



THE CITY OF WINNIPEG

TENDER

TENDER NO. 949-2025

**SUPPLY AND DELIVERY OF LARGE DIAMETER BUTTERFLY VALVES WITH
MANUAL ACTUATORS AND COUPLINGS**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

- B1.1 SUPPLY AND DELIVERY OF LARGE DIAMETER BUTTERFLY VALVES WITH MANUAL ACTUATORS AND COUPLINGS

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, November 26, 2025.
- B2.2 The Contract Administrator or the Manager of Purchasing may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

B3. ENQUIRIES

- B3.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.
- B3.2 If the Bidder finds errors, discrepancies or omissions in the Tender, or is unsure of the meaning or intent of any provision therein, the Bidder shall promptly notify the Contract Administrator of the error, discrepancy or omission at least five (5) Business Days prior to the Submission Deadline.
- B3.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Tender will be provided by the Contract Administrator to all Bidders by issuing an addendum.
- B3.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Tender will be provided by the Contract Administrator only to the Bidder who made the enquiry.
- B3.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.
- B3.6 Any enquiries concerning submitting through MERX should be addressed to:
MERX Customer Support
Phone: 1-800-964-6379
Email: merx@merx.com

B4. CONFIDENTIALITY

- B4.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:
- (a) was known to the Bidder before receipt hereof; or
 - (b) becomes publicly known other than through the Bidder; or
 - (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.
- B4.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Tender to the media or any member of the public without the prior written authorization of the Contract Administrator.

B5. ADDENDA

- B5.1 The Contract Administrator may, at any time prior to the Submission deadline, issue addenda correcting errors, discrepancies or omissions in the Tender, or clarifying the meaning or intent of any provision therein.

- B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline or provide at least two (2) Business Days by extending the Submission Deadline.
- B5.3 Addenda will be available on the MERX website at www.merx.com.
- B5.4 The Bidder is responsible for ensuring that they have received all addenda and is advised to check the MERX website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.5 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid/Proposal. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.
- B5.6 Notwithstanding B3, enquiries related to an Addendum may be directed to the Contract Administrator indicated in D4.

B6. SUBSTITUTES

- B6.1 The Work is based on the materials, equipment, methods and products specified in the Tender.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the material, equipment, method or product as either an approved equal or alternative;
 - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
 - (c) identify any anticipated cost or time savings that may be associated with the substitute;
 - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the Contract;
 - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the Contract.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in their sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.
- B6.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons they wish to inform.
- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.

B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base their Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B16.

B6.9 No later claim by the Contractor for an addition to the price(s) because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

B7. BID SUBMISSION

B7.1 The Bid shall consist of the following components:

- (a) Form A: Bid/Proposal;
- (b) Form B: Prices;

B7.2 All components of the Bid shall be fully completed or provided and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely.

B7.3 The Bid shall be submitted electronically through MERX at www.merx.com.

B7.3.1 Bids will **only** be accepted electronically through MERX.

B7.4 Bidders are advised that inclusion of terms and conditions inconsistent with the Tender document, including the General Conditions, will be evaluated in accordance with B16.1(a).

B8. BID

B8.1 The Bidder shall complete Form A: Bid/Proposal, making all required entries.

B8.2 Paragraph 2 of Form A: Bid/Proposal shall be completed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in their own name, their name shall be inserted;
- (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
- (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
- (d) if the Bidder is carrying on business under a name other than their own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.

B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.

B8.3 In Paragraph 3 of Form A: Bid/Proposal, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

B8.4 Paragraph 13 of Form A: Bid/Proposal shall be signed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in their own name, it shall be signed by the Bidder;
- (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
- (c) if the Bidder is a corporation, it shall be signed by their duly authorized officer or officers;
- (d) if the Bidder is carrying on business under a name other than their own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.

B8.4.1 The name and official capacity of all individuals signing Form A: Bid/Proposal should be entered below such signatures.

B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B9. PRICES

B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B9.1.1 Prices on Form B: Prices shall include:

- (a) duty;
- (b) freight and cartage;
- (c) Provincial and Federal taxes [except the Goods and Services Tax (GST) and Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable] and all charges governmental or otherwise paid;
- (d) profit and all compensation which shall be due to the Contractor for the Work and all risks and contingencies connected therewith.

B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.

B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

B9.4 The Bidder shall enter the Total Bid Price from Form B: Prices into the Total Bid Price field in MERX.

B9.5 Bidders are advised that the calculation indicated in B16.4 will prevail over the Total Bid Price entered in MERX.

B9.1 The Bidder shall enter the lump sum price in Canadian funds for the Work in the Total Bid Price field in MERX.

B10. DISCLOSURE

B10.1 Various Persons provided information or services with respect to this Work. In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.

B10.2 The Persons are:

- (a) N/A

B11. CONFLICT OF INTEREST AND GOOD FAITH

B11.1 Further to C3.2, Bidders, by responding to this Tender, declare that no Conflict of Interest currently exists, or is reasonably expected to exist in the future.

B11.2 Conflict of Interest means any situation or circumstance where a Bidder or employee of the Bidder proposed for the Work has:

- (a) other commitments;
- (b) relationships;
- (c) financial interests; or

(d) involvement in ongoing litigation;

that could or would be seen to:

- (i) exercise an improper influence over the objective, unbiased and impartial exercise of the independent judgment of the City with respect to the evaluation of Bids or award of the Contract; or
 - (ii) compromise, impair or be incompatible with the effective performance of a Bidder's obligations under the Contract;
- (e) has contractual or other obligations to the City that could or would be seen to have been compromised or impaired as a result of their participation in the Tender process or the Work; or
- (f) has knowledge of confidential information (other than confidential information ~~disclosed~~ by the City in the normal course of the Tender process) of strategic and/or material relevance to the Tender process or to the Work that is not available to other bidders and that could or would be seen to give that Bidder an unfair competitive advantage.

B11.3 In connection with their Bid, each entity identified in B11.2 shall:

- (a) avoid any perceived, potential or actual Conflict of Interest in relation to the procurement process and the Work;
- (b) upon discovering any perceived, potential or actual Conflict of Interest at any time during the Tender process, promptly disclose a detailed description of the Conflict of Interest to the City in a written statement to the Contract Administrator; and
- (c) provide the City with the proposed means to avoid or mitigate, to the greatest extent practicable, any perceived, potential or actual Conflict of Interest and shall submit any additional information to the City that the City considers necessary to properly assess the perceived, potential or actual Conflict of Interest.

B11.4 Without limiting B11.3, the City may, in their sole discretion, waive any and all perceived, potential or actual Conflicts of Interest. The City's waiver may be based upon such terms and conditions as the City, in their sole discretion, requires to satisfy itself that the Conflict of Interest has been appropriately avoided or mitigated, including requiring the Bidder to put into place such policies, procedures, measures and other safeguards as may be required by and be acceptable to the City, in their sole discretion, to avoid or mitigate the impact of such Conflict of Interest.

