



Lake Worth Drainage District
13081 S. Military Trail
Delray Beach, FL 33484
561.498.5363

Request for Bid Radial Gates for Water Control Structure 11

RFB No. 16-8308L.12

**Submission Deadline:
Thursday, October 6, 2016 at 11:00 a.m.**

Refer all inquiries and proposals to:

Anthony LasCasas, Project Manager
Lake Worth Drainage District
13081 S. Military Trail
Delray Beach, Florida 33484
alascasas@lwdd.net

Request for Bid - Response Checklist

This Response Checklist is provided for the convenience of the respondent and shall not be relied upon in lieu of the instructions or requirements of this solicitation. To ensure that your bid package is complete, please review the following items to confirm that they have been addressed and are enclosed. Detailed information on each of the following requirements is provided in Section IV of the RFB. There is no requirement to return this checklist with your bid package.

- Have you met the bid submission deadline established in the solicitation?
- Have you submitted an original bid package along with the required number of complete copies of the bid package, and is the original bid package marked "Original" and each copy marked "Copy"?
- Does the response include a title page?
- If any addenda was issued by the District, have you submitted a signed receipt of each addendum?
- Have you included a transmittal letter with authorized agent name, title, address, telephone number and signature, along with a declaration that the response was prepared without collusion with any other person or entity submitting a response pursuant to this solicitation?
- Have you provided a Statement of Business Organization?
- Have you submitted a completed and signed bid form?
- Have you provided a list of three former client references pertaining to similar past projects?
- Have you included a summary of litigation?
- Have you provided a Sworn Statement on Public Entity Crimes?
- Have you provided a Certificate of Insurance?
- Have you provided Certification of Good Standing from the Florida Secretary of State?

Section I - General Information

Definitions

"Bid" or "Response" denotes the Bidder's written response to this RFB offering to provide the specified commodities and/or services. It shall be considered as a formal offer.

"Bid Documents" denotes (1) the RFB package, which provides information and instruction to Bidders including but not limited to General Information (such as Definitions, Invitation to Bid, Point of Contact, and Bid Schedule), Standard Terms and Conditions, Special Terms and Conditions, Scope of Work, Response Requirements and Format, Bid Tabulation and Review, and applicable attachments; (2) design plans and specifications; and (3) all addenda. The Bid Documents are to be used by the Bidders to provide Bids or Responses to the RFB.

"Bidder" or "Respondent" denotes any qualified firms, contractors, consultants, organizations, persons and joint ventures, or other entities submitting a response to this RFB.

"Contract" denotes a binding written agreement, including purchase orders, containing terms and obligations governing the responsibility between the District and other party.

"District" or "LWDD" denotes the Lake Worth Drainage District.

"Solicitation". A written request to obtain services and/or commodities through a Request for Bids, Request for Proposals or Request for Quotes. The District may also solicit responses separately via a Request for Qualifications or Request for Information.

"RFB" denotes a Request for Bids, which is a written Solicitation for sealed competitive Bids in which price is the primary selection criteria.

District Overview

The Lake Worth Drainage District (District) manages the water resources for much of southeastern Palm Beach County, providing comprehensive flood control, water conservation and water supply protection to an estimated 700,000 residents and more than 10,000 acres of agricultural land. The District monitors and controls a complex system of approximately 500 miles of canals and associated rights-of-way, 20 major water control structures and numerous minor structures. The District encompasses approximately 200 square miles in Palm Beach County. The District is bordered on the west by the Arthur R. Marshall Loxahatchee National Wildlife Refuge, on the east by I-95, on the north by Okeechobee Boulevard and on the south by the Hillsboro canal. The District's main office is located at 13081 S. Military Trail in Delray Beach, Florida 33484.

Invitation to Bid

The Lake Worth Drainage District is soliciting a Request for Bids (RFB) for radial gates for Water Control Structure 11. This invitation is extended to all qualified suppliers, firms, contractors, consultants, organizations, persons and joint ventures, which can provide the requirement(s) specified herein. Responses should be prepared simply and economically, addressing the requirements in a straightforward and concise manner. The requirements presented in this Solicitation represent the District's anticipated needs.

Bid Documents may be obtained at District Headquarters at 13081 Military Trail, Delray Beach, Florida 33484 or on the District's website at www.lwdd.net/doing-business beginning Monday, September 19,

2016. All Bids must be received at District Headquarters no later than Thursday, October 6 at 11:00 a.m. at which time all Bids will be publicly opened and tabulated. The Bid will be awarded to the lowest responsive and responsible Bidder as determined by the requirements stated herein.

All Bids must be submitted in a sealed envelope, identified as "Sealed Bid RFB No. 16-8308L.12" and addressed to the Project Manager.

Point of Contact

All inquiries and proposals should be directed, in writing, to the following Project Manager. The District will not accept any verbal inquiries.

Anthony LasCasas
Project Manager
Lake Worth Drainage District
13081 S. Military Trail
Delray Beach, Florida 33484
alascasas@lwdd.net

Schedule

- I Advertise for Bids Sunday, September 18, 2016
- II Bid Documents available at LWDD Monday, September 19, 2016
- III All inquiries, and requests for Wednesday, September 28, 2016
clarifications and/or corrections @ 4:00 P.M.
due at LWDD by
- IV All responses and/or addenda issued by LWDD.....Friday, September 30, 2016
@ 4:00 P.M.
- V Completed Bid packages accepted Thursday, October 6, 2016
at LWDD until @ 11:00 A.M.
- VI Bid Opening Thursday, October 6, 2016
@ 11:00 A.M.
- VII Notice of Award..... Friday, October 7, 2016

Section II – Standard Terms and Conditions

Anti-Lobbying Provision

All Respondents, their agents and proposed subconsultants or subcontractors, are hereby placed on notice that neither the District's Board of Supervisors, employees of the District nor employees of any other Project sponsoring agencies shall be lobbied either individually or collectively regarding this Solicitation. Respondents, their agents and proposed subconsultants or subcontractors are hereby placed on notice that they are prohibited from contacting any of these individuals for any purpose relating to the Solicitation (e.g. general information, meetings of introduction, meals, etc.).

Any proposal submitted by a Respondent, its agents and potential subconsultants or subcontractor who violate these guidelines will not be considered for review. The Project Manager shall be the only point of contact for questions and/or clarifications concerning the Solicitation, the selection process and the negotiation and award procedures.

A "Cone of Silence" shall be in effect as of the deadline to submit the Response to this Solicitation, and shall terminate at the time the District Board of Supervisors awards or approves a Bid, rejects all Bids, or otherwise takes action which ends the Solicitation process. "Cone of Silence" denotes that there shall be no communication between Respondent and any Board Member, employee, agent or representative of District during this time period, except contact with the Project Manager as provided herein.

Public Entity Crimes/Discriminatory Vendor List

Any Respondent, or any of its suppliers, subcontractors or consultants who shall perform work which is intended to benefit the District, shall not be a convicted vendor or included on the Discriminatory Vendor List. If the Respondent or any affiliate of the Respondent has been convicted of a public entity crime or has been placed on the Discriminatory Vendor List, a period longer than 36 months must have passed since that person was placed on the convicted vendor or Discriminatory Vendor List. The Respondent further understands and accepts that any Contract issued as a result of this Solicitation shall be either voidable or subject to immediate termination by the District, in the event there is any misrepresentation or lack of compliance with the mandates of Section 287.133 or Section 287.134, respectively, Florida Statutes. The District, in the event of such termination, shall not incur any liability to the Respondent for any work or materials furnished.

