options requested may or may not be added and purchased based upon necessity and the availability of budgeted funds. The Bid Award will be made to the lowest, responsive, responsible bidder for the main or primary product or items listed on the Bid Proposal Form. Pricing for any additional options will be requested in a separate section of the bid and will not be included in the determination of the Bid Award.

**12. QUANTITIES:**

The Town of Cary reserves the right to adjust quantities as needed, and to add additional items and/or products as needed, as determined to be in the best interest of the Town. The quantities stated herein, for term or multi-year contracts are estimated, and may change to be more or less over the term of the contract.

**13. PRICE ADJUSTMENTS:**

**For Bids with fixed price contract periods**, it is the Town's intent to contract at a fixed price for a period of twelve (12) months, with an option to extend the contract for five (5) additional six (6) month periods. The price proposed by the Bidder is to remain fixed for the first sixty (60) day period of the contract. Prices for additional extension term periods may be subject to a price increase or decrease if the price adjustment mirrors and reflects a previous industry wide adjustment for the product or item(s) specified in the Bid.

Any price increase or decrease will be adjusted to the latest yearly percentage increase in the All Urban Consumers Price Index (CPI-U) (National) as published by the Bureau of Labor Statistics, U.S. Dept. of Labor, or other appropriate agreed upon price index. The amount of the increase or decrease will be determined by the difference between the latest price index available ninety (90) days prior to the end of the current contract year in effect, and the price index for the same month one year prior.

Any requested price increase must be fully documented and submitted to the Procurement Department at least sixty (60) days prior to the Bid contract anniversary date. Any approved price adjustment (increase or decrease) will then become effective upon the anniversary date of the contract at the start of the next term period.

The Town reserves the right to accept or to refuse any documented price adjustment submitted by the vendor/contractor for any reason as determined to be in the best interest of the Town. In the event the Town

does not accept the proposed price adjustment for the extended term, the Bid contract will not be renewed, and the Town will rebid the product or item(s). Any Bid contract extension is subject to the continuation of need and usage by the Town and the appropriation of funds.

**14. CONTRACT EXTENSIONS:**

The Town reserves the right to extend all bid contracts for up to five (5) additional six (6) month periods from the date of the award of the original bid, if agreed upon in writing by the contracted vendor. The contract extension(s) may be for additional quantities or for an additional time period as agreed.

**15. TRADE SECRETS:**

This Bid document and all Bidders' responses and proposals received are considered public information, except for trade secrets specifically identified in writing by the Bidder, which will be handled according to 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 an envelope clearly marked "**TRADE SECRET INFORMATION- DO NOT DISCLOSE.**" The Town shall make a good faith effort to protect such confidential information.

**16. BID TABULATIONS:**

Bidders wishing to obtain a bid tabulation prior to the award of the bid may view and download tabulations from the North Carolina electronic Vendor Portal (eVP) website at [eVP](#). Tabulations should be posted within 48 hours (two workdays) after the public bid opening. From the Town's homepage, select the following in order to view bid tabulations: Business and Development, Bids and Proposals, select the link to the North Carolina Interactive Purchasing System, Search Bid Number, enter the desired bid number, and select Search. Bid tabulations only reflect the bids as read at the time of the bid opening and should not be considered an award. It is the Town's policy to furnish bid tabulations to all bidders.

**17. INVOICING:**

For prompt payment all invoices must include an accurate Purchase Order Number. Please submit invoices to your Town of Cary Project Manager as a PDF attachment. Invoices not submitted following these instructions will result in delayed payment.

**18. TERMS AND CONDITIONS:**

Acceptance of the Town's Purchase Order includes acceptance of all applicable Terms and Conditions. The Town's Purchase Order Terms & Conditions are provided below for your information.



**TOWN OF CARY**  
**PURCHASE ORDER TERMS AND CONDITIONS**

By acceptance of the Purchase Order to which these terms are attached ("Purchase Order"), the vendor or Seller, ("Seller"), declares that the goods or services ("Goods and/or Services") Seller is to provide pursuant to the Purchase Order shall be provided according to the following terms and conditions:

1. Purchase Order Number: The purchase order number must appear on all invoices, packing slips, correspondence, and bills of lading. Cary shall not be responsible for Goods and/or Services provided without a purchase order.
2. Invoices: Each purchase order shall be invoiced separately. Invoices for partial shipments will be accepted and final invoices shall indicate completion of order. The Purchase Order Number shall be referenced on all invoices.
3. Sales Tax: Cary's purchase orders do not show North Carolina (NC) sales tax; however, Cary is not tax exempt and does pay NC sales tax. NC sales tax must be listed separately on the invoice. Cary does not pay Federal Excise Tax.
4. Risk of Loss: The risk of loss and damage to Goods which are the subject of this order shall remain with the Seller until Goods are delivered to the destination set out in the order and accepted by Cary.
5. Quantity: The specific quantity ordered must be delivered in full and will not be changed without Cary's consent. Any unauthorized quantity is subject to rejection and return at Seller's expense.
6. Freight And Packaging: Price quotations shall include freight, transportation, shipping, handling and similar charges. Collect freight shipments shall be refused. Seller shall absorb any increase in rates becoming effective after the date of Purchase Order. Seller agrees to assume and pay all extra expense occurring on account of improper packaging.
7. Failure to Deliver: If Seller fails to provide Goods and/or perform Services as and when specified, Cary reserves the right to cancel the order, or any part thereof, without prejudice to its other rights, and Cary may return part or all of any shipment so made and may charge Seller with any loss or expense sustained as a result of such failure to provide.
8. Cash Discounts: All cash discounts shall be effective from the date of actual receipt of a correct and approved invoice by Cary.
9. Responsibilities of Seller: Seller represents and warrants that it is fully qualified, skilled, and capable of providing the Goods and/or Services in a fully competent, professional, and timely manner; shall provide Goods and/or Services in accordance with industry standards; shall use best efforts and exercise reasonable care and diligence in providing Goods and/or Services and shall act in the best interest of Cary; perform other actions required to remain in good standing with the North Carolina Secretary of State; and possesses all necessary qualifications, licenses, and certifications. Seller shall be responsible for all errors, omissions, or mistakes in providing Goods and/or Services and shall correct at no additional cost to Cary any and all errors, omissions, or mistakes.
10. Insurance: If Seller is to provide Services of any kind pursuant to Purchase Order, Seller shall maintain at its own expense: (a) Commercial General Liability Insurance in an amount not less than \$1,000,000 per occurrence and \$2,000,000 in the aggregate for bodily injury, property damage, and personal advertising and injury; Cary shall be named as additional insured, and a waiver of subrogation shall be included. (b) Professional Liability insurance in an amount not less than \$1,000,000 per claim - if providing professional services; (c) Workers Compensation Insurance as required by the general statutes of the State of North Carolina or as required per state law and Employer's Liability Insurance not less than \$500,000 each accident for bodily injury by accident, \$500,000 each employee for bodily injury by disease, and \$500,000 policy limit. A waiver of subrogation shall be included; (d) Commercial Automobile Insurance applicable to bodily injury and property damage, covering all owned, non-owned, and hired vehicles, in an amount not less than \$1,000,000 combined single limit as applicable. Cary shall be named as additional insured, and a waiver of subrogation shall be included; (e) Umbrella/Excess Liability

Insurance in an amount not less than \$1,000,000 per occurrence and \$1,000,000 in the aggregate. Cary shall be named as additional insured, and a waiver of subrogation shall be included, or the policy shall state it is follow form. Certificates of Insurance shall be furnished prior to the commencement of Services.