B11.5 Without limiting B11.3, and in addition to all contractual or other rights or rights at law or in equity or legislation that may be available to the City, the City may, in their sole discretion:

- (a) disqualify a Bidder that fails to disclose a perceived, potential or actual Conflict of Interest of the Bidder or any of their employees proposed for the Work;
- (b) require the removal or replacement of any employees proposed for the Work that has a perceived, actual or potential Conflict of Interest that the City, in their sole discretion, determines cannot be avoided or mitigated;
- (c) disqualify a Bidder or employees proposed for the Work that fails to comply with any requirements prescribed by the City pursuant to B11.4 to avoid or mitigate a Conflict of Interest; and
- (d) disqualify a Bidder if the Bidder, or one of their employees proposed for the Work, has a perceived, potential or actual Conflict of Interest that, in the City's sole discretion, cannot be avoided or mitigated, or otherwise resolved.

B11.6 The final determination of whether a perceived, potential or actual Conflict of Interest exists shall be made by the City, in their sole discretion.

B12. QUALIFICATION

B12.1 The Bidder shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Bidder does not carry on business in Manitoba, in the jurisdiction where the Bidder does carry on business; and
- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.

B12.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Purchasing Division website at <https://www.winnipeg.ca/matmgt/Templates/files/debar.pdf>

B12.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) have successfully carried out work similar in nature, scope and value to the Work; and
- (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract;
- (c) have a written workplace safety and health program, if required, pursuant to The Workplace Safety and Health Act (Manitoba); and
- (d) have completed the Accessible Customer Service online training required by the Accessibility for Manitobans Act (AMA) (see B12.4 and D5).

B12.4 Further to B12.3(d), the Bidder acknowledges that they and all Subcontractors have obtained training required by the Accessibility for Manitobans Act (AMA) available at <https://accessibilitymb.ca/resources-events-and-training/online-training.html> for anyone that may have any interaction with the public on behalf of the City of Winnipeg.

B12.5 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B12.6 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B13. OPENING OF BIDS AND RELEASE OF INFORMATION

B13.1 Bids will not be opened publicly.

B13.2 Following the Submission Deadline, the names of the Bidders and their Total Bid Prices (unevaluated and pending review and verification of conformance with requirements) will be available on the MERX website at www.merx.com.

B13.3 After award of Contract, the name(s) of the successful Bidder(s) and their Contract amount(s) will be available on the MERX website at www.merx.com.

B13.4 The Bidder is advised that any information contained in any Bid may be released if required by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law or by City policy or procedures (which may include access by members of City Council).

B13.4.1 To the extent permitted, the City shall treat as confidential information, those aspects of a Bid Submission identified by the Bidder as such in accordance with and by reference to

Part 2, Section 17 or Section 18 or Section 26 of The Freedom of Information and Protection of Privacy Act (Manitoba), as amended.

B14. IRREVOCABLE BID

- B14.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid/Proposal.
- B14.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work until a Contract for the Work has been duly formed and the contract securities have been furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 of Form A: Bid/Proposal.

B15. WITHDRAWAL OF BIDS

- B15.1 A Bidder may withdraw their Bid without penalty at any time prior to the Submission Deadline.

B16. EVALUATION OF BIDS

- B16.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Tender, or acceptable deviation therefrom (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B12 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B6;
- B16.2 Further to B16.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid Submission is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities if the interests of the City so require.
- B16.3 Further to B16.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in their Bid or in other information required to be submitted, that they are qualified.
- B16.4 Further to B16.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.
- B16.4.1 Further to B16.1(a), in the event that a unit price is not provided on Form B: Prices, the City may determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.
- B16.4.2 Bidders are advised that the calculation indicated in B16.4 will prevail over the Total Bid Price entered in MERX.
- B16.5 This Contract will be awarded as a whole.

B17. AWARD OF CONTRACT

- B17.1 The City will give notice of the award of the Contract or will give notice that no award will be made.
- B17.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be qualified, and the Bids are determined to be responsive.
- B17.2.1 Without limiting the generality of B17.2, the City will have no obligation to award a Contract where:

- (a) the prices exceed the available City funds for the Work;
- (b) the prices are materially in excess of the prices received for similar work in the past;
- (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with their own forces;
- (d) only one Bid is received; or
- (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.

B17.3 Where an award of Contract is made by the City, the award shall be made to the qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B16.

B17.4 Further to Paragraph 7 of Form A: Bid/Proposal and C4, the City may issue a purchase order to the successful Bidder in lieu of the execution of a Contract.

B17.4.1 The Contract Documents, as defined in C1.1(p), in their entirety shall be deemed to be incorporated in and to form a part of the purchase order notwithstanding that they are not necessarily attached to or accompany said purchase order.

B17.5 Following the award of contract, a Bidder will be provided with information related to the evaluation of their Bid upon written request to the Contract Administrator.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for the Supply of Goods* (Revision 2020-01-31) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for the Supply of Goods* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Purchasing Division website at http://www.winnipeg.ca/matmgt/gen_cond.stm
- C0.2 A reference in the Tender to a section, clause or subclause with the prefix “C” designates a section, clause or subclause in the *General Conditions for Supply of Goods*.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

- D1.1 In addition to the *General Conditions for the Supply of Goods*, these Supplemental Conditions are applicable to the Work of the Contract.

D2. SCOPE OF WORK

- D2.1 The Work to be done under the Contract shall consist of the supply and delivery of Large Diameter (600mm) Butterfly Valves with Manual Actuators and Couplings conforming this specification by August 15, 2026.
- D2.2 The major components of the Work are as follows:
- (a) supply and delivery of Large Diameter (600mm) Butterfly Valves with Manual Actuators and Couplings conforming to this specification. Installation of the valves is not included;
 - (b) pre-delivery factory testing; and
 - (c) supply of shop drawings, and operation and maintenance manuals.
- D2.2.1 Field testing of the equipment will be completed by the City of Winnipeg.