Point of Contact and Timetable for Inquiries

Respondents shall contact the Project Manager, identified on the cover page of this Solicitation, for all inquiries relating to this Solicitation. All Respondents' technical inquiries shall be confirmed in writing either through the mail, via facsimile transmission or electronic mail. The District will not accept any verbal inquiries. Technical questions will not be entertained beyond the cut-off date indicated in the RFB schedule so that answers to substantive questions, in the form of written addenda, can be posted on the District's website (www.lwdd.net).

Oral Representations

No oral representations made by District staff shall be binding. The contents of this RFB and any subsequent addenda issued by the District shall govern all aspects of this Solicitation.

Addenda (Interpretations, Clarifications and/or Corrections)

No oral interpretations will be made to any Bidder as to the meaning of the Bid Documents. Any written inquiry or request for interpretation received seven (7) or more days prior to Bid Opening will be given consideration. All such changes and interpretations will be made in writing in the form of an

addendum and, if issued, will be posted to the District website at www.lwdd.net/doing-business within the "Doing Business with the District" section by the date indicated in the RFB schedule. Submission of a Bid constitutes acknowledgement by the Bidder of the receipt of all addenda. All addenda are a part of the Bid Documents and each Bidder will be bound by such addenda, whether or not received. It is the responsibility of each Bidder to verify that he or she has received all addenda issued before Bids are opened. No authorization is allowed by the Lake Worth Drainage District personnel, except the Project Manager, to interpret, or give information as to Bid requirements in addition to that which is contained in the written Bid Documents and addenda.

Withdrawal of Response

Respondents shall withdraw their submitted Response by notifying the District in writing through an authorized representative at any time prior to the submission deadline. Individuals making the withdrawal shall provide evidence of serving as an authorized representative of the Respondent. Responses, once received, become the property of the District, and will not be returned to Respondents even when they are withdrawn from consideration. Responses, once opened, shall not be withdrawn or modified except to the extent agreed to by the District during subsequent Contract negotiation.

Postponement/Cancellation

The Lake Worth Drainage District may, at its sole and absolute discretion, reject any and all, or parts of any and all Bids; re-advertise this Solicitation; postpone or cancel this Solicitation process; or waive any irregularities in this Solicitation or in the Bids received as a result of this Solicitation.

Development Costs

Neither the District nor its representatives shall be liable for any expense incurred in connection with the preparation, submission or presentation of a Response to this Solicitation. All information in the Response shall be provided at no cost to the District.

Tax Exempt Status

The District is exempt from Florida Sales and Federal Excise taxes on direct purchase of tangible property. The Project Manager will sign an exemption certificate submitted by the successful Bidder. Bidders doing business with the Lake Worth Drainage District shall not be authorized to use the District's Tax Exemption Number in securing such materials.

Public Records and Exemptions

Upon receipt, Responses become "public records" and shall be subject to public disclosure consistent with Chapter 119, Florida Statutes. Respondents shall invoke the exemptions to disclosure provided by law, in the Response to the Solicitation, by providing the specific statutory authority for the claimed exemption, identifying the data or other materials to be protected, and stating the reasons why such exclusion from public disclosure is necessary. Responses will be made available for public inspection at the time the District posts notice of its decision or intended decision concerning Contract awards, or ten (30) days after submission deadline, whichever is earlier.

Response Submission and Opening

All Responses shall be hand delivered or mailed via U.S. mail or overnight courier to the address and contact listed on the cover page of this RFB. Responses must be submitted in a sealed envelope by the deadline indicated in the RFB schedule. The Response shall identify the Solicitation number and title specified on the cover page of this Solicitation. This reference information shall also be marked on the outside of the sealed envelope, including the Respondent's return address. The District assumes no responsibility for Responses not properly marked. The District cautions Respondents to

assure actual delivery of Responses prior to the deadline set for opening Responses. The District will not accept Responses delivered after the established deadline. If the Response is delivered after the established deadline, a Respondent shall be deemed non-responsive to the Solicitation requirements.

All Bids submitted by the deadline will be opened at the time specified in the RFB schedule. The public is welcome to attend the Bid Opening.

All Bids received shall remain valid for sixty (60) days upon Bid Opening.

Rejection of Responses

The District reserves the right to reject any and all Responses for reasons including, but not limited to, the following: (1) when such rejection is in the interests of the District; (2) if such Response is deemed non-responsive; (3) if the Respondent is deemed non-responsible; or (4) if the Response contains any material irregularities. Minor irregularities contained in the Response will be waived by the District. A minor irregularity is a variation from the Solicitation that does not affect the price of the Contract nor does it give a Respondent an advantage or benefit not enjoyed by other Respondents and does not adversely impact the District.

Assignment

The successful Respondent will not transfer, assign, convey, sublet or otherwise cede the performance required by this Solicitation or consign any of its rights without the prior written consent of the District through its Board of Supervisors. Any award issued pursuant to this Solicitation and the monies, which may become due hereunder, are not assignable except with the prior written approval of the District through its Board of Supervisors.

Board of Supervisor Approval

Bid results will be presented to the District's Board of Supervisors for final approval.

Formal Notice of Intent to Award

In compliance with Chapter 120, Florida Statutes, the Notice of Intent to Award will be posted on the District web-site and at the District offices at 13081 S. Military Trail, Delray Beach, Florida 33484. The notice will remain posted for a period of 72 hours (excluding weekends and District observed holidays).

If a Respondent intends to protest the District's official notice, the Notice of Intent to Protest shall be filed in writing within 72 hours after the Notice to Intent to Award is posted, and a formal written protest shall be filed within 10 days after filing the Notice of Intent to Protest. Failure to file a protest within the time prescribed in Rule 40E-7.302 Florida Administrative Code and Section 120.54(5), Florida Statutes, shall constitute a waiver of proceedings under Chapter 120, Florida Statutes.

Contract Award

The Respondent understands that this Solicitation or the Response does not constitute a Contract with the District. No Contract is binding or official until Responses are reviewed and accepted by appointed District staff, approved by the appropriate level of authority within the District, and an official Contract is duly executed by the parties. A sample Contract is attached to this Solicitation. The District anticipates that the final official Contract will be in substantial conformance with the sample Contract. Any deviations from the sample Contract that may be requested by the Respondent shall be submitted with the Response for consideration by the District.

The Respondent to whom the award is made shall, within ten (10) calendar days after Notice of Award has been given, provide evidence of any required insurance and sign the necessary Contract in the form attached. Failure to execute the Contract and/or to provide evidence of any required insurance coverage shall be just cause for the annulment of the award. Award may then be made to the next most responsible and responsive Respondent or the bid may be re-advertised as the District may decide.

The District anticipates awarding a Contract to the responsible entity that submits the lowest responsive Bid. The District anticipates the award of a single Contract, but reserves the right to award multiple Contracts, or not to make any award whatsoever, if determined to be in the interest of the District.

The successful Bidder shall enter into a two-party Contract that shall be acceptable to the District in form and content. If the awarded Contract is terminated, the District reserves the right to go to the next responsive and responsible firm with the balance of the Contract.

Discounts

The District anticipates entering into a Contract with the Bidder who submits the most responsive and responsible Bid. Bid amounts are determined after reduction for early payment discounts offered by the Bidder. The District encourages the offer of early payment discounts as an enhancement to the Bidder's cash flow and a cost savings to the taxpayer. The District will consider and actively attempt to earn all discounts offered by the Bidder.