11. State and Federal Funds. Seller shall work in good faith with Cary to meet requirements imposed by the federal or state government or other funding entity if grants are used to fund any portion of a purchase order. If the source of funds is Federal funds, the following Federal provisions apply pursuant to 2 C.F.R. § 200.326 and 2 C.F.R. Part 200, Appendix II (as applicable), unless a more stringent State or local law or regulation is applicable: Equal Employment Opportunity (41 C.F.R. Part 60); Davis-Bacon Act (40 U.S.C. 3141-3148); Copeland "Anti-Kickback" Act (40 U.S.C. 3145); Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708); Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387); Debarment and Suspension (Executive Orders 12549 and 12689); Byrd Anti-Lobbying Amendment (31 U.S.C. 1352); Procurement of Recovered Materials (2 C.F.R. § 200.322); Record Retention Requirements (2 CFR § 200.324); Prohibition on Certain Telecommunications and Video Surveillance Goods and/or Services or Equipment (2 C.F.R § 200.216); Domestic Preferences for Procurements (2 C.F.R § 200.323); Employment Eligibility Verification (FAR 52.222-54); and Whistleblower protections (41 U.S.C. 265 and 10 U.S.C. 2408). Seller further represents that, prior to accepting any purchase order that is funded by Federal funds, Seller:

- a. Is not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal Government agency and not included in the Excluded Parties List System;
- b. Has not, within the preceding three-years, been convicted of or had a civil judgment rendered against it for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) contract or subcontract; violation of Federal or State antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating Federal criminal tax laws, or receiving stolen property; and
- c. Is not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) contract or subcontract; violation of Federal or State antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating Federal criminal tax laws, or receiving stolen property.

12. Indemnification.

- a. Indemnification; General. To the fullest extent permitted by applicable laws and regulations, Seller shall indemnify, protect, defend, and hold harmless Cary, its elected officials, officers, employees, agents, and volunteers (collectively, "Cary Indemnitees") from and against any and all claims, costs, civil penalties, fines, losses, liabilities, injuries (including death), demands, damages (including but not limited to all professionals' fees and charges and all court or other dispute resolution costs), actions, causes of action, suits, proceedings, judgments, and expenses, including reasonable attorneys' fees, court costs, and other legal expenses and including, without limitation, those costs incurred at the trial and appellate levels and in any bankruptcy, reorganization, insolvency, or similar proceeding and other legal expenses (collectively and separately, "Claims") by whomsoever brought or alleged, arising out of, resulting from, or in connection with:
  - i. The provision of Goods and/or Services by Seller;
  - ii. Any breach or violation by Seller of any applicable law or regulation; or
- b. Indemnification; Intellectual Property. Seller shall indemnify, protect, defend, and hold harmless Cary Indemnitees from and against any and all Claims arising out of, related to, or resulting from any claim, action or proceeding by a third party alleging that any deliverables or work product created or reduced to practice by or on behalf of Seller in connection with providing the Goods and/or Services, or any use of such deliverables or work product, infringes or misappropriates or otherwise violates any intellectual property right (including, without limitation, any patent, copyright, trademark, or trade secret) or other proprietary right of any third party.

13. No Consequential or Indirect Damages. Except for Seller's indemnification obligations hereunder or any liability arising out of Seller's negligence, willful misconduct, violation of law, or infringement or misappropriation of intellectual property rights, in no event shall either Party be liable to the other for consequential, indirect, incidental, special, exemplary, punitive or enhanced damages, lost revenues or diminution in value, arising out of, relating to, or in connection with Seller's provision of Goods and/or Services, regardless of whether such damages were foreseeable, whether said Party was advised of the possibility of such damages, and the legal or equitable theory upon which the claim is based.
14. Public Records and Dissemination of Information. Seller acknowledges that records in the custody of Cary are public records and subject to public records requests. Cary may provide copies of such records, including copyrighted records, in response to public record requests.

Seller shall not publicly disseminate any information concerning the provision of Goods and/or Services to Cary without prior written approval from Cary. Any approval given by Cary may be given with certain stipulations, such as Cary participation in the creation of the public product or Cary review and the option to refuse public release of the final product(s) should such product(s) fail to meet Cary's standards and goals. Publicly disseminate means, but is not limited to, electronic, video, audio, photographic, or hard copy materials serving as, in whole or part, advertising, social media posts, sales promotion, professional papers or presentations, news releases, articles, or other media products, and/or Seller's business collateral pieces. Notwithstanding the foregoing, with Cary's written consent, Seller may list Cary as a reference in response to requests for proposal and may identify Cary as a customer in presentations to potential customers. Any permitted use of Cary's trademarked materials (including, without limitation, Cary's logo in its various forms) must be in compliance with the guidelines outlined at <https://brand.carync.gov/>.

15. Documents and Deliverables. If Seller's provision of Goods and/or Services results in the creation of drawings, specifications, plans, surveys, reports, technical memoranda, testing protocol, designs, electronic databases, written materials, work papers, manuals, and other documents or instruments identified as 'Deliverables' herein or which, by their nature, are to be owned by Cary, Cary shall be granted, at no additional cost, ownership of all such Deliverables. Cary is and will be the sole and exclusive owner of all right, title, and interest in and to all Deliverables and associated work product, including all Intellectual Property Rights therein. Seller acknowledges and agrees that any and all work product that may qualify as "work made for hire" as defined in the Copyright Act of 1976 (17 U.S.C. § 101) is hereby deemed "work made for hire" for Cary and all copyrights therein shall automatically and immediately vest in Cary. In the event Seller creates Deliverables or work product that requires a license, Seller will convey with the ownership of Deliverables or work product, a perpetual license required for the operation of the Deliverables or work product.

Seller shall provide all Documents and Deliverables in electronic form to the Cary in read-only MS-Windows compatible format (including either screen readable .pdf or HTML formats). In addition, all drawings shall be CAD generated and shall be provided on electronic media downloadable onto an AutoCAD based system. All Deliverables (draft and final) intended for presentation on Cary's website must be provided in a manner and format compatible, consistent, and in compliance with the U.S. Department of Justice's current accessibility requirements applicable to local government websites and all Cary technology standards, including but not limited to such material must be provided in screen readable PDF or HTML versions, be screen-reader friendly and contain alternate text tags of no more than 34 characters. In the event that Seller notices any errors in electronic data provided to the Cary under this Agreement, Seller shall immediately notify Cary, and if Seller provided such electronic data, Seller shall immediately replace same with correct versions thereof.

16. Independent Seller. Seller is acting as an independent Seller, and not as an employee, partner, or agent of Cary. Seller has no authority to commit, act for or on behalf of Cary, or to bind Cary to any obligation or liability. Seller shall not be eligible for and shall not receive any employee benefits from Cary and shall be solely responsible for the payment of all taxes, FICA, federal and state unemployment insurance contributions, state disability premiums, and all similar taxes and fees relating to the provision of Goods and/or Services by Seller.
17. Nondiscrimination. To the extent permitted by law, neither Party, their officers, employees, Sellers, agents, successors, or permitted assigns shall discriminate against any member of a protected class as

defined by Federal, State, or local law, including Wake County Code of Ordinances Section 34.01.

