


ACCEPTANCE

The Contract/Bid attached hereto and by this reference incorporated herein and made a part hereof is hereby accepted by the order of the Village of Buffalo Grove ("Municipality") this 22<sup>nd</sup> day of August 2023.

This Acceptance, together with the Contract/Bid attached hereto, constitutes the entire and only agreement between the parties relating to the Product and the compensation therefor and supersedes and merges any other prior or contemporaneous discussions, agreements, or understandings, whether written or oral, and shall prevail over any contradictory or inconsistent terms or conditions contained in any purchase order, acceptance, acknowledgement, invoice, or other standard form used by the parties in the performance of the Contract/Bid. Any such contradictory or inconsistent terms or conditions shall be deemed objected to by the Municipality without further notice of objection and shall be of no effect nor in any circumstances binding upon the Municipality unless accepted by the Municipality in a written document plainly labeled "Amendment to Agreement." Acceptance or rejection by the Municipality of any such contradictory or inconsistent terms or conditions shall not constitute acceptance of any other contradictory or inconsistent terms or conditions.

VILLAGE OF BUFFALO GROVE

By:  \_\_\_\_\_  
Village Manager

Finance Department  
Fifty Raupp Blvd.  
Buffalo Grove, IL 60089-2198  
Phone 847-459-2500  
Fax 847-459-7906

**Water Appurtenances Material Purchase Addendum #1**

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**TO:** Prospective Respondents and Other Interested Parties  
**FROM:** The Village of Buffalo Grove Finance Department  
**ISSUE DATE:** July 12, 2023  
**SUBJECT:** ADDENDUM #1  
**Note:** This Addendum is hereby declared a part of the original bid and contract documents and in case of conflict, the provisions in the following Addendum shall govern.

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The following changes and clarifications shall be made to the Bid Documents for Water Appurtenances Material Purchase.

Q1. Are accessories such as bolts, gaskets, and megalugs needed for the hydrants and valves?

A1. No.

Q2. Are valve boxes needed for the hydrants?

A2. No.

Q3. What is the bury depth of the hydrants?

A3. 5.5 foot bury depth.

PROSPECTIVE RESPONDENTS ARE TO ACKNOWLEDGE RECEIPT OF ADDENDUM #1. AND SHALL INCLUDE AND NOTE THIS ADDENDUM IN YOUR RESPONSE.

RESPONDENT: Mid American Water

SIGNED:  DATE: 7/26/2023

TITLE : President

## Village of Buffalo Grove

**CONTRACT/BID FOR THE WATER APPURTENANCES MATERIAL PURCHASE**

Full Name of Bidder Mis American Water Inc ("Bidder")  
 Principal Office Address 1500 Mountain Aurora, IL 60505  
 Local Office Address 1125 N.Old Rand Rd. Wauconda, IL 60084  
 Contact Person Derek Dixon Telephone Number 630-851-4500

TO: Village of Buffalo Grove  
 50 Raupp Blvd  
 Buffalo Grove, Illinois 60089  
 Attention: **Brett Robinson**  
**Administrative Services Director**

*Bidder warrants and represents that Bidder has reviewed and understood all documents included, referred to, or mentioned in this bound set of documents, including Addenda Nos. 1 [if none, write "NONE"], which are included as part of this Contract/Bid.*

#### 1. **Proposal to Provide Product**

A. **Contract and Product.** If this Contract/Bid is accepted, Bidder proposes, and agrees, that Bidder shall, provide to the Municipalities the product, items, materials, merchandise, supplies, or other items identified in the Invitation for Bids attached hereto ("**Product**") in new, undamaged, and first-quality condition. Bidder further proposes to:

1. **Labor, Equipment, Materials, and Supplies.** Provide, perform, and complete, in the manner specified and described in this Contract/Bid, all necessary work, labor, services, transportation, equipment, materials, supplies, information, data, and other means and items necessary to provide and/or deliver the Product to the Village in a proper and workmanlike manner;
2. **Permits.** Procure and furnish all permits, licenses, and other governmental approvals and authorizations necessary for the Product;
3. **Bonds and Insurance.** Procure and furnish all bonds and all insurance certificates and policies of insurance, if any, specified in this Contract/Bid;
4. **Taxes.** Pay all applicable federal, state, and local taxes; and
5. **Miscellaneous.** Do all other things required of Bidder by this Contract/Bid.

B. **Performance Standards.** If this Contract/Bid is accepted, Bidder proposes and agrees that the Product will comply strictly with the Specifications attached hereto and by this reference made a part of this Contract/Bid. If this Contract/Bid specifies a Product by brand name or model, that specification is intended to reflect the required performance standards and standard of excellence that the Village requires for the Product. However, Bidder may propose to deliver a Product that is a different brand or model, if Bidder provides, within its bid, written documentation establishing that the brand or model it proposes to deliver possess equal quality, durability, functionality, capability, and features as the Product specified.

C. **Responsibility for Damage or Loss.** If this Contract/Bid is accepted, Bidder proposes and agrees that Bidder shall be responsible and liable for, and shall promptly and without charge to the Village, repair or replace, any damage done to, and any loss or injury suffered by, the Village as a result of Bidder's failure to perform hereunder.

