

PURCHASING DIVISION
CITY OF WORCESTER
MASSACHUSETTS 01608-1895
ROOM 201 - CITY HALL, 455 MAIN ST.
PHONE (508) 799-1220

SEALED BID INVITATION
(Supplies, Material, Equipment, Services)

AN EQUAL OPPORTUNITY AFFIRMATIVE ACTION EMPLOYER

SEALED BID NO. CR-7961-W3

DATE: January 18, 2023

CITY OF WORCESTER
Christopher J. Gagliastro, MCPPO
Purchasing Agent

BUYER: Christopher J. Gagliastro

NOTICE TO BIDDERS
TERMS AND CONDITIONS

All bids are subject to the terms and conditions and specificity herein set forth except where specifically deleted by the City of Worcester in Section No. 6 below.

COMPLETE ORIGINAL COPY (including ALL pages) OF THIS BID MUST BE SUBMITTED IN A SEALED ENVELOPE:

DATE: FEBRUARY 15, 2023 TIME: 10:00 A.M. LOCAL TIME

PLACE: Purchasing Division, Room 201, City Hall, Worcester, Massachusetts

MARK SEALED ENVELOPE **"Sealed Bid No. CR-7961-W3, Insertion Valves & Tapping Services / DPW & P"**

The name and address of the bidder must appear in the upper left hand corner of the envelope. The City of Worcester is not responsible for bids not properly marked.

GENERAL

1. This Bid Invitation covers: Provide all the service, labor, materials and parts necessary and proper to provide/perform insertion valves & tapping services, on an as needed basis, as per the requirements and specifications of the City of Worcester Department of Public Works & Parks for a period of one (1) year from April 1, 2023 through March 31, 2024. This contract may be extended for one additional year at the same pricing, terms and conditions. This option is at the sole discretion of the City and will be determined near the end of the first contract year.
2. A certified check or bid bond made payable to the "City Treasurer, City of Worcester" in the Amount of \$ N/A must accompany this bid.
3. All bids received will be publicly opened and read in the Bid Room at City Hall at date and time shown above.
NO BID WILL BE ACCEPTED AFTER TIME AND DATE SPECIFIED
4. A performance bond in the amount of \$ N/A of the total dollar award is required.
5. A payment bond in the amount of \$ N/A of the total dollar award is required.
6. All terms and conditions are applicable to this proposal except the following section numbers which are hereby deleted from this invitation: all apply
7. **Questions pertaining to this bid must be directed to Christopher J. Gagliastro via e-mail at gagliastroc@worcesterma.gov**

Please go to the closed bids page of our site to obtain bid results. www.worcesterma.gov

8. The following meanings are attached to the defined words when used in this bid form.
 - (a) The word "City" means The City of Worcester, Massachusetts.
 - (b) The word "Bidder" means the person, firm or corporation submitting a bid on these specifications or any part thereof.
 - (c) The word "Contractor" means the person, firm or corporation with whom the contract is made by carrying out the provisions of these specifications and the contract.
 - (d) The words "Firm Price" shall mean a guarantee against price increases during the life of the contract.
9. Any prospective bidder requesting a change in or interpretation of existing specifications of terms and conditions must do so within five (5) days (Saturdays, Sundays and Holidays excluded) BEFORE scheduled bid opening date. All requests are to be in writing to the Purchasing Division (or e-mailed at: gagliastroc@worcesterma.gov). *No changes will be considered or any interpretation issued unless the request is in our hands within five (5) days (Saturdays, Sundays and Holidays excluded) BEFORE scheduled bid opening date.*
10. The contractor will be required to indemnify and save harmless the City of Worcester, for all damages to life and property that may occur due to his negligence or that of his employees, subcontractors, etc., during this contract.
11. The Contract Agreement will be in the form customarily employed by the City of Worcester and is on file in the Purchasing Division at City Hall.
12. Bids which are incomplete, not properly endorsed, or signed, or otherwise contrary to these instructions will be rejected as informal by the Purchasing Agent. **Conditional bids will not be accepted.**
13. The Bidder must certify that no official or employee of the City of Worcester, Massachusetts is pecuniarily interested in this proposal or in the contract which the bidder offers to execute or in expected profits to arise therefrom, unless there has been compliance with provisions of G.L. C. 43 Sec. 27, and that this bid is made in good faith without fraud or collusion or connection with any other person submitting a proposal.
14. As the City of Worcester is exempt from the payment of Federal Excise Taxes and Massachusetts Sales Tax, prices quoted herein are not to include these taxes.
15. All prices are to be firm F.O.B. Destination, City of Worcester, Massachusetts, unless otherwise indicated by the City. **Time reserved for award is ninety days.**
16. In case of error in the extension prices quoted herein, the unit price will govern.
17. It is understood and agreed that should any price reductions occur between the opening of this bid and delivery of any order, the benefit of all such reductions will be extended to the City.
18. The City of Worcester reserves the right to reject any and all bids, wholly or in part, and to make awards in a manner deemed in the best interest of the City.
19. Awards will be made to the bidder quoting the lowest net price in accordance with the specifications.
20. The supplier will be bound by all applicable statutory provisions of law of the Federal Government, the Commonwealth of Massachusetts, the City of Worcester, and the Department of Public Safety of the Commonwealth of Massachusetts.
21. Any bid withdrawn after time and date specified, the bidder shall forfeit deposit on bid as liquidated damages.
22. The contractor will not be permitted to either assign or underlet the contract, not assign either legally or equitably any monies hereunder, or its claim thereto without the previous written consent of the City Treasurer and of the Purchasing Agent of the City of Worcester.
23. If this bid shall be accepted by the City, and the bidder shall fail to contract as aforesaid and to give a bond in the amount as specified in Section 4, within ten (10) days, (not including Sunday or a legal Holiday) from the date of the mailing of a notice from the City to him/her, according to the address given herewith, that the contract is ready for signature, the City may by option determine that the bidder has abandoned the contract and thereupon the proposal and

acceptance shall be null and void and the bid security accompanying this proposal shall become the property of the City as liquidated damages.