D3. DEFINITIONS

- D3.1 When used in this Tender:
- (a) "**AWWA**" means American Water Works Association;
 - (b) "**ANSI**" means American National Standards Institute;
 - (c) "**ASME**" means American Society of Mechanical Engineers;
 - (d) "**ASTM**" means American Society of Testing and Materials;
 - (e) "**CSA**" means Canadian Standards Association;
 - (f) "**f.o.b**" means Free on Board;
 - (g) "**NSF**" means National Sanitation Foundation; and
 - (h) "**Supply Chain Disruption**" means an inability by the Contractor to obtain goods or services from third parties necessary to perform the Work of the Contract within the schedule specified therein, despite the Contractor making all reasonable commercial efforts to procure same. Contractors are advised that increased costs do not, in and of themselves, amount to a Supply Chain Disruption;

D4. CONTRACT ADMINISTRATOR

- D4.1 The Contract Administrator is:
The Contract Administrator is:
Derick Ellis
Technologist 2 – Water Planning
Telephone No.: 204-986-2003
Email Address: delis@winnipeg.ca

D5. ACCESSIBLE CUSTOMER SERVICE REQUIREMENTS

- D5.1 The Accessibility for Manitobans Act (AMA) imposes obligations on The City of Winnipeg to provide accessible customer service to all persons in accordance with the Customer Service Standard Regulation ("CSSR") to ensure inclusive access and participation for all people who live, work or visit Winnipeg regardless of their abilities.
- D5.1.1 The Contractor agrees to comply with the accessible customer service obligations under the CSSR and further agrees that when providing the Goods or Services or otherwise acting on the City of Winnipeg's behalf, shall comply with all obligations under the AMA applicable to public sector bodies.
- D5.1.2 The accessible customer service obligations include, but are not limited to:
- (a) providing barrier-free access to goods and services;
 - (b) providing reasonable accommodations;
 - (c) reasonably accommodating assistive devices, support persons, and support animals;
 - (d) providing accessibility features e.g. ramps, wide aisles, accessible washrooms, power doors and elevators;
 - (e) inform the public when accessibility features are not available;
 - (f) providing a mechanism or process for receiving and responding to public feedback on the accessibility of all goods and services; and
 - (g) providing adequate training of staff and documentation of same.

D6. SUPPLIER CODE OF CONDUCT

- D6.1 The Contractor has reviewed and understands the City's Supplier Code of Conduct. This document is located at: <https://www.winnipeg.ca/media/4891>
- D6.2 The Contractor agrees to comply with the Supplier Code of Conduct as it may be amended or replaced from time to time. The Contractor is responsible for periodically checking the above link for updates to the Supplier Code of Conduct. Contract signature on Form A: Bid/Proposal from the Contractor signifies agreement to the Supplier Code of Conduct which comes into effect once the Contract starts.
- D6.3 If there is a conflict between the Contract and the Supplier Code of Conduct – the Contract will prevail.

D7. UNFAIR LABOUR PRACTICES

- D7.1 Further to C3.2, the Contractor declares that in bidding for the Work and in entering into this Contract, the Contractor and any proposed Subcontractor(s) conduct their respective business in accordance with established international codes embodied in United Nations Universal Declaration of Human Rights (UDHR) <https://www.un.org/en/about-us/universal-declaration-of-human-rights> International Labour Organization (ILO) [https://www.ilo.org/global/lang--en/index.htm](https://www.ilo.org/global/lang-en/index.htm) conventions as ratified by Canada.
- D7.2 The City of Winnipeg is committed and requires its Contractors and their Subcontractors, to be committed to upholding and promoting international human and labour rights, including fundamental principles and rights at work covered by ILO eight (8) fundamental conventions and the United Nations Universal Declaration of Human Rights which includes child and forced labour.
- D7.3 Upon request from the Contract Administrator, the Contractor shall provide disclosure of the sources (by company and country) of the raw materials used in the Work and a description of the manufacturing environment or processes (labour unions, minimum wages, safety, etc.).

- D7.4 Failure to provide the evidence required under D7.3, may be determined to be an event of default in accordance with C16.
- D7.5 In the event that the City, in its sole discretion, determines the Contractor to have violated the requirements of this section, it will be considered a fundamental breach of the Contract and the Contractor shall pay to the City a sum specified by the Contract Administrator in writing ("Unfair Labour Practice Penalty"). Such a violation shall also be considered an Event of Default, and shall entitle the City to pursue all other remedies it is entitled to in connection with same pursuant to the Contract.
- D7.5.1 The Unfair Labour Practice Penalty shall be such a sum as determined appropriate by the City, having due regard to the gravity of the Contractor's violation of the above requirements, any cost of obtaining replacement goods/ services or rectification of the breach, and the impact upon the City's reputation in the eyes of the public as a result of same.
- D7.5.2 The Contractor shall pay the Unfair Labour Practice Penalty to the City within thirty (30) Calendar Days of receiving a demand for same in accordance with D7.5. The City may also hold back the amount of the Unfair Labour Practice Penalty from payment for any amount it owes the Contractor.
- D7.5.3 The obligations and rights conveyed by this clause survive the expiry or termination of this Contract, and may be exercised by the City following the performance of the Work, should the City determine, that a violation by the Contractor of the above clauses has occurred following same. In no instance shall the Unfair Labour Practice Penalty exceed the total of twice the Contract value. Submissions

D8. AUTHORITY TO CARRY ON BUSINESS

- D8.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

D9. INSURANCE

- D9.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured; such liability policy to also contain a cross-liability clause, non-owned automobile liability and products and completed operations cover, to remain in place at all times during the performance of the Work;
 - (b) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. The Limit of Liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence.
- D9.2 Deductibles shall be borne by the Contractor.
- D9.3 The Contractor shall provide the Contract Administrator with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in C4 for the return of the executed Contract Documents, as applicable.
- D9.4 The Contractor shall not cancel, materially alter, or cause the policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

SCHEDULE OF WORK

D10. COMMENCEMENT

- D10.1 The Contractor shall not commence any Work until they are in receipt of a notice of award from the City authorizing the commencement of the Work.
- D10.2 The Contractor shall not commence any Work until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D8;
 - (ii) evidence of the workers compensation coverage specified in C6.17;
 - (iii) evidence of the insurance specified in D9;and
 - (iv) the direct deposit application form specified in D15
 - (b) the Contractor has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.

D11. DELIVERY

- D11.1 Goods shall be delivered by August 15, 2026, f.o.b. destination, freight prepaid to:
- (a) City of Winnipeg Water Services
Delivery Address:
552 Plinguet St. Winnipeg,
MB, Canada.
R2J 0G1
- D11.2 The Contractor shall confirm each delivery with the Contract Administrator or their designate, at least two (2) Business Days before delivery.
- D11.3 Goods shall be delivered between 8:30 a.m. and 4:30 p.m. on Business Days.
- D11.4 The Contractor shall off-load goods as directed at the delivery location.