D. **Inspection/Testing/Rejection.** The Village shall have the right to inspect all or any part of the Product. If, in the Village's judgment, all or any part of the Product is defective or damaged or fails to conform strictly to the requirements of this Contract/Bid, then the Village, without limiting its other rights or remedies, may, at its discretion: (i) reject such Product; (ii) require Bidder to correct or replace such Product at Bidder's cost; (iii) obtain new Product to replace the Product that are defective, damaged, or nonconforming and charge Bidder with any excess cost incurred thereby; and/or (iv) cancel all or any part of any order or this Contract/Bid. The product so rejected may be returned or held at Bidder's expense and risk.

## 2. Contract Price Proposal

- A. If this Contract/Bid is accepted, Bidder proposes, and agrees, that Bidder shall deliver the Product to the Village in accordance with the Schedule of Prices (Appendix A.):

If the Village has specified the Quantity of Product to be purchased by the Village on Page 1 of the Invite for Bids, then Bidder shall take, in full payment for all Product and other matters set forth under Section 1 of this Contract/Bid, including overhead and profit, taxes, royalties, license fees, contributions and premiums, and compensation to all subcontractors and suppliers, the total Contract Price (based on unit price multiplied by approximate quantities)

### B. Basis for Determining Prices

It is expressly understood and agreed that:

1. All prices stated in the Schedule of Prices are firm and shall not be subject to escalation or change.
2. The Village is not subject to state or local sales, use, and excise taxes, and no such taxes are included in the Schedule of Prices, and that all claims or rights to claim any additional compensation by reason of the payment of any such tax are hereby waived and released.
3. All other applicable federal, state, and local taxes of every kind and nature applicable to the Product are included in the Schedule of Prices; and
4. If the Quantity of Product to be purchased by the Village is specified on Page 1 of the Invite for Bids, such amount is an estimate only. The Village reserves the right to increase or decrease such quantity, and the total Contract Price to be paid will be based on the final quantity determined by the Village for the Product that complies with this Contract/Bid that are accepted by the Village. Bidder hereby waives and releases all claims or rights to dispute or complain of any such estimated quantity or to assert that there was any misunderstanding in regard to the quantity of Product to be delivered.

### C. Time of Payment

It is expressly understood and agreed that all payments shall be made in accordance with the following schedule:

- Within 6 weeks of receipt of invoice.
- All payments may be subject to deduction or set off by reason of any failure of Bidder to perform under this Contract/Bid.

## 3. Contract Time

If this Contract/Bid is accepted, Bidder proposes, and agrees, that Bidder shall provide the Product to the Village no earlier than October 1, 2023, and no later than January 31, 2024.

## 4. Financial Assurance

A. Indemnification. If this Contract/Bid is accepted, Bidder proposes and agrees that Bidder shall indemnify, save harmless, and defend the Village against all damages, liability, claims, losses, and expenses (including attorneys' fees) that may arise, or be alleged to have arisen, out of or in connection with Bidder's performance, or failure to perform, under this Contract/Bid, including, without limitation, any failure to meet the representations and warranties set forth in Section 6 of this Contract/Bid.

B. Penalties. If this Contract/Bid is accepted, Bidder proposes, and agrees, that Bidder shall be solely liable for any fines or civil penalties that are imposed by any governmental or quasi-governmental agency or body that may arise, or be alleged to have arisen, out of or in connection with Bidder's performance, or failure to perform, under this Contract/Bid.

## 5. Firm Bid

All prices and other terms stated in this Contract/Bid are firm and shall not be subject to withdrawal, escalation, or change provided that the Village accepts this Contract/Bid within 45 days after the date this sealed Contract/Bid is opened.

## 7. Bidder's Representations and Warranties

In order to induce the Village to accept this Contract/Bid, Bidder hereby represents and warrants as follows:

A. The Product. All Product, and all of their components, shall be of merchantable quality and, for a period of not less than one year after purchase: (1) shall be free from any latent or patent defects or flaws in workmanship, materials, and design; (2) shall strictly conform to the requirements of this Contract/Bid, including, without limitation, the performance standards set forth in Subsection 1B of this Contract/Bid; and (3) shall be free of any liens or encumbrances, fit, sufficient, and suitable for the purposes expressed in, or reasonably inferred from, this Contract/Bid. The warranties expressed herein shall be in addition to any other warranties applicable to the Product (including any manufacturer's warranty) expressed or implied by law, which are hereby reserved unto the Village.

B. Compliance with Laws. All Product, and all of their components, shall comply with, and Bidder agrees to be bound by, all applicable federal, state, and local laws, orders, rules, and regulations, as they may be modified or amended from time to time. Every provision required by law to be inserted into this Contract/Bid shall be deemed to be inserted herein.

C. Not Barred. Bidder is not barred by law from contracting with the Municipalities or with any other unit of state or local government as a result of: (1) a delinquency in the payment of any

tax administered by the Illinois Department of Revenue unless Bidder is contesting, in accordance with the procedures established by the appropriate revenue act, its liability for the tax or the amount of tax, as set forth in 65 ILCS 5/11-42.1-1; (2) a violation of either Section 33E-3 or Section 33E-4 of Article 33 of the Criminal Code of 1961, 720 ILCS 5/33E-1 et seq.; or (3) any other reason.