24. When quoting, the bidder shall submit a signed copy of this bid form, and if bid accepted by the City shall constitute part of the contract of purchase. Do not detach any part of this form 30B (Sealed Bid Goods & Services) when submitting a bid. Bidder must sign and return complete form 30B (Sealed Bid Goods & Services).
25. If in the judgment of the Purchasing Agent any property is needlessly damaged by an act or omission of the contractor or his/her employees, servants or agent, the amount of such damages shall be determined by the Purchasing Agent of the City of Worcester and such amount shall be deducted from any money due the contractor or may be recovered from said contractor in actions at law.
26. It is agreed that deliveries and/or completion are subject to strikes, lockouts, accidents and/or Acts of God.

INSURANCE AND WORKER'S COMPENSATION

27. COMMERCIAL GENERAL LIABILITY INSURANCE: Contractor to supply the City of Worcester with certificates of insurance evidencing general liability coverage of not less than \$ 1,000,000.00 per occurrence / \$ 2,000,000.00 aggregate.
28. AUTOMOBILE LIABILITY INSURANCE: Contractor to supply the City of Worcester with certificates of insurance evidencing automobile liability coverage, bodily injury and property damage combined single limit, of \$ 1,000,000.00 (all owned, hired, and non-owned autos).
29. COMPENSATION INSURANCE: The contractor shall furnish the City of Worcester with certificates showing that all of his/her employees who shall be connected with this work are protected under Massachusetts' statutory worker's compensation insurance policies.
30. The Contractor shall carry public liability insurance with an insurance company satisfactory to the City so as to save the City harmless from any and all claims for damages arising out of bodily injury to or death of any person or persons, and for all claims for damages arising out of injury to or destruction of property caused by accident resulting from the use of implements, equipment or labor used in the performance of the contractor or from any neglect, default or omission, or want of proper care, or misconduct on the part of the Contractor or for anyone of his employ during the execution of the contract.
31. Prior to starting on this contract, the Contractor shall deposit with the Contracting Officer certificates from the insurer to the effect that the insurance policies required in the above paragraphs have been issued to the Contractor. The certificates must be on a form satisfactory to the Purchasing Agent.
32. Except as may otherwise be stated herein, the Contractor shall also carry bodily injury and property damage insurance in an amount not less than those set forth above covering the operation of all motor powered vehicles owned or operated by the Contractor and engaged in this contract.

DISCOUNT

33. Prompt pay discounts will be considered when determining the low bid except when discounts are for a period of less than 30 days. In this event discounts will not be taken into consideration when determining low bid.
34. Time, in connection with discount offered, will be computed from date of completion and/or delivery and acceptance at destination, or from date correct bill or voucher properly certified by the contract is received if the latter date is later than the date of completion and acceptance and/or delivery and acceptance.

GUARANTEE

35. The bidder to who a contract is awarded guarantees to the City of Worcester all equipment, materials and or workmanship for a period of one (1) year after final inspection and acceptance and shall replace promptly any defective equipment, materials and/or workmanship required without additional cost to the City.

DELIVERIES AND COMPLETION

36. It is understood and agreed that in the event of failure on the part of the bidder to indicate date of delivery and/or completion, delivery and/or completion will be made within twelve (12) days from date of notification. Should the successful bidder fail to make delivery or complete contract within time specified, the City reserves the right to make the purchase on such orders at the open market and charge any excess over contract price to the account of the successful bidder, who shall pay the same.
37. The contractor shall familiarize himself with the location and facilities for storage.
38. The City through its Purchasing Division reserves the right to divert delivery from one location to another, and to allow for any change in operating conditions or for any other cause not now foreseen and to proportion deliveries according to available storage facilities.