D12. LIQUIDATED DAMAGES

- D12.1 If the Contractor fails to achieve delivery of the goods within the time specified in D11.1 Delivery the Contractor shall pay the City two hundred and fifty dollars (\$250) per Calendar Day for each and every Calendar Day until the goods have been delivered.
- D12.2 The amount specified for liquidated damages in D12.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Delivery by the day fixed herein for same.
- D12.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D13. SUPPLY CHAIN DISRUPTION SCHEDULE DELAYS

- D13.1 The City acknowledges that the schedule for this Contract may be impacted by Supply Chain Disruption. Commencement and progress of the Work shall be performed by the Contractor with due consideration to the delivery requirements and schedule identified in the Contract, in close consultation with the Contract Administrator.
- D13.2 If the Contractor is delayed in the performance of the Work by reason of Supply Chain Disruption, the Work schedule may be adjusted by a period of time equal to the time lost due to such delay and costs related to such delay will be determined as identified herein.

- D13.3 A minimum of seven (7) Calendar Days prior to the commencement of Work, the Contractor shall declare whether a Supply Chain Disruption will affect the start date. The Contractor shall provide sufficient evidence that the delay is directly related to a Supply Chain Disruption, including but not limited to evidence related to ordering of material or goods, production and/or manufacturing schedules or availability of staff as appropriate.
- D13.4 For any delay related to Supply Chain Disruption and identified after Work has commenced, the Contractor shall within seven (7) Calendar Days of becoming aware of the anticipated delay declare the additional delay and shall provide sufficient evidence as indicated in D13.3. Failure to provide this notice will result in no additional time delays being considered by the City.
- D13.5 The Work schedule, including the durations identified in D11 where applicable, will be adjusted to reflect delays accepted by the Contract Administrator.
- D13.6 Any time or cost implications as a result of Supply Chain Disruption and in accordance with the above, as confirmed by the Contract Administrator, shall be documented in accordance with C7.
- D13.7

MEASUREMENT AND PAYMENT

D14. INVOICES

- D14.1 Further to C10, the Contractor:
- (a) shall submit invoices for Work performed in accordance with the instruction on the City's website at: <https://www.winnipeg.ca/finance/corporate-accounts-payable.stm>; and
 - (b) should copy the Contract Administrator on submission of its invoice.

D15. PAYMENT

- D15.1 Further to C10, the City shall make payments to the Contractor by direct deposit to the Contractor's banking institution, and by no other means. Payments will not be made until the Contractor has made satisfactory direct deposit arrangements with the City. Direct deposit application forms are at https://legacy.winnipeg.ca/finance/files/Direct_Deposit_Form.pdf.

WARRANTY

D16. WARRANTY

- D16.1 Warranty is as stated in C11.

DISPUTE RESOLUTION

D17. DISPUTE RESOLUTION

- D17.1 If the Contractor disagrees with any opinion, determination, or decision of the Contract Administrator, the Contractor shall act in accordance with the Contract Administrator's opinion, determination, or decision unless and until same is modified by the process followed by the parties pursuant to D17.
- D17.2 The entire text of C19.4 is deleted, and amended to read: "Intentionally Deleted"
- D17.3 The entire text of C19.5 is deleted, and amended to read:
- (a) If Legal Services has determined that the Disputed Matter may proceed in the Appeal Process, the Contractor must, within ten (10) Business Days of the date of the Legal Services Response Letter, submit their written Appeal Form, in the manner and format set out on the City's Purchasing Division Website, to the Chief Administrative Officer, and

to the Contract Administrator. The Contractor may not raise any other disputes other than the Disputed Matter in their Appeal Form.

- D17.4 Further to C19, prior to the Contract Administrator's issuance of a Final Determination, the following informal dispute resolution process shall be followed where the Contractor disagrees with any opinion, determination, or decision of the Contract Administrator ("Dispute"):
- (a) In the event of a Dispute, attempts shall be made by the Contract Administrator and the Contractor's equivalent representative to resolve Disputes within the normal course of project dealings between the Contract Administrator and the Contractor's equivalent representative.
 - (b) Disputes which in the reasonable opinion of the Contract Administrator or the Contractor's equivalent representative cannot be resolved within the normal course of project dealings as described above shall be referred to a without prejudice escalating negotiation process consisting of, at a minimum, the position levels as shown below and the equivalent Contractor representative levels:
 - (i) The Contract Administrator;
 - (ii) Supervisory level between the Contract Administrator and applicable Department Head;
 - (iii) Department Head.
- D17.4.1 Names and positions of Contractor representatives equivalent to the above City position levels shall be determined by the Contractor and communicated to the City at the pre-commencement or kick off meeting.
- D17.4.2 As these negotiations are not an adjudicative hearing, neither party may have legal counsel present during the negotiations.
- D17.4.3 Both the City and the Contractor agree to make all reasonable efforts to conduct the above escalating negotiation process within twenty (20) Business Days, unless both parties agree, in writing, to extend that period of time.
- D17.4.4 If the Dispute is not resolved to the City and Contractor's mutual satisfaction after discussions have occurred at the final escalated level as described above, or the time period set out in D17.4.3, as extended if applicable, has elapsed, the Contract Administrator will issue a Final Determination as defined in C1.1(v), at which point the parties will be governed by the Dispute Resolution process set out in C19.

THIRD PARTY AGREEMENTS

D18. FUNDING AND/OR CONTRIBUTION AGREEMENT OBLIGATIONS

- D18.1 In the event that funding for the Work of the Contract is provided to the City of Winnipeg by the Government of Manitoba and/or the Government of Canada, the following terms and conditions shall apply, as required by the applicable funding agreements.
- D18.2 Further to D18.1, in the event that the obligations in D18 apply, actual costs legitimately incurred by the Contractor as a direct result of these obligations ("Funding Costs") shall be determined by the actual cost to the Contractor and not by the valuation method(s) outlined in C7.4. In all other respects Funding Costs will be processed in accordance with Changes in Work under C7.
- D18.3 For the purposes of D18:
- (a) "**Government of Canada**" includes the authorized officials, auditors, and representatives of the Government of Canada; and
 - (b) "**Government of Manitoba**" includes the authorized officials, auditors, and representatives of the Government of Manitoba.
- D18.4 Modified Insurance Requirements