D. Qualified. Bidder has the requisite experience, ability, inventory, capital, facilities, equipment, plant, organization, and staff to enable Bidder to deliver the Product at the Contract Price and within the Contract Time Proposals set forth above.

## 8. Acknowledgements

In submitting this Contract/Bid, Bidder acknowledges and agrees that:

A. Reliance. The Village is relying on all warranties, representations, and statements made by Bidder in this Contract/Bid.

B. Reservation of Rights. The Village reserves the right to reject any and all bids, reserve the right to reject the low-price bid, and reserve such other rights as are set forth in the Instructions to Bidders.

C. Acceptance. If this Contract/Bid is accepted, Bidder shall be bound by each and every term, condition, or provision contained in this Contract/Bid and in the Village's written notification of acceptance in the form included in this bound set of documents.

D. Remedies. Each of the rights and remedies reserved to the Village in this Contract/Bid shall be cumulative and additional to any other or further remedies provided in law or equity or in this Contract/Bid.

E. Time. Time is of the essence in the performance of all terms and provisions of this Contract/Bid. Except where specifically stated otherwise, references in this Contract/Bid to days shall be construed to refer to calendar days and time.

F. No Waiver. No examination, inspection, investigation, test, measurement, review, determination, decision, certificate, or approval by the Village, whether before or after the Village's acceptance of this Contract/Bid; nor any information or data supplied by the Village, whether before or after the Village's acceptance of this Contract/Bid; nor any order by the Village for the payment of money; nor any payment for, or use, possession, or acceptance of, the whole or any part of the any Product by the Village; nor any extension of time granted by the Village; nor any delay by the Village in exercising any right under this Contract/Bid; nor any other act or omission of the Village shall constitute or be deemed to be an acceptance of any defective, damaged, or nonconforming Product, nor operate to waive or otherwise diminish the effect of any representation or warranty made by Bidder; or of any requirement or provision of this Contract/Bid; or of any remedy, power, or right of the Village.

G. Severability. It is hereby expressed to be the intent of the parties to this Contract/Bid that should any provision, covenant, agreement, or portion of this Contract/Bid or its application to any Person or property be held invalid by a court of competent jurisdiction, the remaining provisions of this Contract/Bid and the validity, enforceability, and application to any Person or property shall not be impaired thereby, but the remaining provisions shall be interpreted, applied, and enforced so as to achieve, as near as may be, the purpose and intent of this Contract/Bid to the greatest extent permitted by applicable law.

H. Amendments and Modifications. No amendment or modification to this Contract/Bid shall be effective until it is reduced to writing and approved and executed by the corporate authorities of the parties in accordance with all applicable statutory procedures.

I. Assignment. Neither this Contract/Bid, nor any interest herein, shall be assigned or subcontracted, in whole or in part, by Bidder except upon the prior written consent of the Village.

J. Governing Law. This Contract/Bid shall be governed by, construed and enforced in accordance with the internal laws, but not the conflicts of laws rules, of the State of Illinois.

## 9. Contractor's Insurance

Contractor shall procure and maintain, for the duration of the Contract, insurance against claims for injuries to persons or damages to property, which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors.

A. Minimum Scope of Insurance: Coverage shall be at least as broad as:

Insurance Services Office Commercial General Liability occurrence form CG 0001 with the Village named as additional insured on a primary and non-contributory basis. This primary, non-contributory additional insured coverage shall be confirmed through the following required policy endorsements: ISO Additional Insured Endorsement CG 20 10 or CG 20 26 and CG 20 01 04 13. Insurance Services Office Commercial General Liability occurrence form CG 0001 with the Village named as additional insured, on a form at least as broad as the ISO Additional Insured Endorsement CG 2010 and CG 2026

- 1) Insurance Service Office Business Auto Liability coverage form number CA 0001, Symbol 01 "Any Auto."
- 2) Workers' Compensation as required by the Labor Code of the State of Illinois and Employers' Liability insurance.

B. Minimum Limits of Insurance: Contractor shall maintain limits no less than:

- 1) Commercial General Liability: \$1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. The general aggregate shall be twice the required occurrence



limit. Minimum General Aggregate shall be no less than \$2,000,000 or a project/contract specific aggregate of \$1,000,000.

- 2) Business Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury and property damage.
- 3) Workers' Compensation and Employers' Liability: Workers' Compensation coverage with statutory limits and Employers' Liability limits of \$500,000 per accident.

#### C. Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by the Village. At the option of the Village, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as it respects the Village, its officials, agents, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigation, claim administration and defense expenses.

