



# Lake County

## Purchasing Division

<http://doingbusiness.lakecountyil.gov/>

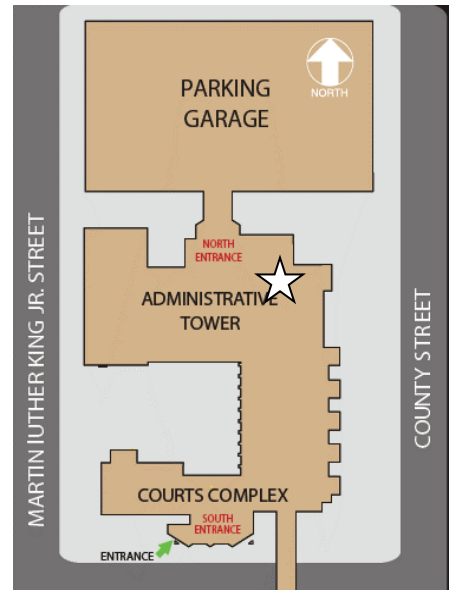
Please note the submission location is:

**Lake County**  
**Attn: Purchasing Division**  
 18 N. County Street – 9<sup>th</sup> Floor  
 Waukegan, IL 60085-4350

Contact information for Lake County Purchasing is:

**Purchasing Division**  
 Phone 847-377-2992  
 Fax 847-984-5889  
 Email: [purchasing@lakecountyil.gov](mailto:purchasing@lakecountyil.gov)

Waukegan Campus



ALL SUBMITTALS SHOULD BE LABELED ACCORDINGLY. PLEASE USE BELOW LABEL FOR YOUR CONVENIENCE.

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<u>BID No.</u> Bid #18142	Vendor Name: _____  Deliver to:  Lake County <b>ATTN: PURCHASING DIVISION</b> 18 N. County Street – 9 <sup>th</sup> Floor Waukegan, IL 60085-4350
<u>Buyer</u> Yvette Albarran	
<u>Bid Description</u> Electric Valve Actuators for the Des Plaines River WRF - Lake County Public Works Department, Libertyville, Illinois	
<u>BID Due Date*</u> September 20, 2018 at 2:00 p.m.	

\*Please note: Responses are due at the 9<sup>th</sup> floor reception desk and shall be time stamped by 2:00 p.m. CST on the required due date. Please allow sufficient time for parking, passing through security and arriving at the 9<sup>th</sup> floor.



Lake County Purchasing Division  
18 North County Street - Ninth Floor  
Waukegan, Illinois 60085-4350  
(847) 377-2992

E-Mail: [purchasing@lakecountyil.gov](mailto:purchasing@lakecountyil.gov)

Access Bid Results:  
<http://www.lakecountypurchasingportal.com/>

#### SUBMISSION INFORMATION

INVITATION: #18142  
BID OPENING DATE: September 20, 2018  
TIME: 2:00 p.m. local time  
LOCATION: Lake County  
Purchasing Division  
18 N. County St., 9<sup>th</sup> Floor  
Waukegan, IL 60085-4350

Submit 1 original and 1 electronic copy on a CD or flash drive

ISSUANCE DATE: August 31, 2018  
BUYER: Yvette Albarran

#### INVITATION TO BID VENDOR INFORMATION

COMPANY NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE, ZIP CODE: \_\_\_\_\_

**Electric Valve Actuators for the Des Plaines River WRF - Lake County Public Works Department, Libertyville, Illinois**

BID ITEM #	DESCRIPTION	QUANTITY	UNIT OF MEASURE	PRICE EACH	EXTENDED TOTAL
1.	3 - Electric Actuators to be Class 1 Division 1 Rated Hazardous Area to operate, 2-48" Slide Gates 1-60" Slide Gate Manufacturer: _____	3	Each	\$	\$
2.	2 - Electric Actuators to be NEMA 4X Water Tight Non-Hazardous to operate, 2-48" Slide Gates Manufacturer: _____	2	Each	\$	\$
	<b>TOTAL BID AMOUNT</b>				\$ _____

**NOTE TO BIDDERS:** Any and all exceptions to these specifications MUST be clearly and completely indicated on the bid sheet. Attach additional pages if necessary. Please be advised that any exceptions to these specifications may cause your bid to be disqualified.

If a bid includes any exceptions, Bidders must insert an "X" in the following box indicating a bid submission with exceptions.

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All documents shall be properly signed and completed. Submit bids by **sealed bid only**. Fax and e-mail bids are not acceptable and will not be considered.

**THE SECTION BELOW MUST BE COMPLETED IN FULL AND SIGNED**

**PROMPT PAYMENT DISCOUNT:** \_\_\_\_\_ % \_\_\_\_\_ DAYS

The undersigned hereby certifies that they have read and understand the contents of this solicitation and agree to furnish at the prices shown any or all of the items above, subject to all instructions, conditions, specifications and attachments hereto. Failure to have read all the provisions of this solicitation shall not be cause to alter any resulting contract or to accept any request for additional compensation. By signing this bid document, the bidder hereby certifies that they are not barred from bidding on this contract as a result of a violation of either Section 33E-3 or 33E-4 of the Illinois Criminal Code of 1961, as amended.