Insurance

The Respondent, if awarded a Contract, shall maintain insurance coverage reflecting, at a minimum, the amounts and conditions as specified within the Certificate of Insurance attached to this Solicitation. Evidence of appropriate insurance coverage shall be provided as an attachment to the Response. Respondents may fulfill this requirement by having their insurance agent either (1) complete and sign the Certificate of Insurance, or (2) issue a letter on the insurance agency's stationary stating that the Respondent qualified for the required insurance coverage levels and that the Certificate of Insurance will be submitted before final execution of issuance of the Contract. All insurers must be qualified to lawfully conduct business in the State of Florida. Failure of the District to notify the Respondent that the Certificate of Insurance provided does not meet the Contract requirements shall not constitute a waiver of the Respondent's responsibility to meet the stated requirements. In addition, receipt and acceptance of the Certificate of Insurance by the District.

Misrepresentation of any material fact, whether intentional or not, regarding the Respondent's insurance coverage, policies or capabilities, may be grounds for rejection of the Response and rescission of any ensuing Contract.

Non-Discrimination

The District recognizes fair and open competition as a basic tenet of public procurement. Respondents doing business with the District will comply with all federal and state requirements concerning fair employment and will not discriminate by reason of race, color, creed, national origin, religion, age, sex or handicap.

Indemnification

The Respondent agrees to defend, save and hold the District, its agents, assigns and employees, harmless from all claims or causes of action, including costs and attorney's fees, and all judgments whatsoever, involving personal injury, bodily injury, death, or property damage, arising out of the negligent or intentional act or omission, or the violation of any federal, state or local law or regulations by the contractor, its subcontractors, agents, assigns, invitees or employees in connection with this Solicitation and subsequent Contract.

Warranty

The Respondent warrants that the goods offered for sale to the District are fit for the purposes for which such goods are typically used. If the District has informed the respondent of the particular purpose for which it intends to use the goods, the respondent recognizes that the District will rely upon the respondent's skill and judgment to select suitable goods in response to this solicitation. The respondent further warrants that the title of all items is good, that the goods can be transferred and that there are no liens or encumbrances against the title of any items at the time of bid submittal, unless so specified in the response. The respondent shall specify any express warranties applicable to the items included in the bid. The Respondent shall warrant all materials and workmanship provided pursuant to this RFB for a period of one year.

Section III – Scope of Work

The Lake Worth Drainage District is seeking bids for the purchase of replacement radial gates for Control Structure 11.

Gate Specifications

Waterman Model T-1 Radial Gate Structural Steel ASTM A-36 as described in Exhibit A, with exclusions as referenced below.

Existing gate measures approximately 12 ft. wide, 9.6 ft. radius. The gate shall be approximately 8.1 ft. high, as measured from bottom of seal plate to top of weir plate, and approximately 7.7 ft. as measured from the bottom of the seal plate to the center of the pivot pin. **The Supplier must field verify all gate dimensions and loading prior to manufacturing to ensure proper fit and support.**

The proposed gate shall be provided with:

- Neoprene "J" Seals ASTM D-200
- Anchoring Hardware Stainless Steel Type 304
- Stainless Steel Bottom Seal Plate

This bid will **exclude**:

- Seal Rubbing Plate
- Drum Hoist Assembly
- Actuator Mechanism

Contractor shall include an alternate add item to replace the standard face plate with a stainless steel ASTM A240 Type 304.

The Gate shall be designed to withstand a minimum 14 ft. of head upstream of the structure.

The Supplier shall provide signed and sealed shop drawings and calculations prior to fabrication.

The Supplier shall, in addition to providing signed and sealed shop drawings and calculations referenced above, shall certify that the proposed submittal will conform substantially, including any deviations, to the requirements of the specified gate replacement.

The District may require the Supplier to furnish, at the Suppliers expense, a special performance guarantee or other surety.

The Supplier shall assume all responsibility regarding the size and structural strength of the gates.

Bid shall include cost of shipping gates and appurtenances to the Lake Worth Drainage District Campus or to the site at Control Structure 11.

The Supplier shall deliver gates no later than 90 days following date of receipt of the Purchase Order.

The District shall have up to one week from date of delivery to inspect and accept radial gates. Final payment shall be made only upon acceptance of radial gates by the District.

The Supplier shall provide a minimum of 10 hours of field support services for gate installation.

Section IV – Response Requirements and Format

Response Requirements

Title Page

All Responses should include a title page reflecting the RFB subject, title and proposal number; the firm's name; the name, address and telephone number of the contact person; and date of Response.

Signed Receipt of Addendum

It is the responsibility of the Bidder to verify that they have received all addenda issued before Bids are opened. All Responses must include authorized signature of any addenda issued by the District.

Transmittal Letter

All Responses should contain a transmittal letter providing the name of any and all of the persons authorized to make representations on behalf of the Respondent, including the titles, addresses and telephone numbers of each person(s). The letter must declare that the Response was prepared without collusion with any other person or entity submitting a Response pursuant to this Solicitation. An authorized agent of the Respondent must sign the transmittal letter indicating the agent's title or authority.

Statement of Business Organization

All Respondents shall complete the attached Statement of Business Organization. This form provides the District with vital information concerning the responding organization as well as joint venture or subcontractor participation levels (if applicable).

Bid Form

Bids shall be submitted on the Bid Form furnished or upon an exact copy thereof, and must be signed by the Bidder's authorized representative.

References

Respondent shall provide a list of at least three (3) former client references pertaining to projects of similar size and scope including contact name, address and telephone number, summary of each project scope, and date that each project was completed.

Litigation Summary

Respondent shall provide a summary of any litigation filed against the Respondent in the past five years, which is related to the services that Respondent provides in the regular course of business.

Sworn Statement on Public Entity Crimes

The Respondent shall provide an executed copy of the attached Sworn Statement on Public Entity Crimes as referenced in the RFB Standard Terms and Conditions.

Certificate of Insurance

As referenced in the RFB Standard Terms and Conditions, evidence of appropriate insurance coverage (see Attachment D) shall be provided as an attachment to the Response.

Certification of Good Standing with the Florida Secretary of State

The District will review (for all corporations and partnerships) the Respondent's corporate status and good standing with the Florida Secretary of State. If the Respondent is an out-of-state corporation, the Respondent must obtain authority to conduct business in the State of Florida. All corporations or partnerships that are not in good standing with the Florida Secretary of State at the time of Bid submission shall be deemed non-responsible by the District. If successful in obtaining a Contract award under this Solicitation, the corporation or partnership must remain in good standing throughout the contractual period of performance.

Response Format

For the Response to be considered complete and timely, Respondents must submit one (1) original marked "original" and two (2) copies marked "copy" of the Bid Response.

In order to facilitate District review, Responses should be organized in the following sequence:

1. Title Page
2. Signed Receipt for each addendum issued by the District (if applicable)
3. Letter of Transmittal
4. Statement of Business Organization
5. Bid Form
6. References
7. Litigation Summary
8. Sworn Statement on Public Entity Crimes
9. Certificate of Insurance
10. Certification of Good Standing from the Florida Secretary of State

Section V – Bid Tabulation and Review

All Bids must be received at the listed address (District Headquarters at 13081 S. Military Trail, Delray Beach, Florida 33484) no later than 11:00 a.m., Thursday, October 6, 2016, at which time all Bids will be publicly opened and tabulated. The Bid will be awarded to the lowest responsive and responsible Bidder as determined by the requirements stated herein.

Responsiveness Conditions

At the time of Bid Opening, the District shall determine whether the Bid is responsive and has met the requirements of the Solicitation. These requirements include timely receipt of the Bid and submission of all required documentation.

Responsibility Documentation and Review

Subsequent to the Bid Opening and tabulation, the lowest bids will be reviewed for responsibility based on the documentation required herein.

The District may consider any evidence available regarding the financial, technical, and other qualifications and abilities of a Respondent, including past performance (experience) with the District or other Government entity in making the award in the best interest of the District.