#### D. Other Insurance Provisions

The policies are to contain, or be endorsed to contain, the following provisions:

- 1) General Liability and Automobile Liability Coverages: The Village, its officials, agents, employees and volunteers are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; premises owned, leased or used by the Contractor; or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the Village, its officials, agents, employees and volunteers.
- 2) The Contractor's insurance coverage shall be primary and non-contributory as respects the Village, its officials, agents, employees and volunteers. Any insurance or self-insurance maintained by the Village, its officials, agents, employees and volunteers shall be excess of Contractor's insurance and shall not contribute with it.
- 3) Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the Village, its officials, agents, employees and volunteers.
- 4) The Contractor's insurance shall contain a Severability of Interests/Cross Liability clause or language stating that Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
- 5) If any commercial general liability insurance is being provided under an excess or umbrella liability policy that does not "follow form," then the Contractor shall be required to name the Village, its officials, employees, agents and volunteers as additional insureds.
- 6) All general liability coverages shall be provided on an occurrence policy form. Claims-made general liability policies will not be accepted.
- 7) The contractor and all subcontractors hereby agree to waive any limitation as to the amount of contribution

recoverable against them by the Village. This specifically includes any limitation imposed by any state statute, regulation, or case law including any Workers' Compensation Act provision that applies a limitation to the amount recoverable in contribution such as *Kotecki v. Cyclops Welding*

#### E. All Coverages:

- 1) No Waiver. Under no circumstances shall the Village be deemed to have waived any of the insurance requirements of this Contract by any act or omission, including, but not limited to:
  - a. Allowing work by Contractor or any subcontractor to start before receipt of Certificates of Insurance and Additional Insured Endorsements.
  - b. Failure to examine, or to demand correction of any deficiency, of any Certificate of Insurance and Additional Insured Endorsement received.
- 2) Each insurance policy required shall have the Municipality expressly endorsed onto the policy as a Cancellation Notice Recipient. Should any of the policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

#### F. Acceptability of Insurers

Insurance is to be placed with insurers with a Best's rating of no less than A-, VII and licensed to do business in the State of Illinois.

#### G. Verification of Coverage

**Contractor shall furnish the Village with certificates of insurance naming the Village, its officials, agents, employees, and volunteers as additional insured's and with original endorsements, affecting coverage required herein.** The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements are to be received and approved by the Village before any work commences. The Village reserves the right to request full certified copies of the insurance policies and endorsements.

#### H. Subcontractors

Contractor shall include all subcontractors as insured's under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverage's for subcontractors shall be subject to all of the requirements stated herein.

#### I. Assumption of Liability

The contractor assumes liability for all injury to or death of any person or persons including employees of the contractor, any subcontractor, any supplier or any other person and assumes liability for all damage to property sustained by any person or persons occasioned by or in any way arising out of any work performed pursuant to the Contract.

J. Workers' Compensation and Employers' Liability Coverage

The insurer shall agree to waive all rights of subrogation against the Village, its officials, employees, agents and volunteers for losses arising from work performed by the Contractor for the Village.

K. Waiver of Immunity

Nothing contained in this Agreement shall constitute a waiver by the Village of any right, privilege, or defense available to the Village under statutory or common law, including, but not limited to, the Illinois Local Governmental and Governmental Employees Tort Immunity Act, 745 ILCS 10/1-101 et seq., as amended.

9. **Descriptive Literature**

Each bidder bidding on contracts to furnish equipment or materials shall furnish with their proposal, two (2) copies of descriptive literature on the supplies or equipment being bid and manufacturer's specifications shall be in sufficient detail to permit proper evaluation of the bid.

Initials DD.

Bidder's Status: ( Illinois Corporation ( ) Partnership ( ) Individual Proprietor  
 (State) (State)

Bidder's Name: Mid American Water Inc

Doing Business As (if different): \_\_\_\_\_

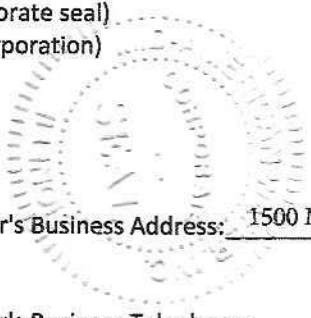
Signature of Bidder or Authorized Agent: *Derek Dixon*

(corporate seal)  
 (if corporation)

Printed Name: Derek Dixon

Title/Position: President

Date: 7/26/2023



Bidder's Business Address: 1500 Mountain Aurora, Il 60505

Bidder's Business Telephone: 630-851-4500 Email: derekdixon1@sbcglobal.net

If a Corporation or Partnership, list all Officers or Partners:

NAME	TITLE	ADDRESS
Derek Dixon	President	1500 Mountain Aurora, Il 60505
Darren Dixon	Vice-President	1500 Mountain Aurora, Il 60505

Provide a copy of the Bidders W-9 with this form.



## Appendix A Schedule of Prices

### VILLAGE OF BUFFALO GROVE WATER APPURTENANCES MATERIAL PURCHASE

ITEM NO	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Ductile Iron Pipe, Class 52, 8"	14,000.00	FT	\$ 38.94/ft	\$ 545,160.00
2	Ductile Iron Pipe, Class 52, 10"	1,000.00	FT	\$ 50.91/ft	\$ 50,910.00
3	Fire Hydrants, Complete	55.00	EA	\$ 4,647.91	\$ 255,635.05
4	Water Valves, 8"	30.00	FT	\$ 1,481.36	\$ 44,440.80
<b>BIDDER'S PROPOSAL IN TOTAL:</b>					<b>\$ 896,145.85</b>

**Written Amount for Proposal of Unit Price Bid Total:**

Eight Hundred Ninety Six Thousand One Hundred Forty Five dollars and 85 cents
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## Appendix B Specifications

### 1. Scope of Work

The intention of these specifications is to provide for the purchase and delivery of approximately one (1) to two (2) year's supply of water distribution system pipe and appurtenances for the Village of Buffalo Grove's Infrastructure Modernization Program. All iron and steel products shall be domestically manufactured or produced and fabricated in accordance with Article 106.01 of the Standard Specifications.