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

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

Typed/Printed Name: \_\_\_\_\_

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

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

Telephone Number: \_\_\_\_\_

E-mail \_\_\_\_\_

Fax Number: \_\_\_\_\_

## LAKE COUNTY - INVITATION FOR BIDS: TERMS AND CONDITIONS

1. **AUTHORITY.** This Invitation for Bids is issued pursuant to applicable provisions of the Lake County Purchasing Ordinance.
2. **BID OPENING.** Sealed bids will be received at the Lake County Purchasing Department until the date and time specified, at which time they shall be opened in public. Late bids shall be rejected and returned unopened to the sender. Lake County does not prescribe the method by which bids are to be transmitted; therefore, it cannot be held responsible for any delay, regardless of the reason, in transmission of the bids.
3. **BID PREPARATION.** Bids must be submitted on this form and all information and certifications called for must be furnished. Bids submitted in any other manner, or which fail to furnish all information or certificates required, may be summarily rejected. Bids may be modified or withdrawn prior to the time specified for the opening of bids. Bids shall be filled out legibly in ink or typewritten with all erasures, strike overs and corrections initialed in ink by the person signing the bid. The bid shall include the legal name of the bidder, the complete mailing address, and be signed in ink by a person or persons legally authorized to bind the bidder to a contract. Name of person signing should be typed or printed below the signature.
4. **BID ENVELOPES.** Envelopes containing bids must be sealed and addressed to the County of Lake Purchasing Division. The name and address of the bidder and the Invitation Number must be shown in the upper left corner of the envelope.
5. **ERRORS IN BIDS.** Bidders are cautioned to verify their bids before submission. Negligence on the part of the bidder in preparing the bid confers no right for withdrawal or modification of the bid after it has been opened. In case of error in the extension of prices in the bid, the unit prices will govern.
6. **RESERVED RIGHTS.** The County of Lake reserves the right at any time and for any reason to cancel this Invitation for Bids, accept or reject any or all bids or any portion thereof, or to accept an alternate bid. The County reserves the right to waive any immaterial defect in any bid. Unless otherwise specified by the bidder or the County, the County has ninety (90) days to accept. The County may seek clarification from any bidder at any time and failure to respond promptly is cause for rejection.
7. **INCURRED COSTS.** The County will not be liable for any costs incurred by bidders in replying to this Invitation for Bids.
8. **AWARD.** It is the intent of the County to award a contract to the lowest responsible bidder meeting specifications. The County reserves the right to determine the lowest responsible bidder on the basis of an individual item, groups of items, or in any way determined to be in the best interests of the County. Award will be based on the following factors (where applicable): (a) adherence to all conditions and requirements of the bid specifications; (b) price; (c) qualifications of the bidder, including past performance, financial responsibility, general reputation, experience, service capabilities, and facilities; (d) delivery or completion date; (e) product appearance, workmanship, finish, taste, feel, overall quality, and results of product testing; (f) maintenance costs and warranty provisions; and (g) repurchase or residual value.
9. **PRICING.** The price quoted for each item is the full purchase price, including delivery to destination, and includes all transportation and handling charges, premiums on bonds, material or service costs, patent royalties and all other overhead charges of every kind and nature. Unless otherwise specified, prices shall remain firm for the contract period.
10. **DISCOUNTS.** Prices quoted must be net after deducting all trade and quantity discounts. Where cash discounts for prompt payment are offered, the discount period shall begin with the date of receipt of a correct invoice or receipt or final acceptance of goods, whichever is later.
11. **TAXES.** Lake County is not subject to Federal Excise Tax. Per Illinois Compiled Statutes, 35 ILCS 120/2-5, Lake County is exempt from state and local taxes.
12. **SPECIFICATIONS.** Reference to brand names and numbers is descriptive, but not restrictive, unless otherwise specified. Bids on equivalent items will be considered, provided the bidder clearly states exactly what is proposed to be furnished, including complete specifications. Unless the bidder specified otherwise, it is understood the bidder is offering a referenced brand item as specified or is bidding as specified when no brand is referenced, and does not propose to furnish an "equal." The County reserves the right to determine whether a substitute offer is equivalent to and meets the standard of quality indicated by the brand name and number.
13. **SAMPLES.** Samples of items, when called for, must be furnished free of expense and, if not destroyed in the evaluation process, will, upon request, be returned at the bidder's expense. Request for the return of samples must accompany the sample and include UPS Pickup Slip, postage or other acceptable mode of return. Individual samples must be labeled with bidder's name, invitation number, item reference, manufacturer's brand name and number.
14. **INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS.** Bidders shall promptly notify the County of any ambiguity, inconsistency or error which they may discover upon examination of the bidding documents. Interpretations, corrections and changes will be made by addendum. Each bidder shall ascertain prior to submitting a bid that all addenda have been received and acknowledged in the bid.
15. **INDEMNIFICATION.** The Seller shall indemnify and hold harmless the County, its agents, officials, and employees from and against all injuries, losses, claims, suits, costs and expenses which may accrue against the County as a consequence of granting the Contract.
16. **DEFAULT.** Time is of the essence of this contract and if delivery of acceptable items or rendering of services is not completed by the time promised, the County reserves the right, without liability, in addition to its other rights and remedies, to terminate the contract by notice effective when received by Seller, as to stated items not yet shipped or services not yet rendered and to purchase substitute items or services elsewhere and charge the Seller with any or all losses incurred. The County shall be entitled to recover its attorney's fees and expenses in any successful action by the County to enforce this contract.
17. **INSPECTION.** Materials or equipment purchased are subject to inspection and approval at the County's destination. The County reserves the right to reject and refuse acceptance of items which are not in accordance with the instructions, specifications, drawings or data of Seller's warranty (express or implied). Rejected materials or equipment shall be removed by, or at the expense of, the Seller promptly after rejection.
18. **WARRANTY.** Seller warrants that all goods and services furnished hereunder will conform in all respects to the terms of this solicitation, including any drawings, specifications or standards incorporated herein, and that they will be free from latent and patent defects in materials, workmanship and title, and will be free from such defects in design. In addition, Seller warrants that said goods and services are suitable for, and will perform in accordance with, the purposes for which they are purchased, fabricated, manufactured and designed or for such other purposes as are expressly specified in this solicitation. The County may return any nonconforming or defective items to the Seller or require correction or replacement of the item at the time the defect is discovered, all at the Seller's risk and expense. Acceptance shall not relieve the Seller of its responsibility.
19. **REGULATORY COMPLIANCE.** Seller represents and warrants that the goods or services furnished hereunder (including all labels, packages and container for said goods) comply with all applicable standards, rules and regulations in effect under the requirements of all Federal, State and local laws, rules and regulations as applicable, including the Occupational Safety and Health Act as amended, with respect to design, construction, manufacture or use for their intended purpose of said goods or services. Seller shall furnish "Material Safety Data Sheets" in compliance with the Illinois Toxic Substances Disclosure to Employees Act.
20. **EQUAL EMPLOYMENT OPPORTUNITY.** Contractor shall comply with the Illinois Human Rights Act, 775 ILCS 5/1-101 et seq., as amended and any rules and regulations promulgated in accordance therewith, including, but not limited to the Equal Employment Opportunity Clause, Illinois Administrative Code, Title 44, Part 750 (Appendix A), which is incorporated herein by reference. Furthermore, the Contractor shall comply with the Public Works Employment Discrimination Act, 775 ILCS 10/0.01 et seq., as amended.
21. **ROYALTIES AND PATENTS.** Seller shall pay all royalties and license fees. Seller shall defend all suits or claims for infringement of any patent, copyright or trademark rights and shall hold the County harmless from loss on account thereof.
22. **LAW GOVERNING.** This contract shall be governed by and construed according to the laws of the State of Illinois. Jurisdiction and venue shall be found exclusively in the 19<sup>th</sup> Judicial Circuit Court, State of Illinois.