18. Compliance with Applicable Law; Conduct. In providing Goods and/or Services, Seller and its officers, employees, agents, and subSellers shall comply fully with all applicable Federal and State laws and regulations, including but not limited to Article 2, Chapter 64, of the North Carolina General Statutes regarding verification of work authorization; and laws related to gifts and favors, conflicts of interest and the like, including N.C.G.S. §§ 14-234, 133-1, and 133-32.

Seller's officers, employees, agents, and subSellers who come onto Cary property to provide Goods and/or Services shall comply with the same health and safety requirements that Cary has implemented for its employees through ordinance, policy, procedure, directive of the Cary Manager, or other means, as may be amended or enacted from time to time.

19. No Waiver of Immunity. Nothing in these terms shall be construed to mandate purchase of insurance by Cary pursuant to N.C.G.S. § 160A-485 or to in any way waive Cary's defense of governmental immunity from any cause of action alleged or brought against any Party for any reason if otherwise available as a matter of law.
20. Severability. If any provision of these terms are held as a matter of law to be invalid or unenforceable by a court of competent jurisdiction, the remainder of the terms shall remain enforceable, and such invalid or unenforceable provision shall be enforced by such court to the maximum possible extent, provided that both Cary and Seller preserve the substantial benefits of the terms.
21. Survival. All representations, indemnifications, and other terms and conditions of these terms which by their nature should survive the completion of the provision of Goods and/or Services by Seller shall survive completion of the provision of Goods and/or Services by Seller.
22. Jurisdiction. These terms shall be governed by the substantive provisions of North Carolina law without regard to conflict of laws provisions. The Parties agree that any legal action or proceeding with respect to the provision of Goods and/or Services by Seller shall be brought exclusively in the State courts of Wake County, North Carolina.
23. Performance of Government Functions. Nothing contained herein shall be deemed or construed so as to restrict or inhibit Cary's police powers or regulatory authority.

## **CONSTRUCTION SERVICES**

If the Purchase Order governed by these terms is for the provision of construction Services, Seller shall provide such Services in compliance with the following terms and conditions in addition to the preceding terms and conditions:

1. Seller represents and warrants that it possesses all necessary licenses and certifications including those required by required trades.
2. All Services shall be accomplished so as to minimize inconvenience to Cary.
3. Access as required by Cary shall be maintained by Seller throughout construction.
4. Seller shall keep the work site free from accumulations of waste materials and rubbish caused by Seller and its employees or the Services at the end of each day and, at the completion of the Services, shall remove all rubbish, waste, tools, scaffolding, and surplus materials and shall leave the site "broom clean" or its equivalent. Seller shall provide signs, barricades, and warning devices to ensure safe passage of both vehicular and pedestrian traffic at all times, if applicable.
5. Seller shall make provision for protecting structures and property and surrounding area from damages arising out of or related to performance of the Services and shall fully restore the site and surrounding area in the event of such damages.
6. All damage to the site or to adjacent property shall be repaired or replaced by Seller to the satisfaction of Cary or to any affected adjacent property owner.
7. The Seller shall not permit any tolls, equipment, or premises involved in the performance of the Services

to be used in a manner that would endanger its safety, intended performance, or configuration while under construction.

8. Unless a specific warranty is provided for a greater period of time, all Services are warranted and guaranteed to be free of defects in materials, equipment, and workmanship for a period of one (1) year following acceptance of the Services by Cary. Any and all manufacturers' warranties shall be assigned to and provided to Cary at the conclusion of Work.
9. If Services performed are subject to N.C.G.S. § 143-128(f1) and a dispute arises with an amount in controversy that exceeds \$15,000.00, Seller shall participate in the Town's dispute resolution process.

### **INFORMATION TECHNOLOGY SERVICES**

If the Purchase Order governed by these terms is for the provision of information technology Services, Seller shall provide such Services in compliance with the following terms and conditions in addition to the preceding terms and conditions:

1. **Seller Warranties.** Seller represents and warrants that:
  - a. For the duration Services are being provided, the Services will fully comply all applicable federal, state, and local laws and regulations, that the functionality of the Services will not decrease, and that Seller shall promptly either repair or replace any defective Services at no additional charge to Cary. If Seller is unable to totally cure any defective Service within thirty (30) days after receipt of notice from Cary, Cary shall have the right to immediately terminate the Services by written notice to the Seller and to obtain a full refund of the fees paid in connection with the Services (including but not limited to any implementation, maintenance, and training fees).
  - b. Seller owns all right, title and interest in and to the Services and has full legal right to license all the Intellectual Property Rights necessary to grant any applicable licenses in the Services, providing Services will not violate or constitute a breach of any agreement binding upon Seller, and as of the date on which Seller provides the Services there is no claim or litigation regarding Seller's ownership or the right to license all the Intellectual Property Rights necessary to grant any applicable licenses in the Services.
  - c. Seller's performance and the Services to be provided hereunder shall comply with all applicable rules, regulations related to privacy, confidentiality, consumer protection, electronic mail, and data security, including, as applicable, the Health and Insurance Portability and Accountability Act of 1996 (42 U.S.C. §1320d) ("HIPAA"), the Health Information Technology for Economic and Clinical Health Act of 2009 (42 U.S.C. §17935) ("HITECH Act"), the American Recovery and Reinvestment Act of 2009 (Pub. L. 111-5) ("ARRA"), if applicable, the California Consumer Privacy Act of 2018 (Cal. Civ. Code. §1798.100 et seq.) ("CCPA") (and as amended from time to time, including the California Privacy Rights Act of 2020, when in effect),(collectively, the "Privacy and Security Laws").
  - d. Seller's Services complies with Section 508 of the Rehabilitation Act of 1973, as amended, with respect to accessibility for individuals with disabilities, if applicable. If Cary receives a complaint or concern regarding the accessibility of the product or service, Seller agrees to promptly responds and resolve such concerns. Seller further agrees to indemnify and hold Cary harmless for any claims arising from the inaccessibility of its product or service.

If the information technology Services being provided involve Seller hosting or accessing Cary data or systems, Seller shall provide such Services in compliance with the following terms and conditions in addition to the preceding terms and conditions:

2. **Security Breaches**
  - a. If Seller discovers, suspects, or is otherwise made aware of (a) any unauthorized disclosure of, use of, or access to Cary data or systems, or any other compromise of Cary data or systems ("Security Breach"), or (b) any condition that is likely to result in Security Breach, Seller shall promptly report (but in no event more than twenty-four (24) hours following discovery or suspicion) the Security Breach or likely Security Breach to Cary.