### 2. Ductile Iron Pipe Class 52

All Ductile Iron Pipe included in this purchase shall conform to the American Water Works Association standards.

Ductile Iron Pipe shall conform to ANSI A21.52/AWWA C151 with a Class 52 wall thickness. All pipe shall be cement lined complying with ANSI C104/AWWA C104, and supplied with standard push-on joint gaskets complying with ANSI A21.11/AWWA C-111.

Pipe lengths shall be eighteen (18) to twenty (20) feet.

All pipe shall be supplied with applicable accessories such as, but not limited to, gaskets, lubricants, and polyethylene encasement, necessary for installation as recommended by the manufacturer. The cost of these accessories shall be included in the price of the pipe.

Polyethylene encasement shall meet the minimum requirements of ANSI A21.5/AWWA C105 and be 4-MIL in thickness. Visible markings on the outside of the polywrap shall include material printed with specification number, pipe diameter range, year of manufacturing, manufacturing mark, and warning of corrosion protection/repair damage. Enough polyethylene encasement shall be supplied to cover the entire length of pipe, and any overlap requirements as recommended by the manufacturer.

Pipe lubricant shall be explicitly designated for use with ductile iron pipe and push on gaskets. The pipe lubricant shall be capable of being applied with a brush, be non-toxic, water soluble, imparting neither taste nor odor to the conveyed water distribution system. The pipe lubricant shall not support growth of bacteria.

This item shall be measured per diameter and paid for at the contract unit price per foot (FT) for DUCTILE IRON PIPE, CLASS 52, of the diameter specified, upon receiving shipment with required documentation and certifications.

### 3. Fire Hydrants, Complete

The fire hydrants shall be Waterous Pacer Model WB67-250 conforming to AWWA C502 and be painted fire engine red above ground. Fire hydrants shall have two hose nozzles at two and a half inch (2-1/2") diameter and one pumper nozzle at four and a half inch (4-1/2") diameter with threads conforming to National Standard Specifications.

The nozzle section, upper and lower standpipes and hydrant base shall be ductile iron. **All fire hydrants and appurtenances shall have an all stainless-steel trim.**

Each fire hydrant shall be supplied with a direct assembly six (6) inch resilient wedge auxiliary gate valve in accordance with the applicable Specification herein.

This item shall be counted and paid for at the contract unit price per each (EA) for FIRE HYDRANTS, COMPLETE, upon receiving shipment with required documentation and certifications.

### 4. Water Valves

Water valves shall be American Flow Control, Series 2500 Resilient Wedge Gate Valves conforming to AWWA C500 and AWWA C504. All valves shall turn counterclockwise to open and shall have the manufacturer and year cast on the body with raised letters. **Valves shall have an all stainless-steel trim.**

This item shall be counted and paid for at the contract unit price per each (EA) for WATER VALVES, of the diameter

specified, upon receiving shipment with required documentation and certifications.

## **5. Delivery**

The successful bidder shall deliver the approved items to one of the approved facilities below within the Village of Buffalo Grove.

All pipe shall be delivered to the Buffalo Grove Metra Station West Parking Lot.

All other appurtenances shall be delivered to Buffalo Grove Public Works, 1650 Leider Lane, Buffalo Grove, Illinois, 60089.

Forty-eight hours' notice shall be given to the Village of Buffalo Grove Public Works before materials are scheduled to be delivered. Deliveries should be scheduled in a uniform and systematic schedule requiring the least number of mobilizations necessary to fulfill the order. Failure to adhere to a scheduled delivery plan may result in a monetary penalty of \$500 per occurrence.

Please contact the following for delivery location, dates, and times:

Chris Krase, Superintendent of Utilities  
Phone: 224-374-4638  
Email: CKrase@vbg.org

Material will only be accepted Monday through Friday from 7:00 AM to 3:00 PM, unless expressly authorized by the Village of Buffalo Grove. No material will be accepted on weekends or Village holidays. In the event of winter weather or other Village related emergencies, the Village reserves the right to cancel deliveries on any given day.

All orders shall be full truck loads or the least number of loads as possible and adhere to the procurement schedule provided herein. Any variation from the procurement schedule must be submitted at the time of bidding. The Village of Buffalo Grove reserves the right to reject any bid based on variations of the procurement schedule that may delay or impact the Village's Infrastructure Modernization Program.

All prices shall be FOB to the location approved by the Village of Buffalo Grove. All freight costs shall be included in the unit price, if applicable. Prices should be firm, without escalation, until this contract expires.

All shipment of materials shall be per the quantities indicated within the bid form. The total quantity listed is expected to be shipped beginning on October 1, 2023, and may be spread out if agreed upon by the Village. **All materials shall be shipped and procured no later than January 31, 2024.**

## **6. Shipping/Bundling**

Upon accepting delivery, the Village of Buffalo Grove Public Works personnel will unload all trucks. Buffalo Grove staff will be utilizing a Caterpillar 938M front end loader for unloading of the materials. Please indicate with you bid if you believe this to pose any issue with your delivery method.