SAMPLING AND ANALYSIS

39. Each bidder must state the commercial name of the product quoted, name, and address of operator or agent from whom the product will be purchased and in addition shall furnish an analysis of the product, date of analysis, by whom made and their address.
40. Samples of the product to be delivered may be taken by a representative of the City, either prior to delivery or while it is being delivered in the storage facilities at destination, or will be taken from the storage facilities to which the product has been delivered as determined from time to time by the Purchasing Agent. Bidder agrees to furnish the necessary manual labor, without additional cost required to assemble the physical samples, which is to be performed under the direction of the City representative.
41. The representative of the City taking the samples shall be given the opportunity, while sampling, to affix his or her signature to the delivery slip each item represented in his/her sample.
42. Any product after the sampling and analysis, not found meeting the requirements of the contract shall be sufficient cause for the cancellation of the contract at the option of the Purchasing Agent.
43. If any product is found that does not meet the analysis submitted by the bidder in his/her proposal, the Purchasing Agent may, at his or her option, exercise his/her right to reject the product and require that all or any part thereof shall be removed promptly by and at the expense of the contractor and replace it forthwith with a product satisfactory to the Purchasing Agent, or to retain the product and compensate the contractor in an amount as determined by the Purchasing Agent and the City Manager.
44. It is understood and agreed that it shall be a material breach of any contract resulting from this bid for the Contractor to engage in any practice which shall violate any provisions of Massachusetts General Laws, Chapter 151B, relative to discrimination in hiring, discharge, compensation, or terms, conditions or privileges of employment because of race, color, religious creed, national origin, sex, age or ancestry.
45. The undersigned as bidder, declares that the only parties interested in this proposal as principals are named herein; that this proposal is made without collusion with any other person, firm or corporation, that no officer or agent of the City is directly or indirectly interested in this bid; and he/she proposes and agrees that if this proposal is accepted he/she will contract with the City in accordance with the specifications, also the terms and conditions as spelled out in this bid form.
46. No Person, including but not limited to corporations, partnerships, limited partnerships or limited liability corporations, shall be eligible to receive a contract under this invitation to bid and/or requires for proposal if that person has been convicted of any felony offense involving the distribution of controlled substances as that term is defined under Chapter 94C of the General Laws and, for contracts to be performed for on-site services to the Worcester Public Schools, if that person or any person to be employed by that person in the performance of such on-site services has been convicted of a "sex offense" or a "sex offense involving a child" or a "sexually violent offense" or would meet the definition of "sexually violent predator" as those terms are defined in Section 178C of the General Laws and who must register with the sex offender registry board.

47. The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ for work or services relating to this contract any unfit person or anyone not skilled in the task assigned to him. In light of the fact that the performance of this contract requires the Contractor and its employees to have significant interaction with the public, the Contractor shall require all employees who may perform services under this contract to conduct themselves in a courteous, professional manner. If the Contractor is notified by the Contract Officer that any person engaged upon the work is incompetent, unfaithful, disorderly, discourteous, or otherwise unsatisfactory, then such person shall be discharged from providing services or work pursuant to this contract. Without limiting the generality of the foregoing, intimidation, threats and/or violent conduct of any kind or nature directed to members of the public are absolutely prohibited. Failure to comply with this requirement shall be grounds for termination of the contract.
48. The Contractor's performance may be evaluated on an ongoing basis including but not limited to consideration of complaints received from members of the public. In order to facilitate this evaluation, the Contractor shall provide the City with documents and records upon request. The Contractor shall further obtain from its employees authorization that appropriate City personnel may obtain all available criminal offender information ("CORI") from the Criminal History Systems Board. A high number of unresolved complaints, any number of complaints that are particularly severe, or employment of individuals who have been convicted of assault or other violent crimes shall be grounds for the early termination or non-renewal of the contract by the City.
49. The procurement officer shall award the contract to the lowest responsible and responsive bidder. The term "responsible bidder" means "a person who has the capability to perform fully the contract requirements, and the integrity and reliability which assures good faith performance." Consistent with its duty to maintain public order and promote public safety, the City has determined that this contract is of a type and nature so as to be particularly sensitive due, at least in part, to the contractor's inherent access and dealings with the members of the general public. Therefore, the City has concluded that additional scrutiny is justified as it determines whether a particular bidder is responsible, having the integrity and reliability to properly perform the requested services. This may entail consideration of the contractor's system of oversight, training and supervision of its employees, including but not limited to its requirement of a high standard of customer service and courtesy in its dealings with the public. The bidder's care and diligence in hiring and assigning its employees will also be considered. In making its determination, the City reserves the right to examine any and all information at its disposal, including but not limited to prior City contracts, the experiences and information obtained from current and former customers (whether identified by the bidder as references or not), as well as other sources available to the City, including but not limited to court documents, newspapers, financial reports (such as DUNS), and certain police data and reports.
50. The Contractor, acting through its owner(s) or any of its employees, or its agents or sub-contractors and any of their employees, shall not engage in any behavior, whether during the course of its duties under this contract or at any other time, that is illegal, criminal or otherwise shocking or offensive to the general public. The determination whether any particular behavior is illegal, criminal or shocking to the general public shall rest in the sound judgment of the Contracting Officer or the City Manager. In making such determination, the Contracting Officer or the City Manager shall apply the general standards of the community. No criminal conviction or formal charges shall be required to make such determination. Such behavior need be something more than trivial and something which would cause the general public to have concerns either about the safety of individuals coming in contact with the Contractor or about the character and integrity of the individuals with which the City does business. Violation of this provision shall be grounds for immediate and unilateral termination of this contract by the City upon five days' notice as otherwise provided herein

GIVE FULL NAMES AND RESIDENCES OF ALL PERSONS INTERESTED IN THE FOREGOING PROPOSAL.