- b. Seller shall mitigate, in a timely manner and to the extent practicable, any harmful effects of any Security Breach. Seller shall cooperate with Cary in investigating and responding to any Security Breach, including, without limitation, observing any reasonable requests made by Cary to ensure compliance with applicable law, and providing any notices that Cary deems appropriate.
  - c. To the extent any Security Breach is attributable to a breach by Seller or Seller personnel, and applicable law requires Cary, or other affected individuals be notified of a security incident involving Cary Data, Cary shall have the exclusive right to determine whether notice will come from Cary or Seller. In any event, the content, timing, and other details of the notice are subject to Cary's approval, in Cary's sole discretion.
  - d. Seller shall bear the costs incurred in complying with its legal obligations relating to the Security Breach, and in addition to any other damages for which Seller may be liable under this Agreement, Seller shall bear the following costs which may be incurred by Cary in responding to the breach, to the extent applicable: (a) the cost of providing notice to affected individuals, government agencies, credit bureaus, and other required entities (which may include, without limitation, print services, postage, and obtaining contact information for affected individuals); (b) the cost of providing affected individuals with credit monitoring services and identity theft mitigation services for a specific period to the extent Cary determines the incident could lead to a compromise of the affected individuals' credit or credit standing or identity theft, or if required by applicable law; (c) the cost of call center support for affected individuals; (d) forensics services; (e) fines imposed by credit card associations, merchant banks or financial account institutions and costs passed on by individual card companies, banks, and other financial institutions; (f) the cost of any other measures required under applicable law; and (g) any other losses for which Seller would be liable under the Agreement.
3. Cary Data Portability. Upon the completion of Sellers provision of Services, Seller will make all Cary data available to Cary for export or download in commercially accessible formats at no cost to Cary. Seller shall not delete or destroy any Cary data in its systems or otherwise in its possession or control, unless and until it has received written acknowledgment from Cary that Cary has exported or downloaded Cary data it requires.

# **MINIMUM SPECIFICATIONS**

## **SECTION 11000**

### **EQUIPMENT GENERAL PROVISIONS**

#### **PART 1 -- GENERAL**

1.01 These specifications have been written to purchase, and have installed, a replacement **Return Activated Sludge (RAS) Pump & Waste Activated Sludge (WAS) Pump (UNITS)** for our North Cary Water Reclamation Facility, by a reputable vendor (CONTRACTOR). The facility currently has six (6) RAS Fairbanks Morse and three (3) WAS Fairbanks Morse pumps available for use that are nearing the end of their useful life.

- A. Cary will be replacing all nine (9) pumps over time but want to replace one of each (1) UNITS immediately.
  - 1. Pricing submitted for consideration must be held firm for twelve (12) months.
  - 2. Cary's current plan is to start up additional purchases at least 30 days apart.
- B. The CONTRACTOR shall provide a pump(s) as specified herein. Cary will procure and install any required adaptor(s) to mate the pump(s) to the existing slide rail system.

#### 1.02 THE REQUIREMENT

- A. The CONTRACTOR shall furnish and test all mechanical equipment, and all necessary accessories as specified required for a complete and operable system.
- B. The mechanical equipment shall be provided complete with all accessories, special tools, spare parts, mountings, and other appurtenances as specified, and as may be required for a complete and operating installation.

#### 1.03 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. All equipment, materials, and installations shall conform to the requirements of the most recent editions with latest revisions, supplements, and amendments of the specifications, and applicable codes.
- B. Pumps shall not exceed the NEC ratings of any component of the current submersible pumping system.

#### 1.04 SHOP DRAWINGS

- A. The winning bidder shall submit shop drawings to our Engineer for all equipment and shall include the following information:
  - 1. Performance characteristics and descriptive data.
  - 2. Detailed equipment dimensional drawings and setting plans.

3. General lifting, erection, installation, and adjustment instructions, and recommendations.
4. Details on materials of construction of all components including applicable ASTM designations.
5. Information on bearing types and bearing life.
6. Motor data sheet indicating motor horsepower; enclosure type; voltage; insulation class; temperature rise and results of dielectric tests; service-rating; rotative speed; motor speed-torque relationship; efficiency and power factor at  $\frac{1}{2}$ ,  $\frac{3}{4}$ , and full load; slip at full load; running, full load, and locked rotor current values; and safe running time-current curves.
7. Equipment and motor protective device details. Connection diagrams for motor and all protective devices.
8. Equipment shop coating systems, interior and exterior.
9. A list of spare parts and special tools to be provided.
10. Any additional information required to show conformance with the equipment specifications.
11. Warranty documentation including statement of duration of warranty period and contact phone numbers and addresses for warranty issues.

#### 1.05 OPERATION AND MAINTENANCE INSTRUCTION/MANUALS

- A. The winning bidder shall provide three (3) printed copies of the O&M manual, and all other materials outlined above, with each set bound together in sturdy three-ring binders with a detailed Table of Contents.
- B. The winning bidder shall also provide three (3) digital copies (on separate thumb drives) of the documents outlined above.
- C. Information not applicable to the specific piece of equipment installed on this project shall be struck from the submission.
- D. Information provided shall include a source of replacement parts and names of service representatives, including address and telephone number.
- E. Extensive pictorial cuts of equipment are required for operator reference in servicing.

When written instructions include Shop Drawings and other information previously reviewed by the Engineer, only those editions thereof which were approved by the Engineer, and which accurately depict the equipment installed, shall be incorporated in the instructions.



## 1.06 GENERAL INFORMATION AND DESCRIPTION

- A. All parts of the equipment furnished shall be designed and constructed for the maximum stresses occurring during fabrication, transportation, installation, testing, and all conditions of operation. All materials shall be new, and both workmanship and materials shall be entirely suitable for the service to which the units are to be subjected and shall conform to all applicable sections of these Specifications.
- B. All parts of duplicate equipment shall be interchangeable without modification. CONTRACTOR 's design shall accommodate all the requirements of these Specifications.
- C. Equipment and appurtenances shall be designed in conformity with ASTM, ASME, AIEE, NEMA, and other generally accepted applicable standards.
- D. All bearings and moving parts shall be adequately protected by bushings or other approved means against wear, and provision shall be made for accessible lubrication by extending lubrication lines and fittings to approximately 30 inches above finished floor elevation.
- E. Details should be designed for appearance as well as utility. Protruding members, joints, corners, gear covers, etc., shall be finished in appearance. All exposed welds on machinery shall be ground smooth and the corners of structural shapes shall be rounded or chamfered.
- F. Machinery parts shall conform within allowable tolerances to the dimensions shown on the working drawings.
- G. All machinery and equipment shall be safeguarded in accordance with the safety codes of the USA and the State in which the project is located.
- H. All rotating shafts, couplings, or other moving pieces of equipment shall be provided with suitable protective guards of sheet metal or wire mesh, neatly and rigidly supported. Guards shall be removable as required to provide access for repairs.
- I. All equipment greater than 100 pounds shall have lifting lugs, eyebolts, etc., for ease of lifting, without damage or undue stress exerted on its components.
- J. All manufactured items provided under this solicitation shall be new, of current design, and shall be the products of reputable manufacturers specializing in the manufacture of such products.

## 1.07 EQUIPMENT WARRANTIES

- A. Warranty requirements may be added to or modified in the individual equipment specifications.
- B. The equipment furnished under this Contract shall be guaranteed to be

free from defects in workmanship, design and/or materials for a period of five (5) years unless otherwise specified in the individual equipment specifications. The period of such warranties shall start on the date the UNIT is placed in use by the Owner with corresponding start-up certification provided by the manufacturer's technical representative as specified herein, provided that the equipment demonstrates satisfactory performance during the thirty-day operational period after the equipment startup. If the equipment does not perform satisfactorily during the thirty-day operational period, the start of the warranty period will be delayed until the equipment demonstrates proper operation. The Equipment Supplier shall repair or replace without charge to the Owner any part of equipment which is defective or showing undue wear within the guarantee period or replace the equipment with new equipment if the mechanical performance is unsatisfactory, furnishing all parts, materials, labor, etc., necessary to return the equipment to its specified performance level.