All pipe shall be shipped in stable bundles. The lower layers of pipe must be stable and non-removable while the upper layers are unloaded. Workers must be able to unload the pipe without being in danger of lower layers rolling or moving prematurely. The pipe manufacturer/supplier will be responsible for devising proper shipping and unloading restraints to accomplish this requirement.

Metal banding shall secure the pipe, with no more than half the load being banded together. The steel banding shall encircle the layers of pipe and additional banding may be fastened to the floor or layer timber to provide further stability as needed.

All fire hydrants and water valves shall be shipped via pallet or container that allows for a systematic storing of materials with a front-end loader. Fire hydrants and water valves shall be protected from chips, scratches, or other damage during shipping and unloading operations. Any fire hydrants or water valves received that are damaged will not be accepted.

## **7. Quality Assurance**

The highest quality materials are required. All pipe, gaskets, hydrants, valves, and appurtenances must meet or exceed all applicable AWWA standards. A supplier of any pipe produced that proves to be inferior or substandard will be removed from the approved bidders list.

As further quality assurance, pipe suppliers shall meet the following requirements:

- The company shall document a 5+ year record of producing compliant pipe, gaskets, hydrants, valves, and appurtenances for water utilities in the USA.
- The exterior coating shall not be damaged or missing in any way. Any rust or damaged areas must be properly repaired to the satisfaction of the Village.
- Each manufacturer shall submit a certificate of compliance with the testing requirements meeting AWWA standards. This certification, to be provided upon demand, must be for each truck load of material. The certification shall include the date of manufacturer, a chemical analysis and all physical test results of the material.

## **8. Contract Time**

The prices in this contract shall be valid until January 31, 2024. The contract shall expire on that date or once the contract's full dollar value is reached, whichever occurs first, unless extended in writing. The Village may terminate the contract at any time if the supplier does not meet the expected schedule or quality of work.

## VILLAGE OF BUFFALO GROVE

## INVITATION TO BID – WATER APPURTENANCES MATERIAL PURCHASE

**OWNER:**

The Village of Buffalo Grove will receive sealed bids for the purchase of the Product generally described as follows:

Product	Description of Product to be Delivered	Est. Quantity of Product to be Purchased
Water Main	Ductile Iron Pipe, 8" and 10" Diameter	15,000 FT
Water Valves	8" Diameter Water Valves	30 EA
Fire Hydrants	Fire Hydrant With 6" Valve Attached	55 EA

All bid proposals must be submitted electronically through the Village's Vendor Registry online procurement system by the Bid Due Date on Tuesday, August 1<sup>st</sup>, 2023, 9:00 AM CST. Hard copy bids will not be accepted. All bids will be opened and read publicly via the Microsoft Teams video conferencing platform using the following link: <https://rb.gv/mveb3>

To submit a bid proposal, bidders shall:

1. Go to [www.vbg.org/bids](http://www.vbg.org/bids)
2. Select on the project description, 'Water Appurtenances Material Purchase' and click the large red button at the top
 

SUBMIT BID
3. Log in to your account and enter your total bid price. This will be the as-read bid price.
4. Bid submittal documents shall be attached as a single .pdf attachment (up to 200 MB) and include the Contract/Bid for Water Appurtenances Material Purchase, manufacturer's descriptive literature, Schedule of Prices, and all other relevant attachments.

The Village of Buffalo Grove does hereby invite sealed bids for material and supplies for the Water Appurtenances Material Purchase.

For information on how to receive a copy of the Bid Package and any addenda, contact the Office of the Purchasing Manager at 847-459-2500 or visit the Village of Buffalo Grove procurement website at [www.vbg.org/bids](http://www.vbg.org/bids).

**TIMELINE:**

Tuesday, July 11<sup>th</sup>, 2023

Tuesday, July 25<sup>th</sup>, 2023 at 9:00 a.m.

Tuesday, August 1<sup>st</sup>, 2023 at 9:00 a.m.

Bid Documents Available to Prospective Bidders

Due date for all questions regarding the Work ("Question Due Date")

Bid Proposals due to the Village ("Bid Due Date")



INSTRUCTIONS TO BIDDERSPreparation of Bids

All bids for the purchase of the Product shall be made only on the blank Contract/Bid form attached to this Bid and shall be complete with a price for each and every item named in the Schedule of Prices section of the Contract/Bid form. All bids must be signed by an authorized official. ***[All bids shall be accompanied by a cashier's, certified check(submitted in advance), scanned bid bond, or E-bond in form and from a surety satisfactory to the Village, in an amount equal to at least ten percent of the Total Contract Price named in the Schedule of Prices section of the Contract/Bid form.]*** Bids that contain omissions, erasures, alterations, or additions not called for, conditional or alternative bids unless called for, or that contain irregularities of any kind may be rejected.

Clarifications

The Village reserves the right to make clarifications, corrections, or changes in this Invite for bid at any time prior to the time bids are opened. All Bidders or prospective Bidders will be informed of said clarifications, corrections, or changes.

Delivery of Bids

All bid proposals must be submitted electronically through the Village's Vendor Registry online procurement system as described in the invitation to bid.

Opening of Bids

All bids will be opened and read publicly via the Microsoft Teams video conferencing platform. The link can be found in the Invitation to Bid.