Section VI– Attachments and Exhibits

Attachments

- Attachment A: Statement of Business Organization
- Attachment B: Bid Form
- Attachment C: Sworn Statement on Public Entity Crimes
- Attachment D: Certificate of Insurance
- Attachment E: Sample Contract (Purchase Order)

Exhibits

- Exhibit A: Technical Specifications for Waterman Radial Gates

Attachment A

STATEMENT OF BUSINESS ORGANIZATION

SOLICITATION NO. 16-8308L.12

Business Organization

1. Business Name: _____
2. Mailing Address: _____

3. Remittance Address: _____
4. State of Incorporation: _____
5. Federal Employer I.D. or Social Security No.: _____
6. Telephone: _____ Fax No.: _____
8. Type of Organization: Corporation _____ Partnership _____ Joint Venture _____ Individual _____
9. Contact Person(s): _____ Title: _____
10. Project Manager: _____ Title: _____

If the parties are certified, please indicate the certifying agency or agencies and attach letters/certificates of certification: _____

Signature: _____ Title: _____

Attachment B

BID FORM

SOLICITATION NO. 16-8308L.12

Item	Units	Cost/Unit	Total Cost
Radial Gate	3 Gates	\$ each	\$
Shipping	1 Lump Sum (LS)	\$ LS	\$
Field Support Services	10 hours	\$ per hour	\$
Total Cost Proposal			\$

Alternate Items:

Stainless Steel Face Plate \$_____ each \$_____ Total

Printed Name of Authorized Agent

Signature of Authorized Agent

Attachment C

**SWORN STATEMENT UNDER §287.133(3)(A)
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES**

THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Bid, Proposal or Contract No. _____ for _____.

2. This sworn statement is submitted by _____
(Name of entity submitting sworn statement)
whose business address is _____

(if applicable) its Federal Employer Identification Number (FEIN) is _____

(if the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____).

3. My name is _____ and my relationship
(Please print name of individual signing this form)

to the entity named above is _____.

4. I understand that a "public entity crime" as identified in Paragraph 287.133(1)(g) Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in Paragraph 287.131(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means:
 1. A predecessor or success of a person convicted of a public entity crime, or
 2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling

of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1)(e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members and agents who are active in the management of the entity.

IMPORTANT: CONTRACTOR MUST COMPLETE THIS SECTION BEFORE SIGNING FORM

8. Based on information and belief the statement, which I have marked below, is true in relation to the entity submitting this sworn statement (Please indicate which statement applies.)

_____ Neither the entity submitting this sworn statement, or any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ The entity submitting this sworn statement or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989, **AND (Please indicate which additional statement applies.)**

_____ There has been a proceeding concerning the conviction before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer did not place the person or affiliate on the convicted vendor list. **(Please attach a copy of the Final Order.)**

_____ The person or affiliate was placed on the convicted vendor list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in the public interest to remove the person or affiliate from the convicted vendor list. **(Please attach a copy of the Final Order.)**

_____ The person or affiliate has not been placed on the convicted vendor list. **(Please describe any action taken by or pending with the Department of General Services.)**

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

_____ Date

_____ Signature

Sworn to and subscribed before me this _____ day of _____, 20____.

Personally Known _____

_____ Notary Public – State of _____

Produced identification _____

My Commission Expires: _____

(Type of Identification)

Attachment D

Certificate of Insurance

PROVIDED TO: LAKE WORTH DRAINAGE DISTRICT

AGENT BROKER Name/Address/Telephone Number		COMPANIES AFFORDING COVERAGE & BEST RATING				
		COMPANY LETTER A	COMPANY LETTER D			
INSUREDS Name/Address/Telephone Number		COMPANY LETTER B		COMPANY LETTER E		
		COMPANY LETTER C		COMPANY LETTER F		
CO LTR	TYPE OF COVERAGE	POLICY NUMBER	EFFECTIVE DATE (MM/DD/YY)	EXPIRATIONDATE (MM/DD/YY)	LIABILITY LIMITS IN THOUSANDS	
						PER OCCURRENCE
	GENERAL LIABILITY				BI & PD Combined	\$2,000,000.00
	CONTRACTUAL LIABILITY					\$2,000,000.00
	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> Any Auto <input checked="" type="checkbox"/> Hired Autos <input checked="" type="checkbox"/> Non-Owned Autos				BI & PD Combined	\$1,000,000.00
	EXCESS LIABILITY ___ UMBRELLA FORM				PER OCCURRENCE	\$2,000,000.00
	WORKERS' COMPENSATION & EMPLOYERS LIABILITY				EACH ACCIDENT \$500,000 DISEASE-POL LIMIT \$500,000 DISEASE EACH EMPLOYEE \$500,000	
NOTES: Project No. _____ - LAKE WORTH DRAINAGE DISTRICT IS ADDITIONAL NAMED INSURED.						
CERTIFICATE HOLDER				CANCELLATION		
LAKE WORTH DRAINAGE DISTRICT 13081 Military Trail Delray Beach, Florida 33484				Should any of the above coverages be cancelled or modified, the Agent/Broker shall notify the Certificate Holder named to the left within 10 days of the effective date.		

Signature of Agent

Date: _____

Attachment E

Sample Contract

PURCHASE ORDER TERMS AND CONDITIONS

This **PURCHASE ORDER** constitutes a binding contract between the LAKE WORTH DRAINAGE DISTRICT (DISTRICT) and the VENDOR as named on the PURCHASE ORDER when accepted by the VENDOR either by express acknowledgment or by commencement of work or shipment without reservations.

INVOICES AND PAYMENTS. The VENDOR shall submit an invoice for the amount of the PURCHASE ORDER upon delivery and acceptance of product. The District shall have up to one week from date of delivery to inspect and accept radial gates. The VENDOR's invoices shall reference the DISTRICT'S PURCHASE ORDER number and original invoices (clearly marked "Original") shall be mailed to ACCOUNTS PAYABLE, Lake Worth Drainage District, 13081 S. Military Trail, Delray Beach, Florida 33484. It is the policy of the DISTRICT that payment for all goods and services shall be made in a timely manner and that interest payments are made on late payments. In accordance with Florida Statutes, Section 218.70, Florida Prompt Payment Act, a "proper" invoice is defined as an invoice that conforms to all statutory requirements and all DISTRICT requirements as specified in the PURCHASE ORDER for invoice submission. The time at which payment shall be due from the DISTRICT shall be forty five (45) days from receipt of a proper invoice and acceptance of deliverables, based on compliance with the statutory requirements set forth in Section 218.70, F.S. and upon satisfaction of the DISTRICT conditions that are detailed herein. If all conditions are met and payment is not made by the DISTRICT in this timeframe, interest shall accrue after thirty (30) days at the rate of 1% per month on the unpaid balance. The VENDOR must invoice the DISTRICT for any accrued unpaid interest. The DISTRICT pays all vendors via ACH (direct deposit) payment. VENDOR is required to provide a W-9 form and completed direct deposit authorization form before payment will be issued.

INDEMNIFICATION. For value received, the VENDOR shall indemnify and hold the DISTRICT, its officers, directors, board members, agents, assigns, and employees harmless from liabilities, damages, property defects, losses and costs, including, but not limited to reasonable attorneys' fees, to the extent caused by the negligence,

recklessness or intentionally wrongful conduct of the VENDOR and other persons employed or utilized by the VENDOR in the performance of the PURCHASE ORDER. The VENDOR further acknowledges that it is solely responsible for ensuring its compliance and the compliance of its subcontractors, suppliers, agents, assigns, invitees and employees with the terms of this PURCHASE ORDER. This paragraph shall survive the expiration or termination of this PURCHASE ORDER.