- C. The CONTRACTOR shall provide an equipment warranty logbook at startup, prepared specifically for this project and submit two (2) copies of the document to the Engineer. The equipment warranty logbook shall include a summary listing of all equipment warranties provided, date received, and start date and end date of warranty period. A copy of each equipment warranty and equipment start-up certification shall also be provided in the document.
- D. The Equipment Supplier shall guarantee to the Owner that all equipment offered under these specifications, or that any process resulting from the use of such equipment in the manner stated is not the subject of patent litigation, and that he has not knowingly offered equipment, the installation or use of which is likely to result in a patent controversy, in which the Owner as user is likely to be made the defendant.

Where patent infringements are likely to occur, each CONTRACTOR shall submit, as a part of his bid, license arrangements between themselves, or the manufacturer of the equipment offered, and the patent owner or the controller of the patent, which will permit the use in the specified manner of such mechanical equipment as he may be bidding.

Each Equipment Supplier, by submitting his bid, agrees to hold and save the Owner and Engineer or its officers, agents, servants, and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the work under this contract, including the use of the same by the Owner.

#### 1.08 PAYMENT SCHEDULE

- A. The payments associated to the project shall comply to the following schedule

Deliverable	Percentage
-------------	------------

Delivery and Acceptance of Shop Drawings	5%
Delivery of UNIT	70%
Acceptance/Signoff of Successful Startup	25%

## PART 2 -- PRODUCTS

### 2.01 ACCEPTABLE MANUFACTURERS

- A. The materials covered by these specifications are intended to be equipment of proven reliability, and as manufactured by reputable manufacturers having experience in the production of such equipment. CONTRACTOR shall furnish the names of not less than five successful installations within the state of North Carolina of the manufacturer's equipment of the same size and model of that offered under this contract. The equipment furnished shall be designed and constructed in accordance with the industry's accepted practices and shall operate satisfactorily when installed and operated per manufacturer's recommendations

### 2.02 PRE-APPROVED EQUALS

- A. The specifications in Section 11130, Part 2.01- Acceptable Manufacturers, were not written to eliminate any one bidder but were identified based on current standards and infrastructure.
- B. Interested Bidders will need to submit requests for alternatives during the Question and Answer period with supporting documentation showing their proposed alternative meets the standards of the products requested as part of this solicitation.
- C. Any deviations from material not previously reviewed and approved will not be accepted and could be cause for bid rejection.

### 2.03 ANCHORS AND SUPPORTS

- A. The CONTRACTOR shall furnish, install, and protect all necessary guides, bearing plates, anchor and attachment bolts, and all other appurtenances required for the installation of the devices included in the equipment specified.

### 2.04 STANDARDIZATION OF GREASE FITTINGS

- A. The grease fittings on all mechanical equipment shall be such that they can be serviced with a single type of grease gun. Fittings shall be "Zerk" type.

### 2.05 ELECTRICAL REQUIREMENTS

- A. All electrical equipment and appurtenances, including but not limited to motors, panels, conduit and wiring, etc., specified in the equipment specifications shall comply with the latest National Electric Code.
- B. In the individual equipment specifications, specified motor horsepower is intended to be the minimum size motor to be provided. In the event a larger motor is proposed the maximum brake horsepower required shall

not exceed the 210 hp.

## 2.06 ACCESSORIES, SPARE PARTS, AND SPECIAL TOOLS

- A. Spare parts for equipment shall be furnished where indicated in the equipment Specifications or where recommended by the equipment manufacturer.
- B. All UNITS submitted for consideration shall have repair parts available for a minimum of 10 years.
- C. Spare parts shall be identical and interchangeable with original parts.
- D. The spare parts shall be packed in containers suitable for long term storage, bearing labels clearly designating the contents and the pieces of equipment for which they are intended.
- E. Painting requirements for spare parts shall be identical to those for original, installed parts. Where no painting or protective coating is specified, suitable provisions shall be made to protect against corrosion.
- F. Spare parts shall be delivered at the same time as the equipment to which they pertain. Spare parts shall be stored separately in a locked area, maintained by the Contractor, and shall be turned over to the Owner in a group prior to substantial completion. All these materials shall be properly packed, labeled, and stored where directed by the Owner and Engineer.
- G. The CONTRACTOR shall furnish all special tools necessary to operate, disassemble, service, repair, and adjust the equipment in accordance with the manufacturer's operation and maintenance manual.
- H. The CONTRACTOR shall furnish a one-year supply of all recommended lubricating oils and greases.
- I. The CONTRACTOR shall submit a list of at least four manufacturers' standard lubricants

which may be used interchangeably for each type of lubricant required. All of these materials shall be properly packed, labeled and stored where directed by the Engineer or owner.

## 2.07 EQUIPMENT IDENTIFICATION

- A. All mechanical equipment shall be provided with a substantial stainless-steel nameplate, mechanically fastened with stainless steel hardware in a conspicuous place, and clearly inscribed with the manufacturer's name, year of manufacture, serial number, and principal rating data.
- B. Nameplates shall not be painted over.

## PART 3 -- EXECUTION

### 3.01 SHOP TESTING

- A. All equipment shall be tested in the shop of the manufacturer in a manner which shall conclusively prove that its characteristics comply fully with the requirements of the Contract Documents and that it will operate in the manner specified or implied.
- B. No equipment shall be shipped to the OWNER until the OWNER has furnished a copy of test results and has notified the CONTRACTOR, in writing, that the results of such tests are acceptable.

### 3.02 FIELD SERVICES

- A. The CONTRACTOR shall provide a qualified Technical Representative who is regularly involved in the inspection, installation, start-up, troubleshooting, testing, maintenance, and operation of the provided equipment. Qualification of the Technical Representative shall be appropriate to the pump provided and subject to the approval of the Engineer and the Owner. Where equipment furnished has significant process complexity, furnish the services of engineering personnel knowledgeable in the process involved and the function of the equipment. The CONTRACTOR shall schedule a one-day trip by a Technical Representatives for each pump that is installed.
- B. For each site visit, the Technical Representative shall submit jointly to the Owner and Engineer a complete signed report of the results of his inspection, operation, adjustments, and testing. The report shall include detailed descriptions of the points inspected, tests and adjustments made, and quantitative results obtained if such are specified.
- C. The CONTRACTOR 's Technical Representative shall provide the following services.
  - 1. Installation: The Technical Representative shall inspect the installed equipment to verify that installation is in accordance with the manufacturer's requirements.
  - 2. Testing: After installation of the equipment has been completed and the equipment is presumably ready for operation, but before it is operated, the Technical Representative shall inspect, operate, test, and adjust the equipment as required to prove that the equipment is in proper condition for satisfactory operation under the conditions specified. Unless otherwise noted in the signed site visit report, the report shall constitute a certification that the equipment conforms to the requirements of the Contract and is ready for startup and that nothing in the installation will render the manufacturer's warranty null and void. The report shall include date of final acceptance field test, as well as a listing of all persons present during tests.
  - 3. Startup: The Technical Representative shall start up the equipment for actual service with the help of the Owner. If equipment or installation problems are experienced, the Owner

and the representative shall provide the necessary services until the equipment is operating satisfactorily and performing according to the specifications at no additional cost to the Owner. Unless otherwise noted in the signed site visit report, the report shall constitute a certification that the equipment conforms to the requirements of the Contract and is ready for permanent operation and that nothing in the installation will render the manufacturer's warranty null and void.