(NOTICE: Give first and last name in full; in case of corporations, give corporate name and names of President, Treasurer, and Manager; and in case of firms give names of the individual members)

Name Address Zip Code

KINDLY FURNISH THE FOLLOWING INFORMATION REGARDING BIDDER:

(1) If a Proprietorship

Name of Owner _____

Business Address _____

Zip Code _____ Telephone No. _____

Home Address _____

Zip Code _____ Telephone No. _____

(2) If a Partnership
Full names and addresses of all partners

Name Address Zip Code

Business Address _____ Zip Code _____

Tel. No. _____

(3) If a Corporation

Full Legal Name _____

State of Incorporation _____ Qualified in Massachusetts ? Yes _____ No _____

Principal Place of Business _____

Street _____ P.O. Box _____

City/Town _____ State _____ Zip _____

Telephone No. _____

Place of Business in Massachusetts _____

Street _____ P.O. Box _____

City/Town _____ State _____ Zip _____

Telephone No. _____

GIVE THE FOLLOWING INFORMATION REGARDING SURETY COMPANY

Full Legal Name of Surety Company _____

State of Incorporation _____ Admitted in Massachusetts ? Yes _____ No _____

Principal Place of Business _____

Street _____ P.O. Box _____

City/Town _____ State _____ Zip _____

Place of Business in Massachusetts _____

Street _____ P.O. Box _____

City/Town _____ State _____ Zip _____

Telephone No. _____

NOTE

The Office of the Attorney General, Washington, D.C. requires the following information on all bid proposals amounting to \$1,000.00 or more.

F.I.D. Number of bidder _____

This number is regularly used by companies when filing their "EMPLOYER'S FEDERAL TAX RETURN, U.S." Treasury Department Form 941.

AUTHORIZED SIGNATURE OF BIDDER _____ TITLE _____
PLEASE SIGN

DATE _____ BID SECURITY \$ _____

The name of Customer Service Representative and the Contract Administrator responsible for servicing this account in the event of contract award are:

NAME (PLEASE PRINT) *Customer Service Rep.* _____ TEL. NO. _____

NAME (PLEASE PRINT) *Contract Administrator* _____ TEL. NO. _____

FAX NUMBER _____ FAX # _____

E-MAIL (Customer Service Rep.): _____

E-MAIL (Contract Administrator): _____

UNDER MASSACHUSETTS GENERAL LAWS, CHAPTER 30B: SECTION 10, THE FOLLOWING CERTIFICATION MUST BE PROVIDED:

Section 10. A person submitting a bid or a proposal for the procurement or disposal of supplies, or services to any governmental body shall certify in writing, on the bid or proposal, as follows:

" The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals."

(Please Print) _____

Name of Person Signing Bid

Signature of Person Signing Bid

Company

No award will be made without vendor certification of the above.

Bidders must state and identify the product offered, such as manufacturer's name, trade name, brand name and quality next to each item. WE MUST KNOW WHAT HAS BEEN OFFERED.

The quantities shown herein are estimated only and the Contractor will be required to furnish all quantities ordered by the City during the period of the contract.

YES X NO _____

Delivery to be made to: Various City locations as required

This Bid includes addenda numbered _____

NO PRICE ADJUSTMENTS ALLOWED. PRICES QUOTED ARE FINAL. CHECK BEFORE SIGNING!

BIDDER TO COMPLETE ITEMS BELOW

Item No.	Estimated Quantity	Description			Unit Price	Total Amount
		Provide all service, labor, materials and parts necessary & proper to provide/perform insertion valves & tapping services as per City requirements and specifications.				See Unit Pricing Pages
		Award to be made by section. Bidders may bid on Section A and/or Section B.				
		Questions pertaining to this bid may be directed via email to gagliastroc@worcesterma.gov				

TERMS, PROMPT PAY DISCOUNT _____% 30 DAYS, NET 45 DAYS.

DELIVERY AND/OR COMPLETION TO BE MADE WITHIN as required by the City DAYS FROM DATE OF NOTIFICATION BY THE CITY.

NAME OF BIDDER _____

**CITY OF WORCESTER
DEPARTMENT OF PUBLIC WORKS & PARKS
WATER OPERATIONS**

**PROPOSAL PAGES AND SPECIFICATIONS
FOR
INSERTION VALVES
AND TAPPING SERVICES**

BID # CR -7961-W3



**PROPOSAL
BID ITEMS**

**SECTION A - Insertion Valves
BID # CR -7961-W3**

The Bidder must fill in these **Unit Prices**. Bidder should also carry out all extensions and fill in "Computed Totals." These totals shall be added to produce a "Total Bid Price"

(In case of error or discrepancies, UNIT PRICES govern, and written words take precedence over figures.)

ITEM NUMBER AND DESCRIPTION	ESTIMATE OF QUANTITIES	COMPUTED ITEM TOTALS
Item 4" INSERTION VALVE 1-1		
<div><div>Dollars.</div><div>(\$ _____) per Each.</div></div>	1	\$ _____
Item 6" INSERTION VALVE 1-2		
<div><div>Dollars.</div><div>(\$ _____) per Each.</div></div>	4	\$ _____
Item 8" INSERTION VALVE 1-3		
<div><div>Dollars.</div><div>(\$ _____) per Each</div></div>	4	\$ _____
Item 12" INSERTION VALVE 1-4		
<div><div>Dollars.</div><div>(\$ _____) per Each.</div></div>	2	\$ _____

**PROPOSAL
BID ITEMS**

**SECTION A - Insertion Valves
BID # CR-7971-W3**

ITEM NUMBER AND DESCRIPTION	ESTIMATE OF QUANTITIES	COMPUTED ITEM TOTALS
Item 16" INSERTION VALVE 1-5		
<div><div></div><div>Dollars.</div><div>(\$) per Each.</div></div>	1	\$ <div></div>
Item 24" INSERTION VALVE 1-6		
<div><div></div><div>Dollars.</div><div>(\$) per Each.</div></div>	1	\$ <div></div>
Item Hourly Fee Fully Equipped Valve Truck 1-7		
<div><div></div><div>Dollars.</div><div>(\$) per Hour.</div></div>	100	\$ <div></div>

TOTAL BID PRICE FOR Section A: INSERTION VALVES

DOLLARS
(AMOUNT IN WORDS)

AND CENTS

\$
(AMOUNT IN FIGURES)

**PROPOSAL
BID ITEMS**

**SECTION B - Tapping Services
BID # CR -7961-W3**

ITEM NUMBER AND DESCRIPTION	ESTIMATE OF QUANTITIES	COMPUTED ITEM TOTALS
-----------------------------------	------------------------------	----------------------------

Item 1" Direct Wet Tap
2-1

Dollars.	4	\$
<hr/>		
(\$) per Each.		