**Electric Valve Actuators for the Des Plaines River WRF - Lake County Public Works Department,  
Libertyville, Illinois**

**GENERAL TERMS AND CONDITIONS**

**August 2018**

**1. OVERVIEW**

The intention of Lake County, Illinois is to enter into a contract with one qualified Contractor to provide five electric valve actuators. Three of the valves will be located in a Class-1 hazardous environment (Influent Building). The other two valves will be located in a non-hazardous environment.

**2. WORK INCLUDED**

Work is to include the submission of five actuator vales that are manufactured to perform in the desired conditions.

**3. SUBMISSION OF BIDS**

Bids will be accepted until **2:00 p.m. local time, September 20, 2018**, at the Lake County Purchasing Division, 18 North County Street, 9<sup>th</sup> Floor; Waukegan, IL 60085-4350. Each bid must include the following completed and signed forms and submissions:

- a. One (1) original "Invitation to Bid" including signed forms, Bid Sheet.
- b. One (1) electronic copy of the complete bid submission, on a CD or flash drive.
- c. Compliance with Specifications Sheet, with compliance to each specification section indicated.
- d. One (1) Value Added sheet, if necessary.
- e. One (1) Addendum Acknowledgement, if appropriate.
- f. One (1) Contractor Qualification Form.
- g. Bidders shall complete and submit a Statement of Sustainability to ensure bidders are incorporating sustainability into their firm's practices. Appendix A is included herein for this purpose.
- h. One (1) Reference Sheet.
- i. Product literature and manufacturer's specifications for all items bid.

**4. PRODUCT SUPPLIED**

All equipment will be new (recent manufacture or manufactured for this contract) and unused, first quality only. Equipment supplied will conform in quality, construction, fit for intended use and meet all industry standards for the intended use as specified herein. Please include product descriptive literature and specification sheets with the bid submission.

**5. AWARD**

Award will be made to the lowest responsive and responsible bidder, for the Total Bid Amount, who best meets the evaluation criteria specified herein. Pursuant to the Lake County Purchasing Ordinance Lake County reserves the right to evaluate bids based on criteria to determine such as inspection, testing, quality, workmanship, experience, past performance, financial stability, delivery and suitability for a particular purpose.

**6. EVALUATION CRITERIA AND CONTRACTOR'S QUALIFICATIONS**

All bidders must be qualified vendors and demonstrate the capability to provide the equipment and service required in accordance with the bid specifications. Bids shall be evaluated as follows (not listed in order of priority):

- Bid pricing
- Years in business
- Providing similar service to other organizations of similar size for a minimum of five (5) years
- Quality of workmanship/reliability
- Ability to meet or exceed bid specifications
- Equipment capability
- References
- Timeliness of service

The County reserves the right to consult references, financial statements and any other resources to determine the capability of the bidder

**7. PRECEDENCE**

Where there appears to be variances or conflicts, the following order of precedence shall prevail: Lake County Specifications; Lake County General Terms & Conditions, Lake County Invitation for Bids General Terms & Conditions and the Contractor's Bid Response.

## **8. ESTIMATED QUANTITY**

The quantities listed on the bid cover sheets are estimates of the total quantity to be used during the year. The County does not guarantee any specific amount and shall not be held responsible for any deviation. This contract shall cover the County's requirements whether more or less than the estimated amount.

## **9. BID PRICE**

Bid price shall include the cost of all materials, blast media, coatings, sundries, labor, overhead, profit, insurance, workman's compensation, unemployment insurance and social security, proper disposal of wastes generated, and shall include all other charges of every kind and nature.

## **10. DELIVERY CONDITIONS**

All products/services shall be bid F.O.B. Destination to Lake County sites designated by Public Works. The term F.O.B. Destination shall mean delivered and unloaded at delivery site with all charges for transportation and unloading paid by the Contractor. Any claim for loss or damage shall be between the Contractor and the carriers.

## **11. INVOICES AND PAYMENTS**

The Contractor shall submit an invoice(s) detailing the services and products provided in accordance with the payment provisions of this contract. Invoice shall show the purchase order number and the address where the product or service was provided. Payment shall be made in accordance with the Local Government Prompt Payment Act.

## **12. BID REVIEW**

After bid submittal, bids may be subjected to subsequent review. Lake County reserves the right to conduct follow up reference checks, request additional information or perform other activities related to comprehensive bid review and determination of the lowest responsive and responsible bidder who best meets the specifications.

## **13. NON-ENFORCEMENT BY THE COUNTY**

The Contractor shall not be excused from complying with any of the requirements of the contract because of any failure on the part of the County, on any one or more occasions, to insist on the Contractor's performance or to seek the Contractor's compliance with any one or more of said terms or conditions.

## **14. REFERENCES**

Contractor shall provide customer references, contractor and sub-contractor qualifications, and equipment capability on the forms that follow. Each bidder must demonstrate at least five (5) years' prior experience, as a full-time firm, continuously and actively engaged in Fire Hydrant Preparation and Painting. Please provide a list of customers with a volume equal to the County's estimate, customers with multi-site hydrant locations, and service comparable to Lake County.

NOTE: All bidders must complete the attached Contractor Qualifications, Subcontractor Information, Equipment Capability and Reference forms included herein. Completed forms must be submitted with your bid.

## **15. UNBALANCED BIDDING**

Bidders shall not submit a bid, which contains irregularities of any kind, including unbalanced bids. By an unbalanced bid, it is meant that one or more separate items are substantially out of line with the price for other comparable items. The County reserves the right not to award any items whose unit discount rates appear excessive or unbalanced.

## **16. TERMINATION**

The County reserves the right to terminate this contract, or any part of this contract, upon thirty (30) days' written notice. In case of such termination, the Contractor shall be entitled to receive payment from the County for fuel delivered or in transit to date in accordance with the terms and conditions of this contract. In the event that this contract is terminated due to Contractor's default, the County shall be entitled to purchase substitute items and/or services elsewhere and charge the Contractor with any or all losses incurred, including attorney's fees and expenses.

## **17. CHANGE IN STATUS**

The Contractor shall notify Lake County immediately of any change in its status resulting from any of the following: (a) vendor is acquired by another party; (b) vendor becomes insolvent; (c) vendor, voluntary or by operation law, becomes subject to the provisions of any chapter of the Bankruptcy Act; (d) vendor ceases to conduct its operations in normal course of business. Lake County shall have the option to terminate its contract with the vendor on 15 days written notice based on any such change in status.