- D18.4.1 Where applicable, the Contractor will be required to provide wrap-up liability insurance in an amount of no less than two million dollars (\$2,000,000) inclusive per occurrence. Such policy will be written in the joint names of the City, Contractor, Consultants and all subcontractors and subconsultants and include twelve (12) months completed operations. The Government of Manitoba and their Ministers, officers, employees, and agents shall be added as additional insureds.
- D18.4.2 If applicable the Contractor will be required to provide builders' risk insurance (including boiler and machinery insurance, as applicable) providing all risks coverage at full replacement cost, or such lower level of insurance that the City may identify on a case-by-case basis, such as an installation floater.
- D18.4.3 The Contractor shall obtain and maintain third party liability insurance with minimum coverage of two million dollars (\$2,000,000.00) per occurrence on all licensed vehicles operated at the Site. In the event that this requirement conflicts with another licensed vehicle insurance requirement in this Contract, then the requirement that provides the higher level of insurance shall apply.
- D18.4.4 Insurers shall provide satisfactory Certificates of Insurance to the Government of Manitoba prior to commencement of Work as written evidence of the insurance required. The Certificates of Insurance must provide for a minimum of thirty (30) days' prior written notice to the Government of Manitoba in case of insurance cancellation.
- D18.4.5 All policies must be taken out with insurers licensed to carry on business in the Province of Manitoba.
- D18.5 Indemnification By Contractor
- D18.5.1 In addition to the indemnity obligations outlined in C15 of the General Conditions for Goods, the Contractor agrees to indemnify and save harmless the Government of Canada and the Government of Manitoba and each of their respective Ministers, officers, servants, employees, and agents from and against all claims and demands, losses, costs, damages, actions, suit or other proceedings brought or pursued in any manner in respect of any matter caused by the Contractor or arising from this Contract or the Work, or from the goods or services provided or required to be provided by the Contractor, except those resulting from the negligence of any of the Government of Canada's or the Government of Manitoba's Ministers, officers, servants, employees, or agents, as the case may be.
- D18.5.2 The Contractor agrees that in no event will Canada or Manitoba, their respective officers, servants, employees or agents be held liable for any damages in contract, tort (including negligence) or otherwise, for:
- (a) any injury to any person, including, but not limited to, death, economic loss or infringement of rights;
 - (b) any damage to or loss or destruction of property of any person; or
 - (c) any obligation of any person, including, but not limited to, any obligation arising from a loan, capital lease or other long-term obligation;
- in relation to this Contract or the Work.
- D18.6 Records Retention and Audits
- D18.6.1 The Contractor shall maintain and preserve accurate and complete records in respect of this Contract and the Work, including all accounting records, financial documents, copies of contracts with other parties and other records relating to this Contract and the Work during the term of the Contract and for at least six (6) years after Total Performance. Those records bearing original signatures or professional seals or stamps must be preserved in paper form; other records may be retained in electronic form.
- D18.6.2 In addition to the record keeping and inspection obligations outlined in C6 of the General Conditions for Goods, the Contractor shall keep available for inspection and audit at all reasonable times while this Contract is in effect and until at least six (6) years after Total

Performance, all records, documents, and contracts referred to in D18.6.1 for inspection, copying and audit by the City of Winnipeg, the Government of Manitoba and/or the Government of Canada and their respective representatives and auditors, and to produce them on demand; to provide reasonable facilities for such inspections, copying and audits, to provide copies of and extracts from such records, documents, or contracts upon request by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada and their respective representatives and auditors, and to promptly provide such other information and explanations as may be reasonably requested by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada from time-to-time.

D18.7 Other Obligations

- D18.7.1 The Contractor consents to the City providing a copy of the Contract Documents to the Government of Manitoba and/or the Government of Canada upon request from either entity.
- D18.7.2 If the Lobbyists Registration Act (Manitoba) applies to the Contractor, the Contractor represents and warrants that it has filed a return and is registered and in full compliance with the obligations of that Act, and covenants that it will continue to comply for the duration of this Contract.
- D18.7.3 The Contractor shall comply with all applicable legislation and standards, whether federal, provincial, or municipal, including (without limitation) labour, environmental, and human rights laws, in the course of providing the Work.
- D18.7.4 The Contractor shall properly account for the Work provided under this Contract and payment received in this respect, prepared in accordance with generally accepted accounting principles in effect in Canada, including those principles and standards approved or recommended from time-to-time by the Chartered Professional Accountants of Canada or the Public Sector Accounting Board, as applicable, applied on a consistent basis.
- D18.7.5 The Contractor represents and warrants that no current or former public servant or public office holder, to whom the Value and Ethics Code for the Public Sector, the Policy on Conflict of Interest and Post Employment, or the Conflict of Interest Act applies, shall derive direct benefit from this Contract, including any employment, payments, or gifts, unless the provision or receipt of such benefits is in compliance with such codes and the legislation.
- D18.7.6 The Contractor represents and warrants that no member of the House of Commons or of the Senate of Canada or of the Legislative Assembly of Manitoba is a shareholder, director or officer of the Contractor or of a Subcontractor, and that no such member is entitled to any benefits arising from this Contract or from a contract with the Contractor or a Subcontractor concerning the Work.

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

- E1.1 These Specifications shall apply to the Work.
- E1.2 The following are applicable to the Work:
- (a) Appendix A – Record Drawings
- E1.3 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B6. In every instance where a brand name or design specification is used, the City will also consider approved equals and/or approved alternatives in accordance with B6.

E2. GOODS

- E2.1 The Contractor shall supply and deliver the following equipment in accordance with the requirements hereinafter specified.
- (a) Four (4) 600mm Butterfly Valves complete with Manual Actuator and Couplings in accordance with E5 and E6.

E3. SHOP DRAWINGS

- E3.1 Description
- (a) This Specification shall revise, amend, and supplement the requirements of CW 1110 of the City of Winnipeg's Standard Construction Specifications.
- E3.2 Submit all Shop Drawings in accordance with CW 1110 except as modified herein.
- E3.3 The Contractor shall submit specified Shop Drawings to the Contract Administrator for review. All submissions must be in metric units. Where data is in imperial units, the correct metric equivalent shall also be shown on all submissions for Engineering review.
- E3.4 Allow for a five (5) Business day period for review by the Contract Administrator of each individual submission and re-submission, unless noted otherwise in the Contract Documents.
- E3.5 Shop Drawings not meeting the requirements of CW 1110 or the requirements specified herein will be returned to the Contractor without review for resubmission.
- E3.6 Review of Shop Drawings by the Contract Administrator will be limited to two (2) reviews per Shop Drawing. This shall include a review of the initial submission and a review of the revised submission. Costs associated with subsequent reviews will be billed to the Contractor.
- E3.7 Measurement and Payment
- E3.7.1 Preparation and submission of Shop Drawings will be considered incidental to the Work and will not be measured for payment. No additional payment will be made.

E4. EXPEDITED SHOP DRAWINGS

- E4.1 Further to E3, in order to expedite Shop Drawings with critical timelines, the lowest responsive Bidder, as outlined in B16, will be required, after receiving a written request from the Contract Administrator, to arrange for the preparation of Shop Drawings for the following items with critical timelines:
- (a) Butterfly valves and manual actuators as per E5 and E6.

E4.2 Measurements and Payment

- E4.2.1 If no Contract is awarded, then the City of Winnipeg will pay the requested Bidder up to a maximum of five hundred dollars (\$500.00) for each of the requested submissions for the preparation and delivery of expedited Shop Drawings. Delivery of expedited Shop Drawings to the City and payment of the above amounts will constitute full and final consideration of each party to the other and neither party will have any further liability to the other with respect to this Tender.
- E4.2.2 If Award is made to the lowest responsive Bidder, then as per E3.7, expedited Shop Drawings will be considered incidental to the Work and will not be measured for payment. No additional payment will be made.