Item 1" Saddle Tap
2-2

Dollars.	2	\$
<hr/>		
(\$) per Each.		

Item 2" Saddle Tap (on water mains up to 14" in size)
2-3

Dollars	2	\$
<hr/>		
(\$) per Each.		

Item 2" Direct Tap (on water mains 16" or greater in size)
2-4

Dollars.	1	\$
<hr/>		
(\$) per Each.		

Item 8"X6" Tapping Sleeve & Valve
2-5

Dollars.	4	\$
<hr/>		
(\$) per Each.		

Item 12"X6" Tapping Sleeve & Valve
2-6

Dollars.	2	\$
<hr/>		
(\$) per Each.		

**PROPOSAL
BID ITEMS**

**SECTION B - Tapping Services
BID # CR -7961-W3**

ITEM NUMBER AND DESCRIPTION	ESTIMATE OF QUANTITIES	COMPUTED ITEM TOTALS
-----------------------------------	------------------------------	----------------------------

Item 12"X8" Tapping Sleeve & Valve
2-7

_____ Dollars.	2	\$ _____
(\$ _____) per Each.		

Item Hourly fee for 2 man crew for
2-8 Tapping services or other work

_____ Dollars.	30	\$ _____
(\$ _____) per Hour.		

TOTAL BID PRICE FOR Section B: TAPS

_____ DOLLARS
(AMOUNT IN WORDS)

AND _____ CENTS

\$ _____
(AMOUNT IN FIGURES)

This Proposal is based on provisions of the following addenda:

No. _____ No. _____ No. _____ No

SPECIFICATIONS
FOR
Insertion Valves & Taps
Bid # CR –7961-W3

1.1 Scope of Work

It the intention of the City to have available for emergency situations, the services of a Contractor capable of performing live valve insertions or live taps in order to deal with unforeseen situations as they may arise. This contract is divided into two sections. Bidders may submit on either or both sections. Each section shall be awarded separately based on the pricing submitted within that section, provided the bidder meets experience criteria. Submitting a low bid in one section in no way influences or guarantees consideration or award on the other section.

Section A - Insertion Valves

The Contractor shall provide all labor, materials and equipment necessary to promptly insert valves into existing live water mains sizes 6” through 24” as needed for the City of Worcester without the need for any additional shutdown or valve work. Additionally, there will be an hourly bid price for the services of a fully equipped valve truck including 2 personnel. While not all work shall be performed under emergency situations. **Any bidder shall be capable of responding to, performing and completing work within a 12 hour period on all size valve insertions or provide valve operating services via the truck, in order to deal with emergency situations.**

SECTION B – Tapping Services

The Contractor shall be requested to perform 1”, 2”, 6” and 8” live main tapping services on 6”, 8”, 12” or other sized cast or ductile iron mains. All work shall be performed in the field at locations to be designated as the need arises unless otherwise specified. Additionally, the Contractor shall supply an hourly cost for a two man crew and truck to perform chlorinating services and/or hydrostatic pressure testing services as needed by the City at locations other than those done for tapping services. Additionally, this crew would be available for tapping services needed on other non-standard size locations if the need arises. Should this be needed, parts would be paid at cost with the crew paid at the hourly fee. **Standard size taps, chlorinating services or pressure testing may be required under emergency situations with minimal notice.**

RESPONSIBILITIES

The Contractor shall supply all labor, materials, equipment and tools needed to complete the work as specified herein.

All materials furnished by and construction methods used by the Contractor shall conform to the latest revision of the City of Worcester, Department of Public Works and Parks, Standard Specifications and Details.

The City shall supply all necessary permits, labor, materials and equipment needed to excavate and prepare the location for the insertion or tap and to backfill and pave the excavation.

1.2 Duration Of Contract

This contract is expected to last one year from April 1, 2023 through March 31, 2024. The option exists to extend the work for an additional calendar year at bid prices. This option is at the sole discretion of the City, with no guaranty of extension.

1.3 Bid Quantities

Bid quantities shown in the contract bid document are estimates of yearly work used for bidding purposes only. The actual number of valves or taps to be performed may vary depending on the availability of funding or needs of the City. No guarantees are made by the City as to the quantity of work that will be performed under this contract.

1.4 Materials

Specifications for Valve Insertion System

All insertion valves shall be equal to the Easy Valve (EZ) 2 as manufactured by Advanced Valve Technologies. These are currently the only valves in the size ranges requested available on short notice for emergency situations.

Equipment for Valve Insertion Pipe Sizes:
4" (100mm) through 12" (300MM)

1.0 **SCOPE**

This specification covers the furnishing, complete Valve insertion system.