## **18. MOST FAVORED CUSTOMER**

The Contractor guarantees that the prices covered by this contract shall be the lowest prices offered to any customer for similar goods/services during the period of this contract. If the Contractor offers lower prices or new rate plans for similar goods/services to any other customer during the contract period, then these lower prices shall be offered to Lake County, and the contract shall be modified accordingly.

## **19. RESERVED RIGHTS**

Lake County reserves the right to cancel this Invitation for Bid at any time, to reject any and all bids for any reason, to accept an alternate bid, to waive any informalities or exceptions in the bid and to award on a collective or individual item basis.

## **20. HOLD HARMLESS CLAUSE**

The Contractor agrees to indemnify, save harmless and defend Lake County, its agents, servants, employees, and each of them against and hold it and them harmless from any and all lawsuits, claims, demands, liabilities, losses, and expenses; including court costs and attorney's fees for or on account of any injury to any person, or any death at any time resulting from such injury, or any damage to property, which may arise or which may be alleged to have arisen out of, or in connection with the work covered by this project. The foregoing indemnity shall apply except if such injury is caused directly by the willful and wanton conduct of Lake County, its agents, servants, or employees or any other person indemnified hereafter.

## **21. INSURANCE**

### All Contracts may be subject to change

The contractor must obtain, for the Contract term and any extension of it, insurance issued by a company or companies qualified to do business in the State of Illinois with an A.M. Best Rating of at least A-and provide the County with a Certificate of Insurance 15 days before the start of the project, and thereafter annually for contracts/ projects that will last more than one year. Insurance in the following types and amounts is necessary and/or where applicable:

### Workers Compensation (Coverage A) and Employers Liability (Coverage B)

Workers Compensation Insurance covering all liability of the Contractor arising under the Worker's Compensation Act and Worker's Occupational Disease Act at limits in accordance with the laws of the State of Illinois. Employers' Liability Insurance shall be maintained to respond to claims for damages because of bodily injury, occupational sickness, or disease or death of the Contractor's employees, with limits listed below:

### Employers Liability

- a) Each Accident \$1,000,000
- b) Disease-Policy Limit \$1,000,000
- c) Disease-Each Employee \$1,000,000

Such Insurance shall contain a waiver of subrogation in favor of Lake County.

### Commercial General Liability Insurance

In a broad form on an occurrence basis shall be maintained, to include, but not be limited to, coverage for property damage, bodily injury (including death), personal injury and advertising injury in the following coverage forms where exposure exists:

- Premises and Operations
- Independent Contractors
- Products/Completed Operations
- Liability assumed under an Insured Contract/ Contractual Liability
- Personal Injury and Advertising Injury

With limits of liability not less than:

\$ 1,000,000 Each Occurrence

\$ 1,000,000 Products-Completed Operations

\$ 1,000,000 Personal and Advertising injury limit

\$ 2,000,000 General aggregate; the CGL policy shall be endorsed to provide that the General Aggregate limit applies separately to each of the contractor's projects away from premises owned or rented to contractor.

### Automobile Liability Insurance

Automobile liability insurance shall be maintained to respond to claims for damages because of bodily injury, death of a person, or property damage arising out of ownership, maintenance, or use of a motor vehicle. This policy shall be written to cover any auto whether owned, leased, hired, or borrowed.

The Contractor's auto liability insurance, as required above, shall be written with limits of insurance not less than the following:

\$ 1,000,000 Combined single Limit (Each Accident)

Contractor agrees that with respect to the above required insurance:

- a) The CGL policy shall be endorsed for the general aggregate to apply on a “per Project” basis;
- b) The Contractor’s insurance shall be primary in the event of a claim.
- c) Contractor agrees that with respect to the above required insurance, Lake County shall be named as additional insured, including its agents, officers, and employees and be provided with thirty (30) days notice, in writing by endorsement, of cancellation or material change;
- d) Lake County shall be provided with Certificates of Insurance and endorsements evidencing the above required insurance, prior to commencement of this Contract and thereafter with certificates evidencing renewals or replacements of said policies of insurance at least thirty (30) days prior to the expiration of cancellation of any such policies. Said Notices and Certificates of Insurance shall be provided to:

**Lake County  
Purchasing Division  
18 N. County 9th Floor  
Waukegan, Illinois 60085  
Attn: RuthAnne Hall, Lake County Purchasing Agent**

Failure to Comply: In the event the Contractor fails to obtain or maintain any insurance coverage required under this agreement, the Lake County may purchase such insurance coverage and charge the Expense thereof to the Contractor.

## **22. INDEPENDENT CONTRACTOR**

The Contractor is an independent contractor and no employee or agent of the Contractor shall be deemed for any reason to be an employee or agent of Lake County.

## **23. NON-ENFORCEMENT BY THE COUNTY**

The Contractor shall not be excused from complying with any of the requirements of the Contract because of any failure on the part of the County, on any one or more occasions, to insist on the Contractor’s performance or to seek the Contractor’s compliance with any one or more of said terms or conditions.

## **24. JOINT PURCHASING**

The purchase of goods and services pursuant to the terms of this Contract shall also be offered for purchases to be made by other governmental units, as authorized by the Governmental Joint Purchasing Act, 30 ILCS 525/0.01, et seq. (the “Act”). All purchases and payments made under the Act shall be made directly by and between each governmental unit and the successful bidder. The bidder agrees that Lake County shall not be responsible in any way for purchase orders or payments made by the other governmental units. The bidder further agrees that all terms and conditions of this Contract shall continue in full force and effect as to the other governmental units during extended terms. The credit or liability of each governmental unit shall remain separate and distinct. Disputes between bidders and governmental units shall be resolved between the immediate parties.

The bidder and the other governmental units may negotiate such other and further terms and conditions to this Contract (“Other Terms”) as individual projects may require. To be effective, Other Terms shall be reduced to writing and signed by a duly authorized representative of both the successful bidder and the other governmental unit.

The bidder shall provide the other governmental units with all required documentation set forth in the solicitation including but not limited to: performance and payment bonds, Certificates of Insurance naming the respective governmental unit as an additional insured and certified payrolls to the other governmental unit as required.