4. Training: The Technical Representative shall instruct the Owner's operating personnel in correct operation and maintenance procedures. The instruction shall demonstrate start-up, operation, control, adjustment, troubleshooting, servicing, maintenance, and shutdown. Such instruction shall occur during the testing and startup site visit.
  5. Services after Startup: Where required by the individual equipment specifications, the Technical Representative shall return to the project site thirty (30) days after the startup date to review the equipment performance, correct any equipment problems, and conduct operation and maintenance classes as required by the Owner. A single day trip for services after startup shall be provided for each pump that is installed. This follow-up trip is required in addition to the specified services of Technical Representative prior to and during equipment startup. At this time, if there are no equipment problems, CONTRACTOR shall certify to the Owner in writing that the equipment is fully operational and capable of meeting operating requirements. If the equipment is operating incorrectly, the Technical Representative will make no certification to the Owner until the problems are corrected and the equipment demonstrates a successful thirty (30) days operating period.
- D. The Contract amount shall include the cost of furnishing the Technical Representative for the minimum number of days specified, and any additional time required to achieve successful installation and operation. The times specified for services by the Technical Representative are exclusive of travel time to and from the facility and shall not be construed as to relieve the CONTRACTOR of any additional visits to provide sufficient service to place the equipment in satisfactory operation.
  - E. The Technical Representative shall sign in and out at the office of the Owner's facility on each day they are at the project.

### 3.08 FAILURE OF EQUIPMENT TO PERFORM

- A. Any defects in the equipment, or failure to meet the guarantees or performance requirements of the Specifications shall be promptly corrected by the CONTRACTOR by replacements or otherwise within ninety (90) days of learning of the defects.

### 3.09 PAINTING

- A. All surface preparation, shop painting, field repairs, finish painting, and other pertinent detailed painting shall be the manufacturer's premium coating system suitable for the final service location.
- B. All inaccessible surfaces of the equipment, which normally require painting, shall be finished painted by the manufacturer. The equipment and motor shall be painted with a high-quality epoxy polyamide semi-gloss coating specifically resistant to chemical, solvent, moisture, and acid environmental conditions, unless otherwise specified.
- C. Gears, bearing surfaces, and other unpainted surfaces shall be protected prior to shipment by a heavy covering of rust-preventive compound sprayed or hand applied which shall be maintained until the equipment is placed in operation. This coating shall be easily removable by a solvent.

- END OF SECTION -

## SECTION 11100

### PUMPS - GENERAL

#### PART 1 -- GENERAL

##### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish and test all pumping equipment and provide all necessary accessories.
- B. All pumping equipment shall be provided in accordance with the requirements of Section 11000, Equipment General Provisions.
- C. The provisions of this section shall apply to all pumps and pumping equipment specified except where specifically noted otherwise in the Contract Documents.
- D. The pumps shall be provided complete with all accessories, shims, sheaves, couplings, and other appurtenances as specified, and as may be required for a complete and operating pump.

##### 1.02 SHOP DRAWINGS

- A. Shop Drawings shall include the following information:
  - 1. Details of shaft sealing system
  - 2. Pump performance curves at rated speed and reduced speed. Curves shall indicate flow, head, efficiency, brake horsepower, NPSH required, and minimum submergence. Curves shall include limits (minimum and maximum flows) for stable operation without cavitation, overheating, recirculation, or excessive vibration.
  - 3. General cutaway sections, materials, dimension of shaft projections, shaft and keyway dimensions, shaft diameter, dimension between bearings, general dimensions of pump, suction head bolt orientation, and anchor bolt locations and forces.
  - 4. Foundry certificates and results of Brinnell hardness testing showing compliance to ASTM A 532 (where required in the individual pump specifications).
  - 5. Submersible pump submittals shall also include:
    - a. Product data sheets for power and control cables and length of cables.



6. Pumps shall not exceed the NEC ratings of any component of the existing submersible pumping system at the North Cary Water Reclamation Facility.

## PART 2 -- PRODUCTS

### MATERIALS

- A. All materials employed in the pumping equipment shall be suitable for the intended application. Material not specifically called for shall be high-grade, standard commercial quality, free from all defects and imperfections that might affect the serviceability of the product for the purpose for which it is intended, and shall conform to the following requirements unless otherwise specified in individual pumping equipment Specifications:
  1. Cast iron pump casings and bowls shall be of close-grained gray cast iron, conforming to ASTM A 48, or equal.
  2. Bronze pump impellers shall conform to ASTM B 584, "G" bronze.
  3. Stainless steel pump shafts shall be of Type 400, Series. Miscellaneous stainless-steel parts shall be Type 316.
- B. Suction and discharge flanges shall conform to ANSI standard B16.1 or B16.5 dimensions.
- C. Handholes on pump casings shall be shaped to follow the contours of the casing to avoid any obstructions in the water passage.

### 2.01 ELECTRICAL REQUIREMENTS

- A. All pumps shall be furnished with motors such that the motor shall not be overloaded throughout the full range of the pump operation, unless otherwise specifically approved by the Engineer.

### 2.02 EQUIPMENT IDENTIFICATION

- A. In addition to the requirements of Section 11000, Equipment General Provisions, nameplate data for each pump shall include the rating in gallons per minute, rated head, speed, and efficiency at the primary design point.

## PART 3 -- EXECUTION

### 3.01 SHOP TESTING

- A. Shop tests shall be performed in accordance with Section 11000, Equipment General Provisions, and except where stated otherwise herein, shall be conducted in accordance with the latest version of Hydraulic Institute Standard 14.6, Hydraulic Performance Acceptance Tests.

- B. Pump testing procedures shall be submitted to the Engineer for review before scheduling any required pump testing. The Owner/Engineer shall be given at least 2 weeks advanced notice of the scheduled testing date.
- C. Certified test curves for shall be provided for all centrifugal pumps unless otherwise specified in the individual pump specifications.
- D. Pumps shall be within the tolerances specified for Acceptance Grade 1U, in accordance with the latest version of Hydraulic Institute Standards 14.6.
- E. For wet pit submersible pumps and vertical turbine pumps, all tests shall be run at minimum pump submergence specified in the individual pump specifications.
- F. Where required in the individual pump specifications, each individual casting shall be Brinnell tested in a minimum of two places, in an area of representative casting thickness to ASTM Method E-10. Results shall be certified by a registered professional ENGINEER. Test results shall verify the satisfaction of the required Brinnell hardness of the finished product as specified in respective subsections.

### 3.03 FIELD TESTING

- A. Field tests shall be performed in accordance with Section 11000, Equipment General Provisions and additionally as specified below and in the individual pump specifications.
- B. Final acceptance tests shall demonstrate the following:
  - 1. UNIT(s) has been properly installed and is in proper alignment.
  - 2. UNIT(s) operate without overheating or overloading of any parts and without objectionable vibration. Vibration shall be within the Hydraulic Institute limits, or manufacturer's limits if more stringent.
  - 3. The pumps can meet the specified operating conditions. All pumps shall be checked at maximum speed for a minimum of four points on the pump curve for capacity, head, and amperage. The rated motor nameplate current shall not be exceeded at any point. Pumps with drive motors rated at less than five horsepower shall only be tested for overcurrent when overheating or other malfunction becomes evident in general testing.