TERMINATION FOR DEFAULT. If the VENDOR materially fails to fulfill its obligations under this PURCHASE ORDER, the DISTRICT will provide written notice of the deficiency by forwarding a Cure Notice citing the specific nature of the material breach. The VENDOR shall have thirty (30) days to cure the breach. If the VENDOR fails to cure the breach within the thirty (30) day period, the DISTRICT shall issue a Termination for Default Notice. Once the DISTRICT has notified the VENDOR that it has materially breached its PURCHASE ORDER with the DISTRICT, the DISTRICT'S Governing Board shall determine whether the VENDOR should be suspended from doing future work with the DISTRICT, and if so, for what period of time. Should the DISTRICT terminate for default in accordance with this provision, the DISTRICT shall be entitled to recover procurement costs in addition to all other remedies under law and/or equity.

TERMINATION FOR CONVENIENCE. The DISTRICT may terminate this PURCHASE ORDER with or without cause at any time for convenience upon thirty (30) calendar day's prior written notice to the VENDOR. In the event of termination for convenience, the DISTRICT shall compensate the VENDOR for all authorized and accepted deliverables. The DISTRICT shall be relieved of any and all future obligations hereunder, including but not limited to lost profits and

consequential damages, under this PURCHASE ORDER. The DISTRICT may withhold all payments to the VENDOR for such work until such time as the DISTRICT determines the exact amount due to the VENDOR. In the event a dispute arises which the project managers cannot resolve between themselves, the parties shall have the option to submit to nonbinding mediation.

RECORDS RETENTION/AUDIT. The VENDOR shall maintain all records, books and documents pertinent to the performance of this PURCHASE ORDER in accordance with generally accepted accounting principles consistently applied. The DISTRICT shall have inspection and audit rights to such records for a period of 5 years from final payment under this PURCHASE ORDER. Records relating to any legal disputes arising from performance under this PURCHASE ORDER shall be made available until final disposition.

NONDISCRIMINATION. The VENDOR hereby assures that no person shall be excluded on the grounds of race, color, creed, national origin, handicap, age or sex, from participation in, denied the benefits of, or otherwise be subjected to discrimination in any activity hereunder. The VENDOR shall take all measures necessary to effectuate these assurances.

PUBLIC ENTITY CRIMES/SDN LIST. The VENDOR, by its execution of this PURCHASE ORDER or by commencement of shipment with reservations, acknowledges and attests that neither it, nor any of its suppliers, subcontractors or consultants who shall perform work which is intended to benefit the DISTRICT is included on the U.S. Department of Treasury's List of Specially Designated Nationals and Blocked Persons, is a State of Florida convicted vendor or is included on State of Florida's discriminatory vendor list; and if the VENDOR or any affiliate of the VENDOR has been convicted of a public entity crime or has been placed on the discriminatory vendor list, a period longer than 36 months has passed since placement on one of either of these lists. The VENDOR further understands and accepts that this PURCHASE ORDER shall be either void or subject to immediate termination by the DISTRICT, in the event there is any misrepresentation or lack of compliance with the laws and regulations of the U.S. Department of Treasury and/or the mandates of Section 287.133 or Section 287.134, respectively, Florida Statutes. The

DISTRICT, in the event of such termination, shall not incur any liability to the VENDOR for any work or materials furnished.

PUBLIC ACCESS. The VENDOR shall allow public access to all project documents and materials in accordance with the provisions of Chapter 119, Florida Statutes. Should the VENDOR assert any exemptions to the requirements of Chapter 119 and related Statutes, the burden of establishing such exemption, by way of injunctive or other relief as provided by law, shall be upon the VENDOR.

DISTRICT'S TAX EXEMPTION. The VENDOR shall not utilize the DISTRICT'S exemption certificate number issued pursuant to Sales and Use Tax Law, Chapter 212, Florida Statutes, when purchasing materials used to fulfill its contractual obligations with the DISTRICT. The VENDOR shall be responsible and liable for the payment of all applicable FICA/Social Security and other taxes resulting from this PURCHASE ORDER.

ASSIGNMENT/GUARANTOR. The VENDOR shall not assign, delegate or otherwise transfer its rights and obligations as set forth in this PURCHASE ORDER without the prior written consent of the DISTRICT. Any attempted assignment in violation of this provision shall be null and void. The VENDOR shall not pledge the DISTRICT'S credit or make the DISTRICT a guarantor of payment of surety for any contract, debt, obligation, judgment, lien or any form of indebtedness. Pledging the DISTRICT'S credit shall also be construed to include the use of "factoring agents" or the practice of selling business accounts receivables to a third party at a discount for the purpose of obtaining funding which is also expressly prohibited.

FORCE MAJEURE. Notwithstanding any provisions of this PURCHASE ORDER to the contrary, the parties shall not be held liable for any failure or delay in the performance of this PURCHASE ORDER that arises from fires, floods, strikes, embargoes, acts of the public enemy, unusually severe weather, outbreak of war, restraint of Government, riots, civil commotion, force majeure, act of God, or for any other cause of the same character which is unavoidable through the exercise of due care and beyond the control of the parties. Failure to perform shall be excused during the continuance of such circumstances, but this

PURCHASE ORDER shall otherwise remain in effect.

AMENDMENTS. This PURCHASE ORDER may be amended or rescinded only with the written approval of the parties hereto.

ORDER OF PRECEDENCE. Any inconsistency in this PURCHASE ORDER shall be resolved by giving precedence in the following order: (1) PURCHASE ORDER terms and conditions; (2) Specifications; (3) all other documents, including, but not limited to, drawings, descriptions, sample(s).

ENTIRE AGREEMENT. This PURCHASE ORDER states the entire understanding and agreement between the parties and no course or prior dealing, usage of the trade or extrinsic or parole evidence shall be relevant to supplement, vary or explain any term used with respect to this PURCHASE ORDER. The Florida Uniform Commercial Code (Chapters 671-679, Florida Statutes) shall control definitions. The acceptance or acquiescence of any course of performance rendered under this PURCHASE ORDER shall not be construed as a waiver nor shall it be relevant to define or vary any term stated herein. This PURCHASE ORDER shall inure to the benefit of and shall be binding upon the parties, their respective assigns, and successors in interest.

ADDITIONAL TERMS AND CONDITIONS FOR COMMODITIES:

COMPLIANCE. The VENDOR, its employees, subcontractors or assigns shall comply with all applicable federal, state and local laws and regulations relating to the performance of the PURCHASE ORDER. The DISTRICT undertakes no duty to ensure such compliance but will attempt to advise the VENDOR, upon request, as to any such laws of which it has present knowledge.

APPLICABLE LAW/VENUE. The laws of the State of Florida shall govern all aspects of the PURCHASE ORDER, including but not limited to the provisions of the Florida Uniform Commercial Code, Chapters 671-679, Florida Statutes, for any terms and conditions not specifically stated in this PURCHASE ORDER. In the event it is necessary for either party to initiate legal action regarding the PURCHASE ORDER, venue shall be in the Fifteenth Judicial Circuit for claims under state law

and in the Southern District of Florida for any claims which are justifiable in federal court.

DISTRICT'S TITLE TO MATERIALS, DOCUMENTS & PACKAGING. All materials, drawings or other items provided by the DISTRICT to the VENDOR remain the property of the DISTRICT and will be returned to the DISTRICT upon demand. All containers, reels or pallets shipped with goods by the VENDOR are to remain the property of the DISTRICT unless otherwise agreed to in writing.

SHIPMENT UNDER RESERVATION PROHIBITED. VENDOR is not authorized to ship the goods with any reservations and no tender of a bill of lading will substitute as a tender of the goods.