NOTE: The following specifications also apply to sizes 16" and 24"

1.1 **Equipment Capability:**

The equipment shall be capable of installation, without shutdown, at one location, of pipe sizes, in the range of 4" to 12" diameters. The capabilities specified herein are minimum mandatory requirements that must be met by any Insertion Equipment or Insertion Valve offered.

1.2 **Valve Insertion Equipment**

Quantity Description

1 each End Mill Machine (4" - 12" capability)
1 each Drive Motor: hydraulic, pneumatic, or electric
1 each End Mill Cutter
1 each Central Drill Hexagonal Screw Drive
1 each Replaceable Teeth
1 each Rotating Feed Apparatus (4")
2 each End Rings (4")
1 each Rotating Feed Apparatus (6")
2 each End Rings (6")
1 each Rotating Feed Apparatus (8")
2 each End Rings (8")
1 each Rotating Feed Apparatus (10")

- 2 each End Rings (10")
- 1 each Rotating Feed Apparatus (12")
- 2 each End Rings (12")
- 1 each Drive Chain
- 1 each Hand Crank
- 1 each Export Hose
- 1 each Debris Collection Bag
- 1 each Misc. Tool Kit

2.0 Valve for Use with Specified Equipment

Unless specified by purchaser, valves are not a bid item. However, the specified equipment shall be compatible with the valve below.

2.1.1 The Valve shall be capable of pressure-tight assembly to exterior of the pipe in which flow is to be stopped at a working pressure not to exceed 250 PSI.

2.1.2 The Valve assembly shall be designed as to be easily rotated 120 degrees, perpendicular across the top of the pipe, while riding on two (2) separate rubber gaskets, constructed of (EPDM or SBR), by using a perpendicular rotary feed mechanism, driven by a chain.

2.1.3 The Valve shall be constructed of a two (2) piece, Ductile Iron casting (Top & bottom), to be bolted together, using Ductile Iron bolts with zinc alloy anodes (Corrosion protection), manufactured to the ductile iron specification of ASTM 536 65-45-12.

2.1.4 The EZ Valve shall meet or exceed AWWA Specification C509 for Resilient Seal Valves suitable for Potable water service.

2.1.5 The Ductile Iron Gate shall have a resilient rubber seal 360 degrees around the gate and is expandable to the ID (Inside Diameter) of the pipe.

2.1.6 The valve stem shall be made of Stainless Steel 1 CR 12, with a tensile strength of 60,000psi.

2.1.7 The valve body shall have an epoxy/ E Coating of no less than 8 mills.

2.1.8 The Valve shall use Stainless Steel fasteners joining the Valve Bonnet to the Valve top casting, unless otherwise noted in assembly drawings.

2.1.9 The final Restraint Fasteners (360 Degree) around the Valve Casting shall be constructed of Stainless Steel 304.

2.1.10 Design of valve shall be such that the valve shall have a satisfactory seal against the pipe exteriors in the following ranges, by using multiple gaskets if necessary:

<u>Pipe Size</u>	<u>Diametrical Range</u>
4"	4.40-4.60
4"	4.80 - 5.60
6"	6.40 - 6.80
6"	6.70 - 7.60
8"	8.35 - 8.75
8"	8.95 - 9.70
10"	10.65-10.85
10"	11.10-11.50
10"	11.77-12.12
12"	12.65-12.85
12"	13.20-13.50
12"	14.03-14.38
16"	17.40-17.80

3.0 Equipment

The size and weights of each (4" - 12") Valve insertion unit shall be, once lowered into an excavation hole, two (2) employees can mount the equipment onto the valve. The Insertion Equipment is designed as to be easily transported in the trunk of a midsized car.

- 3.1.1** This equipment shall consist of tapping unit, and a detachable rotary chain drive feed.
- 3.1.2** The End Mill cutting system shall have a positive "Stop" Mechanism located on the opposite end of the Valve casting, from the rotary chain feed drive, to prevent under or over rotation of the 120 Degree slotting operation.
- 3.1.3** The End Mill cutting unit shall be able to cut size (4" - 12") pipe with one (1) size end mill cutter 45MM (4", 6", & 8") and one (1) size end mill cutter 60MM (10" - 12")
- 3.1.4** Drive motor shall be electric, hydraulic, or pneumatic (specified by purchaser) interchangeable and capable of installation and removable from tapping machine without any modification.
- 3.1.5** The End Mill cutter shall be manually advanced laterally by the work person to prevent cutter damage due to inclusions (hard spots, etc.) in the pipe. The cutter teeth shall be able to be field replaceable if necessary.
- 3.1.6** The End Mill process shall constitute a rotary End Mill that through the rotation of the Valve casting cuts a slot, 120 degrees across the top of the pipe only. This allows for the insertion of the Gate mechanism.
- 3.1.7** The End Mill operation shall take place through a 2" Temporary Valve.
- 3.1.8** During the End Mill operation, the "Chips" created by the End Mill Cutter shall be flushed outside of the pipe, through the Chip Flushing Hose attached to the Valve body port located 180 degrees from the End Mill.

4.0 Equivalent Equipment and Materials

Whenever a material or article is specified or described by using the name of proprietary product or the name of a particular manufacturer or vendor, the specific item mentioned shall be understood as establishing the type, function, and quality desired.

5.0 Operating And Maintenance Materials

The two (2) complete sets of operation and maintenance shall be furnished for system.

6.0 Delivery

All equipment shall be bid F.O.B. Worcester, MA. When delivered the equipment shall be complete as bid and ready to operate.