- END OF SECTION -

SECTION 11130

SUBMERSIBLE NON-  
CLOG PUMPS

PART 1 -- GENERAL

1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish submersible non-clog pumps as specified herein. All pumps supplied under this agreement shall be made by the manufacturer.
- B. UNIT(s) shall be provided in accordance with the requirements of Section 11000, Equipment General Provisions and Section 11100, Pump - General.

1.02 OPERATING CONDITIONS AND PERFORMANCE REQUIREMENTS FOR:

**RETURN ACTIVATED SLUDGE PUMPS**

Maximum Pump Speed (rpm)		1,180	
Operating Pump Speed (rpm)		1,180	
Design Capacity (gpm)	1,400	2,800	3,500
Total Dynamic Head (ft.)	59	36	25
Maximum Brake Horsepower	28	32	29
Minimum Pump Speed (rpm)		470	
Design Capacity (gpm)	400	800	1,100
Total Dynamic Head (ft.)	10	8	7
Maximum Brake Horsepower	1.6	2.0	2.5
Motor Speed (RPM)		1,200	
Motor Horsepower		40	
Speed Control		Variable	
Solids Concentration (%)		Frequency	
Temperature of Liquid		<1.0	
Pumped		Ambient	
Suction Condition		Flooded	
Minimum Size of Solids			
(Spherical Diameter, Inches)		4	
Minimum Suction Diameter			
(In.)		8	
Minimum Discharge Diameter (In.)		8	
Impeller Diameter (In.)		13	

## **WASTE ACTIVATED SLUDGE PUMPS**

Maximum Pump Speed (rpm)		1,180	
Operating Pump Speed (rpm)		1,155	
Design Capacity (gpm)	200	500	600
Total Dynamic Head (ft.)	64	55	52
Maximum Brake Horsepower	6.1	9.8	10.7
Minimum Pump Speed (rpm)		505	
Design Capacity (gpm)	200	300	400
Total Dynamic Head (ft.)	11	9	7
Maximum Brake Horsepower	0.8	1.0	1.1
Motor Speed (RPM)		1,200	
Motor Horsepower		20	
Speed Control		Variable	
Solids Concentration (%)		Frequency	
Temperature of Liquid		<1.0	
Pumped		Ambient	
Suction Condition		Flooded	
Minimum Size of Solids			
(Spherical Diameter, Inches)		3	
Minimum Suction Diameter			
(In.)		12	
Minimum Discharge Diameter (In.)		4	
Impeller Diameter (In.)		4	

## **PART 2 -- PRODUCTS**

### **2.01 ACCEPTABLE MANUFACTURERS**

- A. Each pump shall be a submersible, non-clog, centrifugal pump, as manufactured by Fairbanks Morse, Sulzer, or pre-approved equal.

### **2.02 MATERIALS**

- A. The pumps and all related equipment shall be specifically designed to handle aeration tank mixed liquor up to a solids concentration of 1.2 percent. The pump shall be bottom suction, side discharge construction and shall be supplied with a foot mounted discharge connection elbow. The volute shall be provided with a cleanout port to allow for removal of any foreign material blocking or impeding performance of the pump.
- B. The lifting cover, stator housing, and volute casing shall be close-grained cast-iron conforming to ASTM A48-Class 30. All exposed nuts, bolts, washers, and other fastening devices shall be AISI type 316 stainless steel.

- C. Casing shall be constructed of close-grained cast-iron conforming to ASTM A48-Class 30, with a smooth surface devoid of blow holes, pits, burrs, or other irregularities. The casing shall have a suction cover which can be easily removed for easy access to the impeller.
- D. All mating surfaces where watertight sealing is required shall be machined and fitted with nitrile or Viton rubber O-rings. Fitting shall be such that sealing is accomplished by metal- to-metal contact between machined surfaces. This will result in controlled compression of the O-rings without the requirement of a specific torque limit. Secondary sealing compounds, rectangular gaskets, elliptical O-rings, grease or other devices shall not be acceptable.
- E. The impeller shall be stainless steel, dynamically balanced, double shrouded non-clogging design having a long thrulet without acute turns. The impeller shall be capable of handling solids of specified sphere size, fibrous materials, heavy sludge, and capable of passing a maximum solid size of 4" and 3" for the RAS and WAS pumps, respectively. The impeller shall be mechanically secured to the motor shaft per manufacturer's recommendations utilizing machined stainless-steel components. Adhesive or friction-type fits are not acceptable. Impeller shall be coated with the same system applied to the interior of the casing.
- F. The volute shall be a single piece, non-concentric design and shall have smooth fluid passages large enough at all point to pass any size solids which can pass through the impeller.
- G. A wear ring system shall provide efficient sealing between the volute and impeller. The ring shall consist of a stationary stainless steel or, molded nitrile rubber ring with a steel ring insert, which is drive fitted to the volute inlet and rotating stainless steel AISI 304 ring which is drive fitted to the impeller skirt.
- H. Shafting shall be constructed of AISI 329 stainless steel or 400 Series stainless steel for the pump and motor, sufficiently large in diameter to transmit safely the maximum torque developed by the drive unit and of such a design as to provide a rigid support for the impeller and to prevent excessive vibration. The shaft shall be suitably heat-treated, turned, ground, and polished over its entire length.
- I. Each pump shall be provided with a tandem mechanical shaft seal system.
  - 1. The upper seal shall operate in an oil chamber located just below the stator housing. This seal shall contain one stationary ceramic ring and one positively driven rotating carbon ring and shall function as an independent secondary barrier between the liquid and stator housing. The lower seal shall be the primary barrier between the pumped liquid and stator housing. This seal shall consist of a stationary ring and positively driven rotating ring both of which shall be tungsten carbide.
  - 2. An acceptable alternative tandem mechanical seal system shall include lapped Tungsten carbide seals welded to stainless steel retainers and held in contact by separate springs. The tandem double mechanical seal shall run in an oil bath. The seals shall be easily inspected and replaceable and require

neither maintenance nor adjustment. Each pump shall be provided with an oil chamber for the shaft sealing system. The drain and inspection plug, with positive anti-leak seal, shall be easily accessible from the outside.

3. The mechanical seals shall consist of BUNA N or ethylene propylene flexible members, brass or stainless-steel metal parts and 18-8 stainless steel spring, where applicable.
- J. The pump shaft shall rotate on at least two (2) heavy duty permanently lubricated bearings. Bearings shall be designed to carry all radial and axial thrust loads and shall have a minimum AFBMA B-10 life of 50,000 hours under worst possible operating conditions.
- K. All anchor bolts, lifting bolts, eye lugs, etc. necessary for complete installation and maintenance of the pump shall be furnished by Supplier and constructed of Type 316 stainless steel and shall be adequately designed for its intended use.
- L. A heavy-duty stainless steel lifting bail shall be included and be of adequate strength to lift the entire pump and motor assembly.

## 2.03 ELECTRICAL AND CONTROL REQUIREMENTS

The pump manufacturer shall provide the power and control cables between the pump and the local disconnect switch or junction box. The pump cable shall be a minimum of 40 feet in length and all pumps shall be provided with the same length of cable. No splices shall be allowed. Cables shall be PVC or oil-resistant chloroprene rubber jacketed type SPC cable suitable for submersible pump applications, shall be sized according to NEC and ICEA standards, and shall meet with MSHA approval. Stainless steel strain reliefs and strain relief connectors shall be furnished for all cables, one for each box connection and one for support inside the wet well.