DELIVERY TERMS & TRANSPORTATION CHARGES. The District shall have up to one week from date of delivery to inspect and accept radial gates. Delivery is "F.O.B. Destination" unless delivery terms are otherwise specified in the PURCHASE ORDER. If the DISTRICT agrees in writing to reimburse the VENDOR for transportation costs, the DISTRICT shall have the right to designate the method of shipment. In either case, the title and all risk of loss of the goods shall remain with the VENDOR until the goods are received and accepted by the DISTRICT. Rejected materials will be returned to the VENDOR at the VENDOR's risk and expense.

VENDOR TO PACKAGE GOODS. VENDOR will package goods in accordance with good commercial practice. Each shipping container shall be clearly and permanently marked as follows: (1) VENDOR's name and address; (2) consignee's name, address and Purchase Order or Purchase Release number; (3) container number and total number of containers, e.g. box 1 of 4 boxes; and (4) the number of the container bearing the packing slip. VENDOR shall bear the cost of packaging unless otherwise specified in the PURCHASE ORDER.

DISTRICT'S RIGHT TO CANCEL. The DISTRICT reserves the right to cancel all or part of this PURCHASE ORDER, without obligation, if acceptance is not expressed by the VENDOR either through written notice or by delivery of items ordered, within the specified time(s) and date(s).

WARRANTY. The VENDOR warrants that the goods offered for sale to the District are fit for the purposes for which such goods are typically used. The VENDOR further warrants that the title of all items is good, that the goods can be transferred and that there are no liens or encumbrances against the title of any items at the time of delivery. The VENDOR shall warrant all materials and workmanship provided pursuant to this PURCHASE ORDER for a period of one year.

VENDOR NOT TO LIMIT WARRANTY. The VENDOR shall not limit or exclude any express or implied warranties and any attempt to do so shall render this PURCHASE ORDER void, at the option of the DISTRICT. The VENDOR warrants that the goods furnished will conform to the specifications, drawings and descriptions listed in the offering document or to the sample(s) furnished.

TERMS/PROVISIONS. Should any term or provision of this PURCHASE ORDER be held, to any extent, invalid or unenforceable, as against any person, entity or circumstance during the term hereof, by force of any statute, law, or ruling of any forum of competent jurisdiction, such invalidity shall not affect any other term or provision of this PURCHASE ORDER, that the PURCHASE ORDER shall remain operable, enforceable and in full force and effect to the extent permitted by law.

COMPENSATION/CONSIDERATION. The total consideration for all work required by the DISTRICT pursuant to the PURCHASE ORDER shall not exceed the amount indicated on the PURCHASE ORDER. Such amount includes all expenses the VENDOR may incur and therefore no additional compensation shall be authorized. The VENDOR, by executing the PURCHASE ORDER or by commencement of work without reservations, certifies to truth-in-negotiation, specifically, that wage rates and other factual unit costs supporting the consideration are accurate, complete and current at the time of contracting. If the total consideration for this PURCHASE ORDER is subject to multi-year funding allocations, funding for each applicable fiscal year of this PURCHASE ORDER will be subject to DISTRICT Governing Board budgetary appropriation. In the event the DISTRICT does not approve funding for any subsequent fiscal year, this PURCHASE ORDER shall terminate upon expenditure of the current funding, notwithstanding other provisions in this PURCHASE ORDER to the

contrary. The DISTRICT will notify the VENDOR in writing after the adoption of the final DISTRICT budget for each subsequent fiscal year if funding is not approved for this PURCHASE ORDER.

INSURANCE. The VENDOR shall procure and maintain, through the term of this PURCHASE ORDER, insurance coverage reflecting, at a minimum, general liability and automobile liability, and all Florida statutory workers' compensation insurance in accordance with Attachment D. The coverage required shall extend to all employees and subcontractors of the VENDOR. The VENDOR must provide a Certificate of Insurance completed in full, indicating the producer, insured, carrier's name, and BEST rating, policy numbers and effective and expiration dates of each type of coverage required. The Certificate of Insurance shall be signed by an authorized representative and shall identify the DISTRICT as added insured as required. No work is authorized until such time as the DISTRICT has received a Certificate of Insurance in compliance with the above requirements. Vendor shall also provide proof of Workers' Compensation policy coverage.

OWNERSHIP. The DISTRICT shall retain exclusive title, copyright and other proprietary rights in all work items, including, but not limited to, all documents, technical reports, research notes, scientific data, computer programs, including the source and object code, which are developed, created or otherwise originated hereunder by the VENDOR under this PURCHASE ORDER. The VENDOR shall grant to the DISTRICT a perpetual, non-transferable, non-exclusive right to use any proprietary software, if any. Any equipment purchased by the VENDOR with DISTRICT funding shall be returned and title transferred from the VENDOR to the DISTRICT upon expiration or termination of the PURCHASE ORDER.

COMPLIANCE/LICENSES. The VENDOR, its employees, subcontractors or assigns, shall obtain, at its own expense, all licenses, permits and other authorizations necessary to comply with all applicable federal, state and local laws and regulations relating to the performance of the PURCHASE ORDER. The DISTRICT undertakes no duty to ensure such compliance but will attempt to advise the VENDOR, upon request, as to any such laws of which it has present knowledge.

APPLICABLE LAW/VENUE. The laws of the State of Florida shall govern all aspects of the PURCHASE ORDER. In the event it is necessary for either party to initiate legal action regarding the PURCHASE ORDER, venue shall be in the Fifteenth Judicial Circuit for claims under state law and in the Southern District of Florida for any claims which are justifiable in federal court.

INDEPENDENT CONTRACTOR. The VENDOR shall be considered an independent contractor and nothing in this PURCHASE ORDER shall be interpreted to establish any relationship other than that of an independent contractor between the parties and their respective employees, agents, subcontractors or assigns, during or after the term of the PURCHASE ORDER. Both parties are free to enter into contracts with other parties for similar services. The DISTRICT assumes no duty with regard to the supervision of the VENDOR and the VENDOR shall remain solely responsible for compliance with all safety requirements and for the safety of all persons and property at the site of performance under the PURCHASE ORDER. In the event the VENDOR is a sole proprietor, the VENDOR is responsible for submitting legally required returns to the Federal Government.

SEVERABILITY. Should any term or provision of this PURCHASE ORDER be held, to any extent, invalid or unenforceable, as against any person, entity or circumstance during the term hereof, by force of any statute, law, or ruling of any forum of competent jurisdiction, such invalidity shall not affect any other term or provision of this PURCHASE ORDER, to the extent that the PURCHASE ORDER shall remain operable, enforceable and in full force and effect to the extent permitted by law.

DISPUTES. In the event a dispute arises which the project managers cannot resolve between themselves, the parties shall have the option to submit to nonbinding mediation. The mediator or mediators shall be impartial, shall be selected by the parties and the cost of the mediation shall be borne equally by the parties. The mediation process shall be confidential to the extent permitted by law.

BACKGROUND CHECKS. The VENDOR shall conduct thorough background checks for all of the VENDOR'S employees or hired workers who will be working on the DISTRICT site. The background checks shall consist of education verification, a national criminal check for state and federal felonies and misdemeanors, and a check on immigration status in accordance with the above provision title "IMMIGRATION". After reviewing the results of the background check, the VENDOR shall determine whether the VENDOR'S employees and/or hired worker meets the necessary criteria for the position sought to be filled by the DISTRICT. The DISTRICT will rely on the VENDOR'S assessment of its employee' or hired workers' suitability to be hired for the position(s) sought to be filled by the DISTRICT, based on the background check conducted by the VENDOR. Prior to allowing any employees or hired workers to work on-site at DISTRICT facilities the VENDOR will provide written verification to the DISTRICT that a complete background check, as described above, was conducted for any such employee or hired worker. The VENDOR will place the above language in any contract that it has with its subcontractors and is responsible for its enforcement.