## **25. ECONOMIC OPPORTUNITY PROGRAM**

Lake County launched a **Buy Local. Build Local. Work Local.** initiative in 2013 to increase the outreach and procurement opportunities for businesses located within Lake County, including women-owned businesses and minority-owned business enterprises (L/W/MBE). The overarching objective is to maximize participation from these businesses in the County’s procurement process, in accordance with applicable law. The County will take all necessary and reasonable steps to assure that business enterprises defined as L/W/MBE shall have a fair opportunity to participate in County contracts. As part of its Economic Opportunity Program (EOP) commitment the County will make every effort to achieve the following objectives:

- (a) To ensure nondiscrimination in the award and administration of contracts;
- (b) To create a level playing field on which L/W/MBEs can compete fairly for contracts by providing any necessary training and assistance in bid preparation;
- (c) To ensure that the County’s EOP is narrowly tailored in accordance with applicable law;
- (d) To establish a means for firms identifying themselves as L/W/MBEs to register for procurement opportunities and work cooperatively with contracted firms to report on measures that



- (e) demonstrates the County's commitment to its EOP; and
- (e) To help remove barriers to the participation of L/W/MBEs through notification of contract opportunities.

Successful bidders are encouraged to work with Workforce Development to post any and all opportunities for employment on County contracts. Lake County's Workforce Development mission is to foster and ensure the economic prosperity of the Lake County community by maximizing the potential of businesses and workers. As such, Workforce Development provides a key resource for job seekers and employers.

State law mandates an open and competitive bidding process and requires that publicly procured contracts be awarded to the lowest responsible and responsive bidder with no demonstrated preference based on the bidder's location, race and gender.

## **26. REPORTING REQUIREMENTS FOR AWARDED CONTRACTS**

All awarded vendors will identify and report the type of ownership— L/W/MBE, and/or not L/W/MBE for any work that they or their approved subcontractors will perform. In addition, Lake County requests that all awarded vendors provide an accounting of employees assigned throughout the term of the contract in regards to their home address and ethnicity. Lake County may use any data collected to report on potential of businesses and workers benefitting from County contracts.

## **27. SUSTAINABILITY STATEMENT**

Lake County is committed to green and sustainable practices and good environmental stewardship. Consequently, we are asking bidders to provide a Statement of Sustainability to ensure our bidders are also incorporating sustainability into their firms' practices. Please complete Appendix A, included herein, and include it with the bidder's submission.

## **28. ADDITIONAL INFORMATION**

Should the bidder require additional information about this bid, please submit questions on our website at <http://lakecountypurchasingportal.com> by selecting the bid number and addendum link. Questions may also be submitted via email to [purchasing@lakecountyil.gov](mailto:purchasing@lakecountyil.gov). All questions shall be submitted no less than seven (7) days prior to the bid opening date. ANY and ALL changes to these specifications are valid only if included in an addendum issued by Lake County Purchasing. No interpretation of the meaning of the plans, specifications or other contract documents will be made orally. Failure of any bidder to receive any such addendum or interpretation shall not relieve the bidder from obligation under this bid as submitted. All addenda as issued shall become part of the bid documents. Failure to request an interpretation constitutes a waiver to later claim that ambiguities or misunderstandings caused a bidder to improperly submit a bid.

## **29. ADDENDUM ACKNOWLEDGEMENT**

Any and all changes to the specifications, terms, and conditions of this Bid are valid only if they are included by addendum issued by Lake County Purchasing. Bidders shall acknowledge addenda by signing the enclosed Addendum Acknowledgement form. It is the vendor's responsibility to check for addendums, posted on the website at <http://lakecountypurchasingportal.com> prior to the submittal due date. No notification will be sent when addendums are posted unless there is an addendum within three business days of the submittal due date.

## **30. EQUALITY**

In cases where an item is identified by manufacturer's name, it is understood that the Contractor proposes to furnish the item so identified and does not propose to furnish a substitute unless the proposed product is definitely indicated therein by the Contractor. Any additions, deletions, or variations from the following specifications must be noted clearly on the bid exactly as to what the deletions or variations are. Any item appearing in the Contractor's regular published specifications is assumed to be included in the Contractor's proposal. The reference above to the trade name is intended to be descriptive, but not restrictive, and only to indicate to the respective Contractor a unit that will be satisfactory.

Lake County hereby reserves the right to approve as an equal, or to reject as not being an equal, any product the Contractor proposes to furnish which contains variations or deletions from these specifications.

## **31. WARRANTY**

Neither the final payment, nor any provisions in the contract, shall constitute an acceptance of work not done in accordance with the contract documents or relieve the Contractor of liability in respect to any excess warranties or responsibilities for faulty materials or workmanship. If, within two (2) years after the date of completion of the work, or designated portion thereof, or after the date of commencement of warranties, or by terms of an applicable special warranty required by the contract documents, any of the work is found to be not in accordance with the requirements of the contract documents, the Contractor shall correct the work and pay for any damage to other work or property resulting therefrom within seven (7) calendar days after receipt of written notice from Lake County. Lake County shall give notice of observed defects with reasonable promptness after discovery of the condition. Certified commissioning shall extend the standard warranty to two (2) years from date of start-up.

**REFERENCES****Five (5) Electric Valve Actuators for the Des Plaines River WRF - Lake County Public Works Department, Libertyville, Illinois  
Lake County Purchasing Div. August 2018**

(This section must be completed and returned with bid. Attach additional pages as required to complete required documentation.)

List below current/past customers and local governmental entities similar in size and scope of operation to Lake County where you have provided Fine and Carbonless Paper products similar to the items described in this request for bid:

1. Entity: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, Zip Code: \_\_\_\_\_  
Telephone Number: \_\_\_\_\_  
Description of Services and Equipment Provided: \_\_\_\_\_  
\_\_\_\_\_  
Date of Service: \_\_\_\_/\_\_\_\_/\_\_\_\_ To \_\_\_\_/\_\_\_\_/\_\_\_\_

2. Entity: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, Zip Code: \_\_\_\_\_  
Telephone Number: \_\_\_\_\_  
Description of Services and Equipment Provided: \_\_\_\_\_  
\_\_\_\_\_  
Date of Service: \_\_\_\_/\_\_\_\_/\_\_\_\_ To \_\_\_\_/\_\_\_\_/\_\_\_\_

3. Entity: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, Zip Code: \_\_\_\_\_  
Telephone Number: \_\_\_\_\_  
Description of Services and Equipment Provided: \_\_\_\_\_  
\_\_\_\_\_  
Date of Service: \_\_\_\_/\_\_\_\_/\_\_\_\_ To \_\_\_\_/\_\_\_\_/\_\_\_\_

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

Authorized Signature: \_\_\_\_\_  
Title: \_\_\_\_\_

**CONTRACTOR QUALIFICATIONS**

**Five (5) Electric Valve Actuators for the Des Plaines River WRF - Lake County Public Works Department, Libertyville, Illinois**  
**Lake County Purchasing Div.** **August 2018**

(This section must be completed and returned with bid. Attach additional pages as required to complete required documentation.)