E5. BUTTERFLY VALVES

E5.1 Description

- (a) This Specification shall cover the design and manufacture of butterfly valves to be supplied under this Contract. This Specification is supplementary to and shall be read together with the latest revision of AWWA Standard C504, "Rubber Seated Butterfly Valves".
- (b) All butterfly valves to be supplied under this Contract shall be designed and manufactured by a company having at least five (5) years prior experience in manufacturing these types of products in the sizes and to the pressure ratings as those specified herein.
- (c) Valves supplied under this Contract are intended for direct replacement of existing valves currently in service in the City's Regional Water system.

E5.2 Design Requirements

(a) General

- (i) Design, materials and construction of all valves shall conform to the latest version of AWWA Standard C504.
- (ii) Further to AWWA C504, products and coatings in contact with potable water shall be certified as suitable for contact with drinking water by an accredited certification organization in accordance with ANSI/NSF 61 "Drinking Water System Components – Health Effects".
- (iii) Design torques shall be calculated using procedures outlined in AWWA Manual of Water Supply Practices – Butterfly Valves: Torque, Headloss and Cavitation Analysis – M.

(b) Design Parameters

(i) Service	Potable Drinking Water
(ii) Chemical Resistance	1 % Hypochlorite
(iii) Installation	Submerged Service
(iv) Flow Direction	Bi-directional
(v) Service	On-Off
(vi) Operating service	0°C to +40°C
(vii) Water Temperature Service	0°C to 20°C
(viii) Normal System Operating Pressure	552 kPa (80 psi)
(ix) Maximum Differential Pressure	552 kPa (80 psi)
(x) Maximum Transient Pressure	690 KPa (100 psi)
(xi) Valve Test Pressure	1034 Kpa (150 psi)
(xii) Body/Connection Type	Victaulic Style 44
(xiii) Body Lay Length	457 mm (18")
(xiv) Body (All)	Cast or Ductile Iron
(xv) Headloss	Maximum K value 0.5
(xvi) Maximum Velocity	3.0m/s

E5.3 Materials

(a) General

- (i) Materials for butterfly valves shall meet or exceed the latest revision requirements of AWWA Standard C504 and shall meet or exceed the requirements of this Specification.
- (ii) Materials throughout shall be the best of their respective kinds. The equipment shall be designed for the very highest class of service, shall include the highest degree of strength, durability and reliability for continuous operation and for most convenient maintenance.
- (iii) Liberal factors of safety (minimum of fifty percent (50%) shall be used throughout especially for all parts subject to alternating stresses or shock.
- (iv) All joints shall be machined, and all mating faces shall be drilled and tapped, peened, or finished as subsequently specified.
- (v) The mechanical features of the equipment covered by these Specifications shall conform to the appropriate standards of the ASME.
- (vi) Threads on all screws, bolts, studs, and nuts shall be American Standard.

(b) Stainless Steel Components

- (i) All components specified in the latest revision of AWWA Standard C504 as stainless steel and the valve shaft, pins, clamps and retaining rings for the rubber seats shall be ASTM A240 or ASTM A276 Grade S30400 (Type 304) stainless steel. No alternative materials will be accepted in this regard.

(c) Workmanship

- (i) All foundry and machine work shall be in accordance with the best modern practice for the class of work involved.
- (ii) All parts shall conform accurately to the required dimensions and shall be free from injurious defects. All machine parts shall be made to template or gauge.
- (iii) No repairs to metal such as welding, plugging, peening or stitching will be permitted. Any valve or actuator exhibiting such repairs will be rejected.
- (iv) All joints shall be faced true and shall be watertight where subject to water pressure.
- (v) All iron parts receiving bronze mounting shall be finished to fit. Such hand work shall be done in finishing as is required to produce a neat, workmanlike, well fitting, and smooth operating job throughout.
- (vi) All parts of the same size and same make shall be interchangeable.

(d) Ferrous Castings.

- (i) All castings shall be true to pattern, of workmanlike finish and of uniform fine grain quality and condition, free from blowholes, porosity, hard spots, shrinkage defects, cracks, or other injurious defects and shall be smooth and well cleaned before inspection. Castings shall be readily machinable. Castings shall not be repaired, plugged, or welded.

(e) Valve Bodies

- (i) Valve bodies shall be short body and constructed of either cast iron conforming to ASTM Standard A126, Class B or ASTM A48, Class 40; of ductile iron conforming to ASTM A536, Grade 65-45-12; or of alloy cast iron conforming to ASTM A436, Type 1 and 2, or ASTM A439, Type D-2 with a maximum lead content of 0.003 percent.

(f) Valve Ends

- (i) The ends of the valves shall be Victaulic Style 44.

(g) Valve Discs

- (i) The design and materials of valve discs shall conform to the requirements of Section 4.5 of the latest revision of AWWA Standard C504.
- (ii) Discs shall be offset to provide an uninterrupted 360-degree seating edge and shall be cast iron per ASTM A48, Class 40 or ductile iron per ASTM A536 (65-45-12).