Withdrawal of Bids

No bid shall be withdrawn for a period of 45 days after the opening of any bid.

Rejection of Bids

Bids that are not submitted on the Contract/Bid form or that are not prepared in accordance with these Instructions to Bidders may be rejected. If not rejected, the Village may demand correction of any deficiency and accept the deficiently prepared bid upon compliance with these Instructions to Bidders.

Acceptance of Bids

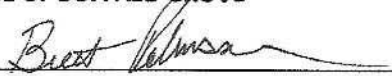
Bids submitted are offers only and the decision to accept or reject is a function of quality, reliability, capability, reputation, and expertise of the bidders.

The Village reserves the right to accept the bid that is in its judgment, the best and most favorable to the interests of the Village and to the public; to reject the low price bid; to accept any item of any bid; to reject any and all bids; and to waive irregularities and informalities in any bid submitted or in the invite for bid process; provided, however, the waiver of any prior defect or informality shall not be considered a waiver of any future or similar defect or informality. Bidders should not rely upon, or anticipate, such waivers in submitting their bid.

Upon acceptance of the successful Bidder's bid by the Village, the successful Bidder's bid, together with the Village's notification of acceptance in the form attached to this Invite for Bids, shall become the contract for the Work.

DATED this 11<sup>th</sup> day of July 2023.

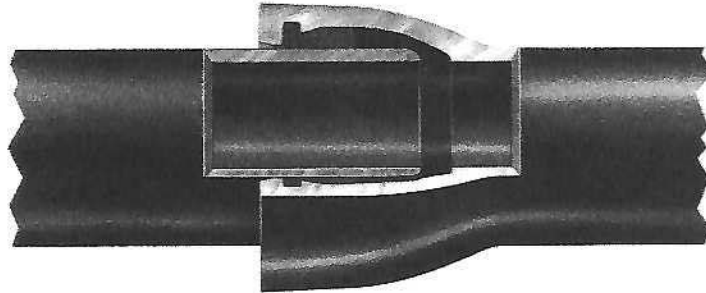
**VILLAGE OF BUFFALO GROVE**

By:   
**Brett Robinson, Administrative Services Director**



## AMERICAN DUCTILE IRON PIPE

### AMERICAN Fastite® Joint Pipe For Water, Sewage or Other Liquids



AMERICAN Fastite Joint Pipe in sizes 4"-64" for water, sewage or other liquids has the proven long-life and high-strength qualities inherent in pipe produced centrifugally in accordance with AWWA C151. In addition, this significant AMERICAN development, a dependable, single gasket, push-on type joint meeting the requirements of AWWA C111, affords the customer lower joint cost and time-saving advantages in installation. It provides exceptional strength and flexibility and has been widely accepted by engineers, contractors and utility officials since the 1950s. For added flexibility during construction, and for possible elimination of bends, a liberal 5° allowable deflection is standard in all sizes through 30", offering 21" offset in a 20' length of pipe. Liberal deflection can also be provided in larger diameter pipe with standard and Special Fastite Deflection Bells.

The patented AMERICAN Fastite Joint embodies many advanced design features and is rated for a water working pressure of 350 psi. For specific conditions, ductile iron piping with this joint has been approved for much higher pressure conditions. The socket, which is scientifically designed with two gasket recesses and a dividing buttress, is manufactured to close tolerances so that the gasket is self-centered, securely confined, and firmly compressed for a permanent, tight, trouble-free joint. The Fastite joint seal, bubble-tight under vacuum and external pressure, becomes even tighter with the application of internal pressure due to a specially designed wedging surface in the socket.

#### Fastite Joint Assembly

The bell opening is slightly tapered to provide easy entry of the pipe end; the flared socket design permits liberal joint deflection. The

plain end of the pipe is tapered or rounded to facilitate entry into the bell and self-centering in the gasket. On pipe cut in the field, the plain end can be easily beveled and smoothed by the use of a portable grinding wheel or other suitable apparatus. Methods of cutting ductile iron pipe are described in Section 3.

A stripe is painted on the plain end of AMERICAN Fastite Joint Pipe to provide a visual means of checking the joint alignment and to assure proper insertion. See page 2-10 for detailed assembly instructions.

#### Fastite Gasket

The Fastite Joint sealing component—a molded synthetic rubber ring gasket of two hardnesses, shaped to fit the configuration of the gasket socket—is manufactured per all requirements of ANSI/AWWA C111/A21.11 and under AMERICAN's own rigid specifications, assuring closely controlled dimensional and hardness properties. The smaller end of the gasket is of harder rubber, approximately 85 durometer hardness, which provides a strong shoulder for self-centering on the gasket buttress, a permanent seal against cold flow, and protection from deterioration. The larger end of the gasket is of softer rubber, approximately 65 durometer hardness, providing ease of assembly and positive sealing. The design assures effective sealing at low or high pressures and in straight or deflected joint alignment. It also eliminates any concerns of infiltration or root intrusion, and assures positive sealing against negative pressure, thus preventing gasket "pullout" should a vacuum be created in the line.

A taper on the inside of the gasket allows the entering pipe to locate and center on the hard section and reduces friction loads during



subsequent assembly. The snug fit and the hard section of the gasket, in conjunction with the design of the buttress, act to restrain the gasket against dislodgment during assembly. Additional internal pressure results in increased tightness of the seal when pipe is either in straight alignment or deflected.