RADIAL GATES

USES

- Maintenance of water elevations in canals
- Increased storage capacity for reservoirs
- Diversion of water for irrigation
- Flow control preserving wide, clear waterways
- Other areas requiring economical water control

Waterman Overflow or Breastwall-type Radial (Tainter) Gates can be engineered for unique applications or can be manufactured from a standardized Waterman design. In either case, they are always made to the customer's exact specifications. They provide a light weight economical gate that can be opened and closed with a minimum of effort. Waterman Radial Gates can also be ordered for existing locations as replacement gates.



CONSTRUCTION FEATURES

FACE PLATE

The face plate is accurately curved on a required radius to an engineered pivot point. This plate is buttressed along the backside with vertical ribs radiused to match the face plate and stiffened with horizontal support beams along the total width of the plate. The horizontal support beams vary in size with the width of the gate and the maximum head of water. They transfer the pressure from the face plate to the radial arms.

SEALS

Waterman provides two types of seals. For overflow and breastwall-type gates, J-bulb seals are securely attached along both sides of the face plate. This provides a positive seal against the adjustable rubbing plates embedded in the side wall, and on the bottom of the face plate to seal against the invert. For breastwall-type gates with which there is a headwall, an additional flat seal is attached at the top of the faceplate for sealing against the headwall.

Waterman makes available flat, wiper-type rubber seals in place of the J-bulb type. This type of seal is especially useful for existing installations in which there are no side rub plates.



RADIAL GATES

CONSTRUCTION FEATURES

BOTTOM AND SIDE SEALING PLATES

Rubbing side plates are made of stainless steel to provide a smooth contact surface for the side seals throughout the full range of movement of the gate. These plates adjust to permit vertical alignment of the contact surfaces. Stainless steel bottom sill plates are supplied to provide a smooth level contact surface for the full width of the invert of the gate. This sill plate can be adjusted to permit leveling and alignment with the side plates.

RADIAL ARMS

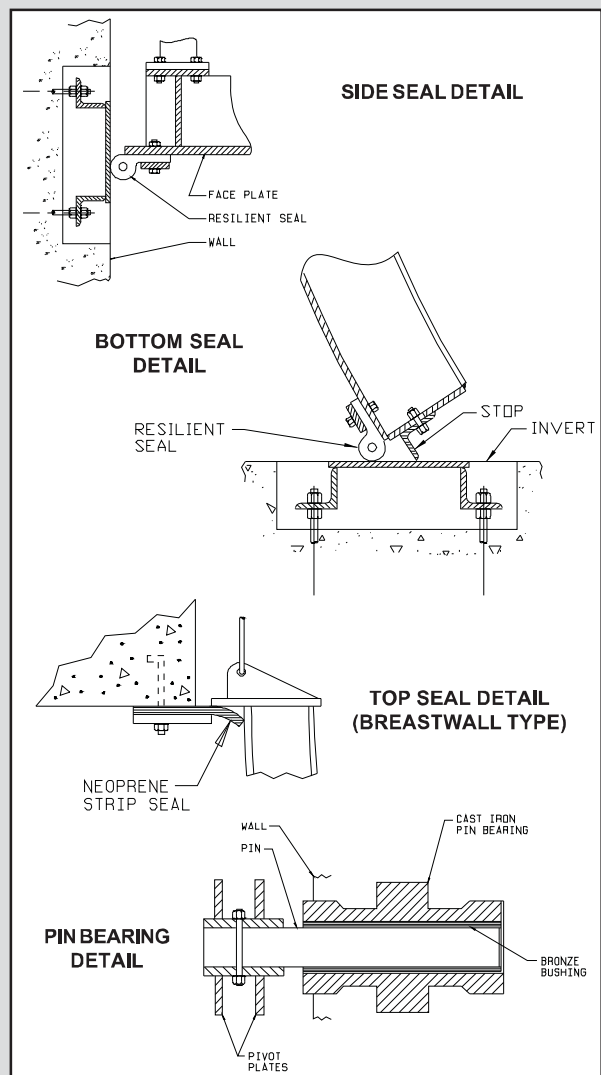
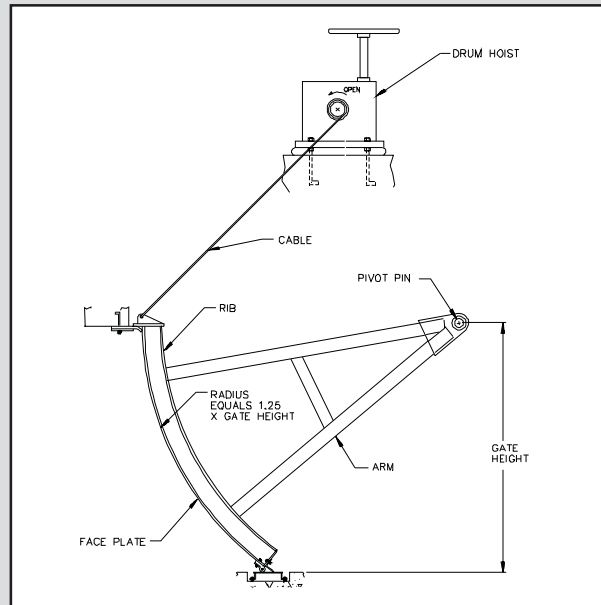
Acting like columns under an arch, radial arms transfer the pressure from the face plate assembly to the pivot bearings on either side of the gate opening. Fabricated from structural steel shapes, larger and thicker members are used as the gate height increases. The radial arms are accurately punched on the forward or upstream end to match corresponding holes in the horizontal support beams. On the downstream end, a steel pin plate assembly is securely welded to the arm to transmit the force to the pivot pin.

PINS AND PIN BEARINGS

Type 304 stainless steel pivot pins transfer the load to bronze bearings encased in cast iron housings, which are firmly anchored in the concrete structure. The bearings are permanently lubricated or grease lubricated and have sufficient surface area to properly distribute the full load to the structure.

HOISTS ~~DO NOT INCLUDE IN BID~~

All Radial Gates are actuated by cabledrum hoists, each system having twin drums connected by a shaft for winding the two operating cables simultaneously. For powering the cabledrum, we make available two variations of actuators - a manual hoist with enclosed gears; and an electric motor operated hoist with auxiliary handwheel.



Waterman Industries
of Egypt

RADIAL GATES

TYPICAL SPECIFICATIONS

GENERAL

Gates, hoists, and accessories shall be of the size, type, material, and construction specified herein. They shall be Waterman breastwall or overflow type radial gates or approved equal. All component parts shall be of the type of material shown in the materials section of this specification.

SIZE AND DESIGN HEAD

The gates shall be designed to withstand the water depth specified as measured from the invert of the gate.

GATE FACE ASSEMBLY

The face assembly shall consist of horizontal structural members, vertical stiffeners and a curved face plate. Horizontal structural members shall be of adequate size and so located to transmit the thrust from the face of the gate to the radial arms. Design loads placed on the structural reinforcing channels shall not induce stresses in excess of those specified in Section 1.51.4 of AISC Specification for Structural Steel Builders. Minimum 6mm (¼") thick, curved face plate shall be attached to the structurals by welding. Sufficient holes shall be located around the perimeter of the assembly for attaching the seals.

Each gate shall be fitted with rubber seals, retained by steel bars, along the side and bottom edges of the gate face. The seals shall be of the "J" type and shall be designed to bear on rubbing plates and sills to insure a water-tight fit when the gate is closed. On breastwall gates, a rubber seal shall also be provided at the top edge of the gate.