Name and Address of Office from which this contract will be administered

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

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

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Project Manager: \_\_\_\_\_

# Years in Business: \_\_\_\_\_ Number of Employees: \_\_\_\_\_

Annual Sales: \$\_\_\_\_\_ Dunn & Bradstreet #: \_\_\_\_\_

**List Employees Who Will be Dedicated to Lake County for the Administration of This Contract:**

(Attach additional pages as necessary)

NAME	POSITION TITLE	NUMBER OF YEARS	AREA OF RESPONSIBILITY / EXPERIENCE	TASK
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

**Name and Address of Contractor's Warehouse Facility. (Location where product(s) are inventoried and shipped from):**

Name of Warehouse manager: \_\_\_\_\_

Address of Warehouse: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_



**Addendum Acknowledgement Bid #18142**

The undersigned acknowledges receipt of the following addendum(s):

ADDENDUM #	SIGNATURE

*I have examined and carefully prepared the submittal documentation in detail before submitting my response to Lake County.*

Submittal Number: 18142

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

Authorized Representative: \_\_\_\_\_

Authorized Representative: *Signature* \_\_\_\_\_

Authorized Representative: *Print* \_\_\_\_\_

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

It is the vendor's responsibility to check for addendums, posted on the website at <http://lakecountypurchasingportal.com> prior to the submittal due date. No notification will be sent when addendums are posted unless there is an addendum within three business days of the submittal due date.

If the submittal has already been received by Lake County, vendors are required to acknowledge receipt of addendum via email to [purchasing@lakecountyil.gov](mailto:purchasing@lakecountyil.gov) prior to the due date.

Submittals that do not acknowledge addendums may be rejected.

All responses are to be submitted in a sealed envelope. Envelopes are to be clearly marked with required submittal information.

## SUSTAINABILITY STATEMENT INSTRUCTIONS

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Lake County is committed to green and sustainable practices and good environmental stewardship. Consequently, we are asking Bidders to provide a Statement of Sustainability to ensure our vendors are also incorporating sustainability into their firms' practices.

### INSTRUCTIONS

On the following Sustainability Statement form, provide a clear description of your firm's sustainable practices, policies, or procedures. These practices may include, but may not be limited to, the following categories and examples:

Waste Minimization within your office or facilities, such as a recycling programs, double-sided copying, electronic internal communications (i.e. memos), use of recycled-content materials and reusable cups, limiting printing, electronic document management, instituting green purchasing policies, using green cleaning supplies and practices, or reducing packaging in materials you procure or supply.

Energy Efficiency within your office, facilities, or firm, such as lighting retrofits, photo-sensor switches for lighting, effective use of daytime lighting, using Energy Star rated appliances or equipment, using an alternative fuel or having efficient fleet policies, an anti-idling policy, or indoor temperature management (i.e. turning the thermostat up in the summer and down in the winter).

Water Efficiency within the office, facilities, or firm, such as faucet or fixture retrofits, switching from individual bottled water to office water coolers or drinking fountains, and installing drought-tolerant landscaping.

Staff encouraged to adopt sustainable practices and supported by your firm through public transit benefits, bicycle accommodations, telecommuting options, support for green seminar attendance, becoming US Green Building Council LEED accredited, or creating an internal "green team."

Education of your staff about green practices, education of your business peers about your green accomplishments, education of your community by your sustainability, or notice of any environmental awards your firm has achieved.

CONTINUE TO NEXT PAGE

# SUSTAINABILITY STATEMENT

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Attach additional sheets if necessary.

## Waste Minimization

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## Energy Efficiency

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## Water Efficiency

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## Staff

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## Education

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## **1. General**

The actuators shall be suitable for use on a nominal power supply as noted in the actuator table at the end of the spec and are to incorporate motor, integral reversing starter, local control facilities and terminals for remote control and indication connections housed within a self-contained, sealed enclosure.

As a minimum the actuators should meet the requirements set out in EN15714-2 and ISA SP96.02

In order to maintain the integrity of the enclosure, setting of the torque levels, position limits and configuration of the indication contacts etc. shall be carried out without the removal of any actuator covers and without mains power over an Infra-red or *Bluetooth*® wireless interface. Sufficient commissioning tools shall be provided with the actuators and must meet the enclosure protection and certification levels of the actuators. Commissioning tools shall not form an integral part of the actuator and must be removable for secure storage / authorized release. In addition, provision shall be made for the protection of configured actuator settings by a means independent of access to the commissioning tool. Provision shall be made to disable *Bluetooth*® communications or only allow a *Bluetooth*® connection initiated by an Infra-Red command for maximum security.

The actuator shall include a device to ensure that the motor runs with the correct rotation for the required direction of valve travel irrespective of the connection sequence of the power supply.

Actuators shall be Rotork IQ Mk3 or owner pre-approved equal

## **2. Actuator Sizing**

The actuator shall be sized to guarantee valve closure at the specified differential pressure and temperature. The safety margin of motor power available for seating and unseating the valve shall be sufficient to ensure torque switch trip at maximum valve torque with the supply voltage 10% below nominal. For linear operating valves, the operating speed shall be such as to give valve closing and opening at approximately 10-12 inches per minute unless otherwise stated in the data sheet. For 90° valve types the operating time will be specified.

## **3. Environmental**

Actuators shall be suitable for indoor and outdoor use. The actuator shall be capable of functioning in an ambient temperature ranging from -33°C (22°F) to 70°C (140°F), up to 100% relative humidity. Actuators for hazardous area applications shall meet the area classification, gas group and surface temperature requirements specified in data sheet.

## **4. Enclosure**

Actuators shall be o-ring sealed, watertight to IP66/IP68 7m for 72hrs, NEMA 4, 6. The motor and all other internal electrical elements of the actuator shall be protected from ingress of moisture and dust when the terminal cover is removed for site for cabling, the terminal compartment having the same ingress protection rating as the actuator with the terminal cover removed.

Enclosure must allow for temporary site storage without the need for electrical supply connection.

All external fasteners shall be plated stainless steel. The use of un-plated stainless steel or steel fasteners is not permitted.

## **5. Motor**

The motor shall be an integral part of the actuator, designed specifically for valve actuator applications. It shall be a low inertia high torque design, class F insulated with a class B temperature rise giving a time rating of 15 minutes at 40°C (104°F) at an average load of at least 33% of maximum valve torque. Temperature shall be limited by 2 thermostats embedded in the motor end windings and integrated into its control.