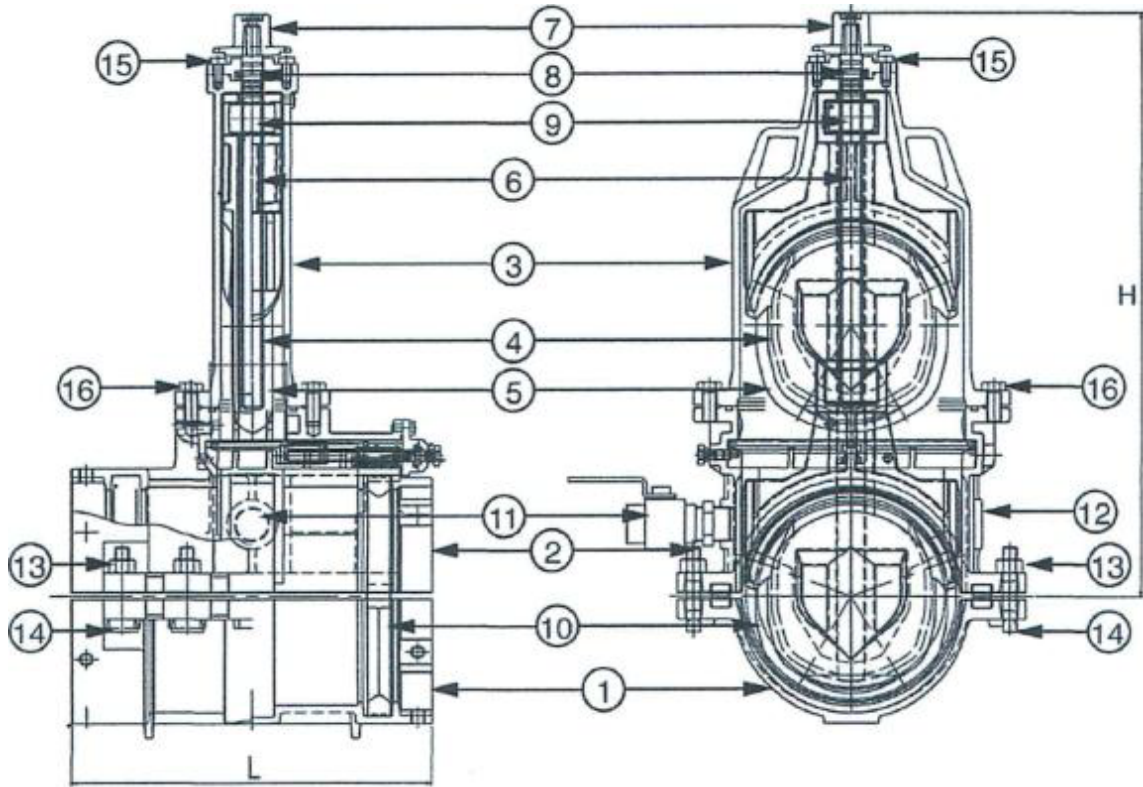
7.0 Demonstration

A qualified representative of the manufacturer shall provide eight (8) hours of demonstration and training in the use of equipment specified. The demonstration and training shall be conducted under actual job conditions. All cost for this training shall be included in the prices bid for the equipment.

8.0 Warranty

A One (1) Year warranty shall cover parts and labor for Equipment and Valves (Excluding Perishable Tooling and O-Rings) barring misuse or lack of routine maintenance.

VALVE CUT SHEET WITH SIZING



Item No.	Description	Material
	Bottom Half of Body	DUCTILE IRON
	Upper Half of Body	DUCTILE IRON
	Bonnet Body	DUCTILE IRON
	Gate	DUCTILE IRON
	Gate Rubber	EPDM
	Stem (Feed Screw)	STAINLESS STEEL
	Wrench Nut	DUCTILE IRON
	Set Collar	BRASS
	Stem Nut	BRONZE
10	Gasket	EPDM
11	Chip Flushing Port	
12	EM Cutting Port	
13	Sacrificial Anode Bolts/ Nuts	DUCTILE IRON
IRON		Zinc
14	Sacrificial Anodes	
15	O-Rings	BUNA-N
16	Bonnet Bolts	STAINLESS STEEL

Rated at 250 PSI

Meets AWWA C-509

SIZE	HEIGHT (H)	LENGTH (L)
4"	13"	17 3/4"
6"	17"	17 3/4"
8"	21"	17 3/4"
10"	25"	19 3/4"
12"	30"	19 3/4"

**EZ Valve Specifications for Nominal Sizes
4^W-24"**

- 1.) **Bottom Half Body:** DI. ASTM A536 65-45-12 (AWWA C-509-01)
- 2.) **Upper Half Body:** DI. ASTM A536 65-45-12 (AWWA C-509-01)
- 3.) **Bonnet:** DI. ASTM A536 65-45-12 (AWWA C-509-01)
- 4.) **Gate:** DI. ASTM A536 65-45-12 (AWWA C-509-01)
- 5.) **Gate Rubber Coated:** ASTM 10429 (AWWA C-509-01)
- 6.) **Stem:** Stainless Steel 1 CR 12 (AWWA C-509-01)
- 7.) **Gasket:** EPDM (AWWA C-509-01)
- 8.) **Set Collar:** Brass ASTM C519100 (AWWA C-509-01)
- 9.) **Stem Nut:** Bronze ASTM C90300 (AWWA C-509-01)
- 10.) **Wrench Nut:** DI. ASTM A536 65-45-12 (AWWA C-509-01)

4.0 Fully Equipped Valve Truck

An hourly fee shall be paid for the use of a two man crew and a valve truck fully equipped for operating valves or vacuuming and cleaning valve boxes. The valve-operating machine shall be a “Wachs”, or approved equal. It shall be computer controlled and have torque-limiting capabilities that allow incremental settings from five (5) to twenty five hundred (2500) foot-pounds of torque. Most importantly, this machine shall be solely and completely dependent upon the operator for continuous control of direction and torque, otherwise known as “non-locking” or “torque limiter” capability. Additionally, the truck must be equipped with an array of valve wrenches to be operated by hand when the need arises.