RADIAL ARMS

The radial arm assemblies shall consist of structural members welded to a pin plate and drilled to match gusset plates welded to the horizontal structural members of the face assembly. The slenderness ratio of the radial arms shall not exceed 150. Bolts for field assembly shall be provided.

A steel pin plate shall transmit the load from the radial arms to the pivot pin collar which shall be welded to the pin plate to distribute the bearing load on the pin. The collar shall be match drilled with the pivot pin.

PINS AND PIN BEARINGS

The Type 304 stainless steel pivot pins shall be sized to transmit the load to the pin bearings. They shall be bolted to the pin plate collar for field assembly.

Permanently lubricated (grease lubricated) bronze bearings encased in cast iron housings shall extend into the concrete and have sufficient surface area to properly distribute the full load to the structure. The bearing shall be bored full length for a running fit with the pivot pin.

SIDE SEAL RUBBING PLATES *DO NOT INCLUDE IN BID*

Stainless steel seal rubbing plate shall provide a smooth contact surface for the side seals throughout the full range of movement of the gate. The rubbing plates shall be adjustable on the anchor bolts to permit vertical alignment of the contact surfaces. Plates shall extend top of wall or minimum one gate height above the gate top in closed position.

RADIAL GATES

TYPICAL SPECIFICATIONS

BOTTOM SILL PLATE

The stainless steel bottom sill plate shall provide a smooth, level contact surface for the full width of the invert of the gate. The sill plate shall be adjustable on anchor bolts to permit leveling and alignment with side rubbing plates.

WELDING

All welds shall have complete fusion with the base metal and shall be free from cracks, oxides, slag inclusions and gas pockets.

RADIAL GATE HOISTS - GENERAL

The hoists shall consist of hoist base, hoist operator, cable drums, drum shafts, cables, and bearing bracket to operate the radial gates.

The hoist shall be furnished with cold-rolled steel drum shaft and with two steel drums. Drums shall be accurately machined to the same diameter and attached to the drum shaft. Stainless steel cables and clamps shall be furnished for field connection of the drums and to the gate.

MANUAL HOIST (ENCLOSED GEAR) *DO NOT INCLUDE IN BID*

The manual hoist operator shall consist of worm and worm gear, with reduction spur gears as required, totally enclosed in cast iron housing. A suitable size handwheel shall be provided to produce necessary output torque to raise the gate when a maximum 36 kg (80 lbs) pull is exerted on the handwheel rim. The direction of rotation to open the gate shall be marked on the handwheel.

ELECTRIC MOTOR OPERATED HOIST *DO NOT INCLUDE IN BID*

The electric hoist actuator shall include the motor, operator unit gearing, limit switch gearing, limit switches, torque switches, controls as specified, declutch lever or knob, space heater, mechanical dial position indicator (optional), gear housings, and auxiliary handwheel as a self-contained unit.

The motor shall be specifically designed for radial gate service and shall be for high torque, totally enclosed, non-ventilated construction, with motor leads brought into the limit switch compartment. Motor insulation shall be Nema Class B with a maximum continuous temperature rating of 120° C (rise + ambient).

The motor shall be of sufficient size to open or close the gate against the maximum expected differential pressure when voltage to the motor terminals is 10% above or below minimal 380V-3Ph-50Hz voltage (other voltages are available on request). The motor duty rating shall be sufficient for one complete open to close to open (or reverse) cycle without exceeding its temperature rating. The motor shall be pre-lubricated and all bearings shall be of the anti-friction type.

Limit switches and associated gearing shall be an integral part of the actuator. Limit switch gearing shall be of the intermittent type, totally enclosed in its own gear case to prevent dirt and foreign matter from entering the gear train, grease-lubricated, and shall be made of bronze or stainless steel. Limit switches shall be of the adjustable type capable of being set to trip at any point of gate travel between fully open and fully closed, and not be subject to breakage or slippage due to over-travel. Each actuator shall have a minimum of two (four) rotor-switch assemblies and a minimum of eight (sixteen) heavy duty contacts.

RADIAL GATES

TYPICAL SPECIFICATIONS

Each actuator shall be equipped with a double torque switch which is responsive to loads encountered in either the opening or closing direction. Each side of the switch shall have a numbered dial and shall be adjustable. A calibration tag shall be mounted near each switch correlating dial setting with unit output torque.

The torque switch shall operate during the complete gate cycle without the use of auxiliary relays, linkages, latches, or other devices. The torque switch shall be wired to shut off the actuator motor in the event of excessive torque being generated in either direction of travel.

Emergency handwheel shall be provided for manual operation. The handwheel shall not rotate during motor operation nor shall a fused motor prevent manual operation. When in manual operating position, the unit will remain in this position until motor is energized at which time the gate operator will automatically return to electric operation and shall remain in motor position until handwheel operation is desired. This movement from motor operation to handwheel operation shall be accomplished by a positive declutching knob or lever which will disengage the motor and motor gearing mechanically but not electrically. Hand operation must be reasonably fast and require no more than 36 kg (80 lbs) of rim effort at a maximum required torque. It shall not be possible for the unit to be simultaneously in manual and motor operation. The direction of rotation to open gate shall be marked on handwheel.

The gate control shall have a built-in lost motion device that travels sufficiently enough to allow the motor to reach full speed before imparting a hammer blow to start gate in motion in either the closing or opening direction. This lost motion device also must permit motor to attain full speed before load is encountered, and load should be shared equally by two lugs cast integrally on the drive sleeve.

A mechanical dial position indicator shall be provided to show gate position as a percentage of gate full open. The indicator shall show gate position at all times regardless of manual or power operation (optional).

The motor controller shall be a reversing type, across-the-line. Starters shall be provided with terminal protection of the overload trip type for each of the three (3) phases. The reversing starters shall be provided with auxiliary contacts for electrical interlocks, and in addition, shall be mechanically interlocked. The controller shall include a 220 Volt fused transformer for the control circuit.

The control circuit shall have a red and green pilot light for visual indication of gate position. The red light will indicate that gate is in the closed position, while the green light will indicate that gate is in open position. Both lights on will indicate that gate is in an intermediate position. Three push-buttons, open-stop-close, will be furnished for gate operation. Starter, push-buttons, and lights are to be furnished (integral with) (remote from) the operator.

For remote or automatic operation a three position selector switch, H-O-A (Hand-Off-Auto) shall be provided. Continuous remote gate position indication shall be provided by use of 1000 OHM potentiometer connected to MDPI gearing.

FASTENERS

All anchor bolts, assembly bolts, screws, nuts, etc. shall be of ample section to safely withstand the forces created by operation of the gate under the specified heads. Quantity and

RADIAL GATES

TYPICAL SPECIFICATIONS

size of fasteners shall be as recommended by Waterman of Egypt. Anchor bolts shall be provided with two nuts each to facilitate installation.

FINISH

All structural and other exposed carbon steel surfaces shall be painted as specified. The hoist shall be given one coat of machinery enamel suitable for outdoor exposure.

MATERIALS

Radial gates and appurtenances shall conform to the requirements of the applicable specifications listed below for the alloy, grade, type, or class of material and the condition and finish appropriate to the structural and operational requirements:

MATERIAL	SPECIFICATION
Structural steel shapes and plates	ASTM A-36, DIN 17100 St 37-2
Carbon steel bars	ASTM A-108, or A-575
Stainless steel	ASTM A-276 Type 304
Bronze bars, rods, shapes	ASTM B-21, or B-98 Permalube Bronze
Seals	J-Type Rubber ASTM D2000
Stainless steel assembly hardware	ASTM F-593 and F-594 Type 304
Cables	Stainless Steel Type 304