Electrical and mechanical disconnection of the motor should be possible without draining the lubricant from the actuator gearcase.

## **6. Motor Protection**

Protection shall be provided for the motor as follows:

- Stall - the motor shall be de-energized within 8 seconds in the event of a stall when attempting to unseat a jammed valve.
- Over temperature - thermostat will cause tripping of the motor. Auto-reset on cooling
- Single phasing - lost phase protection.
- Direction – phase rotation correction.

## **7. Gearing**

The actuator gearing shall be totally enclosed in an oil-filled gearcase suitable for operation at any angle. Grease lubrication is not permissible. All drive gearing and components must be of metal construction and incorporate a lost-motion hammer blow feature. For rising spindle valves the output shaft shall be hollow to accept a rising stem and incorporate thrust bearings of the ball or roller type at the base of the actuator. The design should be such as to permit the opening of the gearcase for inspection or disassembled without releasing the stem thrust or taking the valve out of service. For 90° operating type of valves drive gearing shall be self-locking to prevent the valve back-driving the actuator.

## **8. Hand Operation**

A handwheel shall be provided for emergency operation, engaged when the motor is declutched by a lever or similar means, the drive being restored to electrical operation automatically by starting the motor. The handwheel or selection lever shall not move on restoration of motor drive. Provision shall be made for the hand/auto selection lever to be locked in both hand and auto positions. It should be possible to select hand operation while the actuator is running or start the actuator motor while the hand/auto selection lever is locked in hand without damage to the drive train.

Clockwise operation of the handwheel shall give closing movement of the valve unless otherwise stated in the data sheet. For linear valve types the actuator handwheel drive must be mechanically independent of the motor drive and should be such as to permit valve operation in a reasonable time with a manual force not exceeding 400N through stroke and 800N for seating/unseating of the valve.

## **9. Drive Interface**

The actuator shall be furnished with a drive bushing easily detachable for machining to suit the valve stem or gearbox input shaft. The drive bush shall be positioned in a detachable base of the actuator. Thrust bearings shall be sealed for life and the base shall be capable of withstanding five times the rated thrust of the actuator.

## **10. Local Controls**

The actuator shall incorporate local controls for Open, Close and Stop and a Local/Stop/Remote mode selector switch lockable in any one of the following three positions: local control only, stop (no electrical operation), remote control plus local stop only. It shall be possible to select maintained or non-maintained local control.

The local controls shall be arranged so that the direction of valve travel can be reversed without the necessity of stopping the actuator.

The local controls and display shall be rotatable through increments of 90 degrees to suit valve and actuator orientation.



## **11. Torque and Limits**

Torque and turns limitation to be adjustable as follows:

- Position setting range – multi-turn: 2.5 to 8,000 turns, with resolution to 7.5 deg. of actuator output.
- Position setting range – direct drive part turn actuators: 90° +/-10°, with resolution to 0.1 deg. of actuator output.
- Torque setting: 40% to 100% rated torque.

Position measurement – Absolute position measurement should be incorporated within the actuator. The technology must be capable of reliably measuring position even in the case of a single fault. The design must be simple with the minimum amount of moving parts (no more than 5). Technologies such as LEDs or potentiometers for position measurement are considered unreliable and therefore not preferred.

Measurement of torque shall be from direct measurement of force at the output of the actuator. Methods of determining torque-using data derived from the motor such as motor speed, current, flux etc are not acceptable

A means for automatic “torque switch bypass” to inhibit torque off during valve unseating and “latching” to prevent torque switch hammer under maintained or repeated control signals shall be provided.

The electrical circuit diagram of the actuator should not vary with valve type remaining identical regardless of whether the valve is to open or close on torque or position limit.

## **12. Remote Valve Position and Status Indication**

Four contacts shall be provided which can be selected to indicate any position of the valve; Provision shall be made for the selection of a normally closed or open contact form. Contacts shall maintain and update position indication during handwheel operation when all external power to the actuator is isolated.

The contacts shall be rated for 5mA to 5A, 120V AC, 30V DC.

As an alternative to providing valve position indication any of the four above contacts shall be selectable to signal one of the following:

- Valve opening, closing or moving
- Thermostat tripped, lost phase
- Motor tripped on torque in mid travel, motor stalled
- Remote selected
- Actuator being operated by handwheel
- Actuator fault

Provision shall be made in the design for an additional eight contacts having the same functionality.

A configurable monitor relay shall be provided as standard, which can be used to indicate either Availability or Fault. The relay should be a spring return type with a Normally Open / Normally Closed contact pre-wired to the terminal bung.

The Monitor (availability or fault) relay, being energized from the control transformer will de-energize under any one or more the following conditions:

<u>Available Mode</u>	<u>Fault Mode</u>
<ul style="list-style-type: none"><li>• Loss of main or customer 24V DC power supply</li><li>• Actuator control selected to local or stop</li><li>• Motor thermostat tripped</li><li>• Actuator internal fault</li></ul>	<ul style="list-style-type: none"><li>• Loss of main or customer 24V DC power supply</li><li>• Motor thermostat tripped</li><li>• Actuator internal fault</li></ul>

Provision shall be made in the design for the addition of a contactless transmitter to give a 4-20mA analogue signal corresponding to valve travel and / or torque for remote indication when required. The transmitter will auto range to the set limits

### **13. Local Position Indication**

The actuator display shall include a dedicated numeric/symbol digital position indicator displaying valve position from fully open to fully close in 0.1% increments. Valve closed and open positions shall be indicated by symbols showing valve position in relation to the pipework to ensure that valve status is clearly interpreted. With mains power connected, the display shall be backlit to enhance contrast at all ambient light levels and shall be legible from a distance of at least 5m (16ft).

Red, green, and yellow LEDs corresponding to open, closed and intermediate valve positions shall be included on the actuator display when power is switched on. The yellow LED should also be fully programmable for on/off, blinker and fault indication. The digital display shall be maintained and updated during handwheel operation when mains power to the actuator is isolated.

The actuator display shall include a fully configurable dot-matrix display element with a minimum pixel resolution of 168 x 132 to display operational, alarm, configuration and graphical datalogger information. The text display shall be selectable between English and other languages such as: Spanish, German, French, and Italian. Provision shall be made to upload a different language without removal of any covers or using specialized tools not provided as standard with the actuator.