### A. Cable Entry Water Seal

1. The cable entry water seal design shall insure a watertight and submersible seal without specific torque requirements. The cable entry shall be comprised of a single cylindrical elastomer grommet, flanked by stainless steel washers all having a close tolerance fit against the cable outside diameter and the entry inside diameter and compressed by the entry body containing a strain relief function, separate from the function of sealing the cable. The assembly shall bear against a shoulder in the pump top. The cable entry junction chamber and motor shall be separated by a stator lead sealing gland or terminal board, which shall isolate gaining access through the pump top. The junction chamber containing the terminal board shall be sealed from the motor by an elastomer compression seal O-ring. Connection between the cable conductors and stator leads shall be made with threaded compressed type binding post permanently affixed to the terminal board and thus perfectly

leak proof. Each pump shall be equipped with separate terminal board that totally isolates the incoming power supply from the pump motor.

2. An acceptable alternate cable entry seal shall include cable leads that enter at the top of the motor and allow the cable-to-motor connection to be accomplished in the field without soldering. All power and control lead wires shall be double sealed as they enter the motor in such a manner that cable-wicking will not occur. This sealing system shall consist of a rubber grommet followed by epoxy that is high in adhesive qualities and has a low coefficient of expansion. Each conductor shall have a small section of insulation removed to establish a window area of bare wire and each wire shall be untwisted and surrounded by epoxy potting material. A cable strain relief mechanism shall be an integral part of the sealing system. The cable sealing system shall be capable of withstanding an external pressure test of 1,200 psi as well as a cable assembly pull test as required by Underwriters Laboratories. Power and control leads shall be terminated on a sealed terminal board. The terminal board and its bronze lugs shall be O-ring sealed.

#### B. Electrical Requirements

1. The pump motor shall be designed for 460 volt, 60 Hertz, 3-phase electrical power. Motors shall be mounted on each pump and shall conform to the latest applicable NEMA, IEEE, and ANSI standards for submersible service. Variable speed pumps are required. The motors shall be inverter duty service suitable for use with variable frequency drives with a minimum of a 10 to 1 turndown ratio.
2. The motors shall be rated for continuous duty with a minimum service factor of 1.15.
3. Pumps and motors shall be specifically designed for operation with variable frequency drives where designated. WAS pump must be compatible with 25hp, 31.2-amp drive. RAS pump must be compatible with 50hp, 59.6-amp drive.
4. The pump motor shall be a squirrel-cage induction type, housed in a watertight chamber. The stator winding and stator leads shall be moisture resistant. The use of bolts, pins, or other fastening devices requiring penetration of the stator housing shall not be allowed.
5. The motor shall be guaranteed for continuous unsubmerged duty, capable of sustaining a minimum of ten (10) starts per hour without overheating.
6. The motor shall be provided with pre-lubricated radial and thrust bearings which are designed to carry the entire load which may be imposed upon it under all operating conditions.
7. All motors shall be of nationally known manufacture and shall be housed in enclosures specifically designed for submersible pump application and shall meet or exceed Underwriters Laboratory requirements for operation in a Class I, Group D, Division 1 hazardous location.

8. The stator shall be equipped with three (3) normally closed thermal switches embedded in the end coils of the stator winding (one switch per stator phase). These shall be used in conjunction with and supplemental to external motor overload protection and suitable for inclusion in the existing control system.
9. Moisture detector probes shall be provided in the oil-seal chamber. The pump manufacturer shall ensure compatibility of provided moisture probes with existing North Cary Water Reclamation Facility wiring and local control stations.

#### 2.04 SPARE PARTS

Spare parts shall be provided as shown below. The cost of spares parts shall be provided as an alternate bid item per lot of spare parts. Each lot shall include the following per pump:

- One (1) - set of wear rings per pump (upper and lower)
- Two (2) - mechanical seals (one upper and one lower)
- One (1) - complete set of gaskets and O-ring seals

### PART 3 -- EXECUTION

#### 3.01 MANUFACTURERS' FIELD SERVICES

- A. The services of a qualified manufacturer's technical representative shall be provided. Field services shall include the following site visits:

Service	Number of Trips per Pump (separate days for each pump)	Number of Days/Trip
Testing, Startup, and Training	1	1
Services after Startup	1 (min. 30 days after startup of pump)	1

- B. The pump manufacturer shall have their warranty and service center located within 100 miles of the North Cary Water Reclamation Facility. Additionally, the manufacturer shall have a minimum of four service technicians located within the state of North Carolina with at least two located within the Cary-Raleigh metro area.
  1. Any associated fees shall be captured in the submitted bid price
    - Any fees incurred outside of the submitted price are at the CONTRACTOR'S expense.

#### 3.02 SHOP TESTING

- A. Shop testing shall be in accordance with Section 11000, Equipment General Provisions and with the following additional requirements:
  1. Impeller, motor rating and electrical connections shall be checked.



2. A motor and cable insulation test for moisture content or defective insulation shall be made.
3. Prior to submergence, the pump shall be run dry to establish correct rotation and mechanical integrity.
4. The pump shall be run for 30 minutes submerged, a minimum of six (6) ft. under water.
5. After the run-dry test, the insulation test shall be performed again.
6. After the run-dry test, the pump shall be run continuously unsubmerged for 2 hours under full load with no damage to the motor. During this test, the pump shall demonstrate compliance with the specified performance for flow, head, and horsepower and shall experience a heat rise of not greater than 45°C (80°F) above ambient temperature.

- END OF SECTION -



## ATTACHMENT 1 MUNICIPAL REFERENCES

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Please provide a minimum list of five (5) references in the State of North Carolina of current or clients to whom you have installed the same or similar UNITS as outlined in this bid.

Name of Client \_\_\_\_\_  
Address \_\_\_\_\_  
Contact Person \_\_\_\_\_  
Telephone \_\_\_\_\_ E-mail: \_\_\_\_\_  
Delivery Dates \_\_\_\_\_  
Approximate Quantity Installed \_\_\_\_\_

Name of Client \_\_\_\_\_  
Address \_\_\_\_\_  
Contact Person \_\_\_\_\_  
Telephone \_\_\_\_\_ E-mail: \_\_\_\_\_  
Delivery Dates \_\_\_\_\_  
Approximate Quantity Installed \_\_\_\_\_

Name of Client \_\_\_\_\_  
Address \_\_\_\_\_  
Contact Person \_\_\_\_\_  
Telephone \_\_\_\_\_ E-mail: \_\_\_\_\_  
Delivery Dates \_\_\_\_\_  
Approximate Quantity Installed \_\_\_\_\_

Name of Client \_\_\_\_\_  
Address \_\_\_\_\_  
Contact Person \_\_\_\_\_  
Telephone \_\_\_\_\_ E-mail: \_\_\_\_\_  
Delivery Dates \_\_\_\_\_  
Approximate Quantity Installed \_\_\_\_\_

Name of Client \_\_\_\_\_  
Address \_\_\_\_\_  
Contact Person \_\_\_\_\_  
Telephone \_\_\_\_\_ E-mail: \_\_\_\_\_  
Delivery Dates \_\_\_\_\_  
Approximate Quantity Installed \_\_\_\_\_