- (iii) The disc seating edge, if applicable, shall be solid type 316 stainless steel.
 - (iv) The disc shall be securely attached to the valve shaft using type 304 stainless steel taper fasteners.
 - (v) Disc structures containing hollow cavities are not acceptable.
- (h) Valve Shaft
 - (i) Valve shaft shall be constructed of type 304 stainless steel.
- (i) Valve Seats
 - (i) Valve seats shall be reinforced natural or synthetic rubber reinforced with high resiliency fabric inserts. The mating seat shall be of type 304 stainless steel. Seats shall be of a design that permits adjustment, removal or replacement of the seat at the site of the installation without removal of the valve from the line. Seats that are clamped or mechanically secured are preferred over epoxy retained seats.
 - (ii) Valve seats shall be manufactured from a solid mass rather than layers of rubber bonded together.
 - (iii) Valves with a rubber seat mounted on the valve disc shall meet the following conditions:
 - (iv) The disc seats shall be offset from the centre line of the shafts so that the rubber seat forms a continuous uninterrupted ring.
 - (v) An insert of stainless steel shall be provided in the body to provide a smooth seating surface for the rubber disc seat.
 - (vi) Mechanically retained rubber seats shall be held in position on the disc or body by a segmented retaining ring secured by type 316 stainless steel nuts and bolts which by tightening will slightly deform the rubber seat to maintain proper contact with the seat face throughout the entire circumference.
- (j) Bearings
 - (i) Bearings in the valve body for shaft ends shall be of the sleeve type made of self-lubricating material.
 - (ii) Each valve shall be equipped with one or two thrust bearings of corrosion resistant material on the shaft, outboard of the shaft seal or in the actuator housing.
- (k) Shaft Seals
 - (i) Shaft seals shall be designed for the use of standard split-V type packing, standard O-ring seals or pull-down packing as described in Section 4.2.7 of the latest revision of AWWA Standard C504.
- (l) Painting and Coating
 - (i) Interior surfaces shall be coated with a protective system in accordance to AWWA Standard C550 – Protective Interior Coatings of Valves and Hydrants, which can be used in a potable water system.
 - (ii) Interior coatings shall comply with ANSI/NSF 61 “Drinking Water System Components – Health Effects”
 - (iii) All coatings shall be applied in a minimum of two (2) or more layers (5 mils dry film thickness minimum each coat) for a minimum final coating dry film thickness of the greater of 16 mils or the thickness recommended by the manufacturer for liquid epoxies and a minimum of 10 mils thick for fusion bonded epoxies.
 - (iv) Coatings shall be a 100% solids liquid or fusion bonded epoxy. Approved products: Enviroline 230, Bar-Rust 234P, Specialty Polymer Coatings SP-7888, or approved equal in accordance with B6.
 - (v) Coatings shall be holiday free as defined in Section 5.2.3 of AWWA Standard C550.
 - (vi) Exterior surfaces shall be coated consistent with interior surfaces.
 - (vii) Surfaces shall be prepared to NACE SSPC-SP10- Near-White Metal Blast Cleaning
 - (viii) All machined surfaces shall be protected with an approved coating, prior to assembly to prevent rusting. Machined surfaces for valve seats shall have particular

attention paid to, as this area if untreated, has proven to support "barnacle growth" which can prevent watertight closure of the valve.

- (m) The valve manufacturer shall confirm compatibility with supplied actuator in accordance with **Error! Reference source not found..**
- (n) Acceptable Products:
 - (i) Victaulic Series W719 Butterfly Valve complete with Style 44 Couplings;
 - (ii) Or approved equal in accordance with B6.

E5.4 Submittals

- (a) Shop Drawings
 - (i) Submit Shop Drawings in accordance with E3.
 - (ii) Shop Drawings shall state all performance and design criteria as stated in E5.2.
 - (iii) At the time of submission, the Contractor shall inform the Contract Administrator in writing of any deviation in the Shop Drawings from the requirements of the contract documents. The Shop Drawings shall include a copy of the Specifications attached in Part E and marked by the Contractor as either in "compliance" or "deviation" with comment.
 - (iv) Provide valve torque calculations for operating conditions listed.
- (b) Affidavit of Compliance
 - (i) Provide Affidavit of Compliance stating that valves meet requirements of the latest revision of ANSI/AWWA Standard C504 and terms of this specification.
- (c) Testing
 - (i) Provide all factory pressure test reports.
 - (ii) Provide protective coating thickness measurements as specified in ANSI/AWWA Standard C550.
 - (iii) Provide recent coating qualification testing results as specified in ANSI/AWWA Standard C550 Section 5.2.1.

E5.5 Valve Testing and Acceptance

E5.5.1 Factory Tests – to be completed prior to delivery of the valves.

- (a) Hydrostatic Tests
 - (i) All acceptance testing shall be completed in the presence of the Contract Administrator or their appointed representative, unless the Contract Administrator waives this requirement. Provide a minimum of ten (10) Business Days' notice of testing schedule to the Contract Administrator.
 - ◆ The Contract Administrator may attend the inspection remotely through a virtual platform such as Microsoft Teams or Zoom. The vendor, on request of the Contract Administrator, shall arrange for live feed streaming of the testing, and follow instruction of the Contract Administrator with respect to witnessing of testing, viewing test gauges, seats, seals and all other test apparatus. Cameras used shall be capable of high definition (HD) resolution
 - (ii) Testing of valves with actuator mounted, including pressure tests, paint and coatings and electrical tests shall be coordinated to minimize number of plant visits.
 - (iii) If the Contract Administrator waives witnessing of testing as indicated in (a), provide all testing results to the Contract Administrator for review prior to shipping valves.
 - (iv) All valves shall be tested with actuators mounted and adjusted.
 - (v) All valves shall be tested with valves mounted in the vertical operating orientation.

- (vi) Testing shall be completed in accordance with the latest version of AWWA C504.
- (vii) The following information shall be supplied by the Contractor **prior** to delivery of the valves:
 - ◆ A certified copy of the chemical and physical analysis on all materials used in the manufacturer of the valve(s) or certification that the materials used are in strict accordance with this specification.
 - ◆ Copies of the test reports for Performance, Leakage and Hydrostatic Tests performed in accordance with AWWA Standard C504. Included in the report shall be the signature of the official who is responsible for the valve assembly and testing.

(b) Protective Coatings

- (i) Conduct non-destructive film thickness testing, in accordance with NACE SSPC PA 2, on both interior and exterior surfaces and provide comparison to qualification standard, as per AWWA Standard C550.
- (ii) Conduct low voltage holiday testing as specified in AWWA Standard C550 section 5.2.3. Completed coating shall be holiday-free.
- (iii) Provide results of factory testing to the Contract Administrator.

E5.5.2 Field Tests – to be completed by the City of Winnipeg.

(a) Butterfly Valves

- (i) The City of Winnipeg will perform a hydrostatic leak test on all valves within ten (10) business days of delivery at the location specified in D11.1.
- (ii) The test will be performed as follows:
 - ◆ The valve shall be orientated in the vertical position.
 - ◆ A gasketed, steel blind flange with a tapped fitting suitable for introduction of compressed water shall be bolted in place.
 - ◆ The space between the blind flange and valve disc shall be filled through the center port, and air bled off through the top port. Once all air has been expelled, the top test port shall be closed.
 - ◆ A pressure of 1034 kPa shall be applied through the fitting and maintained for 10 minutes. Under this pressure the valve seat shall be perfectly watertight.
 - ◆ The test shall be repeated for the opposite side.
- (iii) The Contractor may attend and witness the hydrostatic leak test to be completed by the City of Winnipeg.

E5.6 Measurement and Payment

- (a) Supply of butterfly valves shall be measured on a unit basis for each valve acceptably supplied. Payment shall include supply and testing of valves, gearboxes, and handwheels and any associated materials required. Payment will be made at the Contract Price for “Supply and Delivery of 600 mm Butterfly Valve with Manual Valve Actuator and Couplings”.
- (b) The following payment schedule will be used;
 - (i) Eighty percent (80%) payment upon delivery of the equipment at the location specified in D11.1; and
 - (ii) Twenty percent (20%) payment upon successful field testing of the equipment by the City of Winnipeg.