Datalogger graphical displays should as a minimum be able to display log and trend graphs on the local LCD for the following:

- Torque versus Position
- Number of Starts versus Position
- Number of starts per hour
- Dwell Time
- Average temperature

The main display shall be capable of indicating 4 different home-screens of the following configuration:

- Position and status
- Position and torque (analogue)
- Position and torque (digital)
- Position and demand (positioning)

Provision shall be made for the addition of an optional environmental cover to protect the display from high levels of UV radiation or abrasive materials.

The local controls and display shall be rotatable through increments of 90 degrees to suit valve and actuator orientation.

### **14. Integral Starter and Transformer**

The reversing starter, control transformer and local controls shall be integral with the valve actuator, suitably housed to prevent breathing and condensation. The starter shall be suitable for 60 starts per hour and of rating appropriate to motor size. The controls supply transformer shall be fed from two of the incoming three phases and incorporate overload protection. It shall have the necessary tapping and be adequately rated to provide power for the following functions:

- Energizing of the contactor coils.
- 24V DC or 110V AC output for remote controls (maximum 5W/VA)
- Supply for all the internal electrical circuits.

## **15. Remote Control Facilities**

The necessary control, wiring and terminals shall be provided integral to the actuator enclosure. Open and close external interlocks shall be made available to inhibit local and remote valve opening / closing control. It shall be possible to configure the interlocks to be active in remote control only.

Remote control signals fed from an internal 24V DC (or 110VAC) supply and/or from an external supply between 20V and 60 VDC or 40V and 120VAC, to be suitable for any one or more of the following methods of control:

- Open, Close and Stop control.
- Open and Close maintained or “push to run” (inching) control.
- Overriding Emergency Shut-down to close (or open) valve from a normally closed or open contact.
- Two-wire control, energize to close (or open), de-energize to open (or close).

Additionally, provision shall be made for a separate ‘drive enable’ input to prevent any unwanted electrical operation.

It shall be possible to reverse valve travel without the necessity of stopping the actuator. The motor starter shall be protected from excessive current surges during rapid travel reversal. The internal circuits associated with the remote control and monitoring functions are to be designed to withstand simulated lightning impulses of up to 2kV.

Provision shall be made for future operation by distributed control system utilizing field mounted control cards for any one of the following network systems:

- Profibus
- Modbus
- Foundation Fieldbus
- Pakscan (wired and wireless)
- HART

## **16. Monitoring Facilities**

Facilities shall be provided for monitoring actuator operation and availability as follows:

Actuator text display indication of the following status/alarms:

- Closed Limit, open limit, moving open, moving closed, stopped
- Torque trip closing, torque trip opening, stalled
- ESD active, interlock active
- Thermostat trip, phase lost, 24V supply lost, Local control failure
- Configuration error, Position sensor failure, Torque sensor failure
- Battery low, power loss inhibit

Integral datalogger to record and store the following operational data:

- Opening last /average torque against position
- Closing last /average torque against position
- Opening motor starts against position
- Closing motor starts against position
- Total open/closed operations
- Maximum recorded opening and closing torque values
- Event recorder logging operational conditions (valve, control and actuator)

The datalogger shall record relevant time and date information for stored data.

Datalogger data shall be accessed via non-intrusive *Bluetooth*® communication and data displayed on the local LCD. Sufficient standard intrinsically safe tools shall be provided for downloading datalogger and actuator configuration files from the actuators and subsequent uploading to a PC. The actuator manufacturer shall supply PC software to enable datalogger files to be viewed and analyzed.

## **17. Wiring and Termination**

Internal wiring shall be tropical grade PVC insulated stranded cable of appropriate size for the control and 3-phase power. Each wire shall be clearly identified at each end. The terminals shall be embedded in a terminal block of high tracking resistance compound.

The terminal compartment shall be separated from the inner electrical components of the actuator by means of a watertight seal and shall be provided with a minimum of 3 threaded cable entries with provision for an additional 5 extra conduit entries.

All wiring supplied as part of the actuator to be contained within the main enclosure for physical and environmental protection. External conduit connections between components are not acceptable. A durable terminal identification card showing a plan of terminals shall be provided attached to the inside of the terminal box cover indicating:

- Serial number
- External voltage values
- Wiring diagram number
- Terminal layout

The code card shall be suitable for the contractor to inscribe cable core identification alongside terminal numbers.

## **18. Commissioning Kit**

Each actuator shall be supplied with a start-up kit comprising installation instruction manual, electrical wiring diagram and cover seals to make good any site losses during the commissioning period. In addition, sufficient actuator commissioning tools shall be supplied to enable actuator set up and adjustment during valve/actuator testing and site installation commissioning.

## **19. Accessories**

Each actuator shall be supplied with the following accessories to facilitate use with the existing gates.

- Drive Bushing Machining to match the existing stems. Supplier is responsible for measuring existing stems to ensure drive bushing compatibility. Any additional measuring or machining required to match the existing stems shall be by the supplier and not cause additional cost to the end user
- Painted Carbon Steel Adaption Plates and Stainless-Steel Hardware to facilitate mounting the new actuators to the existing gates.
- New Clear Stem Covers to protect the existing gate stems with thread adapter to mount to the new actuator. Stem covers shall be the proper length to allow the gate to fully travel from closed to open.

## **20. Performance and Test Certificate**

Each actuator must be performance tested and individual test certificates shall be supplied free of charge. The test equipment should simulate a typical valve load, and the following parameters should be recorded.

- Current at maximum torque setting
- Torque at max. torque setting
- Flash test voltage
- Actuator output speed or operating time.

In addition, the test certificate should record details of specification such as gear ratios for both manual and automatic and second stage gearing if provided, drive closing direction, wiring diagram number.

## **21. Field Testing and Commissioning**

Supplier shall provide factory certified technician to inspect final installation, program and test actuator functionality and provide a final report of all programming and data collected. Certified commissioning shall extend the standard warranty to two (2) years from date of start-up

Gate Retrofit Details				
Location	Type	Actuator Type	Main Power	Control Power
G-5-2-1	48" SST Slide Gate	Open/Close	480/3/60 VAC	120/1/60 VAC
G-5-2-2	48" SST Slide Gate	Open/Close	480/3/60 VAC	120/1/60 VAC
G-1-2-2	60" SST Slide Gate	Open/Close	480/3/60 VAC	120/1/60 VAC
G-1-2-1		Open/Close	480/3/60 VAC	120/1/60 VAC
G-1-2-3		Open/Close	480/3/60 VAC	120/1/60 VAC