5.0 Tapping sleeves

Tapping sleeves shall be cast or ductile iron full sleeve type capable of containing pressure within the full volume of the sleeve. Sleeves shall be mechanical joint type for use with Class AB or CD cast iron pipe or ductile iron pipe. All tapping sleeves shall conform to the provisions set forth in Items 302 and 303 of these specifications. All tapping sleeves shall have a threaded plug tapped into the body of the tapping sleeve for pressure testing purposes.

Wrap around stainless steel sleeves shall not be allowed.

As an alternate to cast or ductile iron, rigid stainless steel tapping sleeves with removable bolts may be used. Sleeves shall be all stainless steel 304 (18-8) construction with a full gasket giving 360 degree pipe coverage. Sleeves may have stainless steel flange outlet to be used with standard tapping gate or mechanical joint (MJ) outlet suitable for use with standard (MJ) X (MJ) resilient wedge gate valves per **AWWA C509**.

6.0 Tapping Valves

1. All valves **12 inches and less** and all tapping valves shall be gate type resilient-seated style. Both types shall meet or exceed the minimum materials and performance requirements of the latest revisions of the applicable AWWA Standards, C515 for resilient-seated. Both ends shall be mechanical joint in accordance with the latest revisions of AWWA C-111-00 except tapping valves where the outlet end will be mechanical joint.

Design Pressure: The design of the water gate valves as described below shall be based on an internal hydrostatic pressure (working water pressure) of 200 psi.

Resilient-Seated Disc Wedge: The resilient-seated disc wedge shall be fully (100%) encapsulated in rubber. The rubber shall be securely bonded to the wedge, including the part which houses the stem nut. The stem hole through the wedge shall be full opening top to bottom and shall also be covered with rubber. Disc wedges that are not 100% fully encapsulated shall not be acceptable.

Bolting: All resilient-seated gate bonnet bolts, seal or gland plate bolts, stuffing box bolts or any other bolts with threads exposed to the environment shall be type either 304 stainless steel, everdur bronze, cadmium-plated (ASTM B766), or zinc-coated (ASTM A153 or ASTM B633).

Tapping Valves: All tapping valves shall be furnished with the tapping flange having a raised face or lip designed to engage the corresponding recess in the tapping sleeve flange in accordance with **MSS-SP60**. Tapping valves without the raised face shall not be allowed because they do not assure the proper alignment required to prevent damage by a misaligned shell cutter. The interior of the waterway in the valve body shall be a full opening capable of passing a full-sized shell cutter equal to the nominal diameter of the valve.

7.0 SERVICE TAPS

MATERIALS:

All brass fittings shall conform to AWWA C800 as latest revised with a maximum lead content of 0.25 % by weight and shall be manufactured by Ford Meter Box Company or equal unless otherwise approved by the Director. The design of all brass fittings shall be based on a minimum internal hydrostatic pressure (working water pressure) of 200 psi

CORPORATIONS:

For new taps one (1) inch FB1000 cc (AWWA) thread x pack joint (compression)

For new taps 1-1/4 inch to 2 inch FB1000 with Tee Head Adapter cc (AWWA) thread x pack joint (compression)

For replacement of existing corporations one (1) inch or less FB1100 IP thread x pack joint (compression)

For replacement of existing corporations 1- 1/4 inch to 2 inch FB1100 with Tee Head Adapter IP thread x pack joint (compression)

SERVICE SADDLES:

All service saddles shall conform to the following:

- a. All service saddles shall have cc (AWWA) threaded outlet.
- b. All service saddles for use on cast or ductile iron water mains shall be a double strap (bale) equal to or better than the Ford F202, Mueller DR2A, PowerSeal 3413 or Smith-Blair 313.
- c. All service saddles for PVC mains or cast or ductile iron mains in know or suspected corrosive soils shall be a stainless steel double strap (band) equal to or better than Ford FSD202, Mueller DR2S, PowerSeal 3417 or Smith-Blair 317.

METHODS:

All one (1) inch taps on cast or ductile iron mains between 2-inch and 4-inch in size shall be made with cc (AWWA) thread corporations using a service saddle. All taps on PVC water mains shall be made using a service saddle. All 1-1/2 inch and 2 inch taps made on mains less than 16 inches in diameter shall be made with cc (AWWA) thread corporations using a service saddle. All 1-1/2 inch and 2 inch taps made on mains 16 inches or larger shall be made by direct means using cc (AWWA) thread corporations.

8.0**2 - MAN CREW**

The purpose of this crew is to perform, at an hourly rate, any water main disinfection, flushing or pressure testing services that may be needed by the City in emergency or other situations where City crews would be unavailable. Additionally, this hourly rate shall apply to other tapping services for which there is not a bid item, with materials to be paid at cost.