E6. MANUAL VALVE ACTUATORS

E6.1 Description

- (a) This Specification shall cover the design and manufacture of manual actuators for butterfly valves to be supplied under this Contract. This Specification is supplementary to and shall be read together with the latest revision of AWWA Standard C504, "Rubber-Seated Butterfly Valves".

E6.2 General Design Requirements

- (a) Quarter turn, manual geared actuators shall be of worm gear drive type designed for one person operation and for a maximum pull on the handwheel rim, at maximum torque conditions of not more than 356 Newtons (80 pounds) on the handwheel.
- (b) All manual actuators to be supplied under this Contract shall be designed and manufactured by a company having at least five (5) years prior experience in manufacturing these types of products in the size and to the pressure ratings as those specified herein

E6.3 Gearing and Enclosure

- (a) Actuators shall be manual geared with a ball bearing mounted worm gear drive, machine cut gear teeth and be totally enclosed in a sealed housing sufficient to permit normal operation even when totally submerged in water. Gear lubricant shall be of the bulk grease type; synthetic lubricants will not be accepted.
- (b) Number of actuators turn to open or close the valve shall be kept to as few as possible to avoid over torquing and damage to the actuator.
- (c) Submersible rating shall be adequate for 7.5 metres water submergence for forty-eight hours.
- (d) Accessible parts of the actuator requiring lubrication shall be provided with button-head alemite grease fittings.
- (e) Valve will be mounted with shaft in vertical position. Refer to Appendix A for general configuration of existing valves and proposed installation.
- (f) A bevel gear shall be provided to orientate handwheel and operating nut in the horizontal position.
- (g) Final orientation of the gearbox on the valve will be provided during Shop Drawing review process.

E6.4 Input Limit Stops

- (a) Adjustable, external stop-limiting devices shall be provided on the actuators to prevent over- travel of the valve disc in the open and closed position.
- (b) Under circumstances where spur gear attachments are installed on the input side of the actuator to facilitate the maximum input operating torque of 356 Newtons (80 pounds) on the hand wheel, input limit stops shall be installed on the input side of the spur gear attachment.
- (c) A shear pin or other torque regulating device shall be provided on the actuator or handwheel/operating nut as an extra precaution against actuators being over-torqued.

E6.5 Handwheel

- (a) Each actuator shall be equipped with a 450 mm (min) to 600 mm (max) diameter handwheel fitted with an operating nut secured in position by a lock nut, pin or key. The operating nut shall be 49 millimetres square at the top, 51 millimetres square at the base and 45 millimetres high. The handwheel shall be made of steel, cast iron or aluminum with an arrow, the word "OPEN" cast in relief on the rim and have an easy slide fit onto the mating shaft. Direction of opening shall be counterclockwise.
- (b) The handwheel shall be located sufficiently away from the valve flanges, housings, etc. such that personnel will not hit their knuckles on any of these obstructions when using the handwheel.

E6.6 Valve Position Indicator

- (a) A mechanical, valve position indicator shall be provided and mounted on the outside of each valve actuator. The dial or scale plate shall be 316 stainless steel and shall be clearly graduated and marked. A 316 stainless steel pointer shall be aligned to show the exact position of the valve disc in the valve body. The fastener for the indicator dial shall be made of 316SS stainless steel.
- (b) There shall also be a visible indication on the valve shaft end showing the position of the valve disc in relation to the shaft to ensure proper relation of the disc and indicating mechanism in the event an actuator has to be removed and replaced on a valve.

E6.7 Connection for Extension Shaft

- (a) A 50 mm AWWA operating nut shall be located above the handwheel for connection to an extension shaft.

E6.8 Protective Coatings

- (a) All external ferrous components including adaptor and mounting plates, shall be painted and tested in accordance to Clause E5.3(d) and Clause E5.5.1(b) of this Specification.
- (b) Any touch-up paintwork required during installation shall be undertaken by the Installation Contractor. The touch-up paint shall be of the same colour and specifications used in the above clauses and shall be supplied by the Contractor. The Contractor shall provide a minimum of one (1) litre of paint product for this purpose.

E6.9 Measurement and Payment

- (a) Supply and installation of manual actuators, valve stems, and associated materials will be considered incidental to "Supply and Delivery of 600 mm Butterfly Valve with Manual Valve Actuators and Coupling" and will not be measured for payment. No additional payment will be made.

E7. OPERATION AND MAINTENANCE MANUALS

- E7.1** For each type of equipment, a searchable PDF copy of operation and maintenance manuals (including spare parts lists) shall be submitted to the Contract Administrator for review. Upon acceptance of the operation and maintenance manuals, provide final searchable PDF copy plus three (3) printed versions as specified below.
- E7.2** The City's staff shall be in receipt of the operation and maintenance manuals within thirty (30) calendar days of the valves delivery date. The Contract shall not be considered complete until the operation and maintenance manuals have been completed and submitted to the satisfaction of the Contract Administrator.
- E7.3** All instructions in these manuals shall be in the English language to guide the City in the proper operation and maintenance of the equipment.
- E7.4** Bind contents in a three (3) "D-Ring", hard-covered, plastic-jacketed binder with full cover and spine insert. Organize contents into applicable sections of work, parallel to Specifications breakdown.
- E7.5** Provide all required data in electronic format. Text documents shall be Microsoft Word or Adobe format. Drawings, scanned documents, parts lists, test forms shall be in Adobe format. If possible, documents shall be an original electronic format. Documents that require scanning shall be high quality scans and fully legible.
- E7.6** In addition to information called for in the Specifications, the following shall be included:
 - (a) Title sheet, labeled "Operation and Maintenance Instructions", containing project name and date.
 - (b) List of contents.
 - (c) Reviewed shop drawings of all equipment.

- (d) Certified factory test results.
- (e) Full description of entire mechanical system, operation, and control.
- (f) Names, addresses, and telephone numbers of all major sub-contractors and suppliers.
- (g) Detailed specification and operating and maintenance instructions for all items of equipment provided including a preventative maintenance program.
- (h) An itemized list of spare parts recommended for five years of service, particularly those components failure of which will render the equipment supplied inoperative. Any special tools or other ancillary items necessary for commissioning and/or proper operation and maintenance shall also be listed. These prices shall be available to the City at any time prior to the issuance of the Certificate of Acceptance.
- (i) Part books that illustrate and list all assemblies, sub-assemblies, and components.
- (j) Troubleshooting chart covering the complete controls/electrical power systems, showing description of trouble, probable cause, and suggested remedy.

E7.7 Measurement and Payment

E7.8 Measurement and payment for Operation and Maintenance Manuals will be paid as the lump sum value as listed in Form B: Prices. Payment will not be made until the manuals are approved and accepted by the Contract Administrator.