Gaskets made of SBR (Styrene Butadiene Rubber) are standard. For information on gaskets made of special types of rubber, for applications involving air or liquid temperatures in excess of 150°F, or for chemical, hydrocarbon or other special service applications, and for installations in contaminated soils where permeation through gaskets might be a concern, consult AMERICAN for recommendations. See Table 2-1.

**Fastite Lubricant**

AMERICAN Fastite Joint Lubricant is a non-toxic water soluble material imparting neither taste nor odor to the conveyed water and is ANSI/NSF 61 approved. The lubricant is suitable

for use in hot or cold weather and will adhere to wet or dry pipe. AMERICAN Fastite Joint Pipe can be assembled when submerged, though for such installation, special AMERICAN underwater joint lubricant is recommended. See Table No. 2-5 for appropriate lubricant quantities.

**Fastite Joint Materials**

Standard joint materials include Fastite plain rubber gaskets and a sufficient supply of Fastite joint lubricant. Fastite pipes are most often readily joined with available excavating equipment; however, assembly tools can be supplied by AMERICAN on a loan basis with a nominal deposit which is refundable upon return of tools in good condition.

**Coating and Lining**

AMERICAN Fastite Joint Pipe can be furnished asphaltic coated, cement lined, or with special coating or lining where required. See Section 11.

**Fastite Gaskets**

Table No. 2-1

Common Name or Trade Name*	Chemical Name	Maximum Service Temperature**		Common Uses
		Water & Sewer	Air	
Plain Rubber	Styrene Butadiene Copolymer(SBR)	150°F	150°F	Fresh Water, Salt Water, Sanitary Sewage
Plain Rubber (conductive)	Styrene Butadiene Copolymer(SBR)	150°F	150°F	Electrical continuity for thawing of Service Water and Sewage
EPDM	Ethylene Propylene Diene Monomer	212°F	200°F	Water, Sewage, Ketones, Dilute Acids and Alkalies, Vegetable Oil, Alcohols, Air
Neoprene	Polychloroprene(CR)	200°F	180°F	Fresh Water, Sewage
Nitrile Buna-N	Acrylonitrile Butadiene(NBR)	150°F	150°F	Non-Aromatic Hydrocarbons, Petroleum Oil, Hydraulic Fluids, Fuel Oil, Fats, Oil, Grease†
Fluoroelastomer Fluoret Viton®***	FKM	212°F	300°F	Aromatic Hydrocarbons, Gasoline, Refined Petroleum Products, most Chemicals and Solvents, High Temp., Air (Least permeable of all available Fastite gasket rubbers)

\*AMERICAN reserves the right to furnish any Trade or Brand rubber for the chemical formulation specified.  
 \*\*Temperature is in reference to conveyed fluid. **Lubricating oil in air can adversely affect SBR and EPDM performance. SBR, Nitrile and Neoprene are not recommended for hot air exposure in wastewater treatment systems.**  
 \*\*\*Viton® is a registered trademark of DuPont Dow Elastomers.  
 Refer to Section 11 for temperature and service capabilities of pipe linings.  
 Refer higher temperatures or other special requirements to AMERICAN for recommendations regarding suitable gasket material.  
 †This gasket rubber is chemically resistant in the non-potable water uses shown but is not as resistant to permeation in potable water applications as FKM.  
 All Fastite gaskets made from the materials in the above table are suitable for use with water containing normal concentrations of chloramine. Where increased resistance to chloramine is desired, neoprene or fluoroelastomer materials should be considered.



**AMERICAN Fastite® Joint  
for Ductile Iron Pipe  
ANSI/AWWA C111/A21.11  
Standard Dimensions**

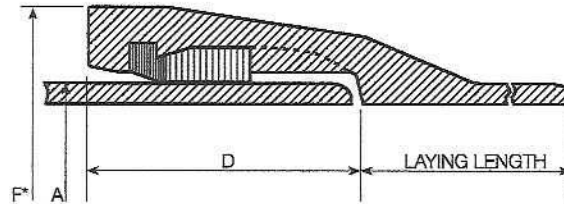


Table No. 2-2

Size in.	Nominal Laying Length ft.	Dimensions in Inches		
		A Outside Diameter	D Depth of Socket	F* Bell O.D.
4	20	4.80	3.31	6.40
6	20	6.90	3.38	8.60
8	20	9.05	3.75	10.96
10	20	11.10	3.75	13.12
12	20	13.20	3.75	15.22
14	20	15.30	5.23	17.61
16	20	17.40	5.23	19.74
18	20	19.50	5.50	22.16
20	20	21.60	5.50	24.28
24	20	25.80	5.50	28.50
30	20	32.00	6.50	34.95
36	20	38.30	6.50	41.37
42	20	44.50	7.50	48.27
48	20	50.80	8.00	54.71
54	20	57.56	8.50	61.65
60	20	61.61	8.75	65.80
64	20	65.67	9.00	70.04

\*Dimensions subject to change at our option. Check AMERICAN if exact dimensions required.  
See Section 3 for additional information on ductile iron pipe.  
See Sections 4 and 7 for information on Fastite fittings.



**AMERICAN Fastite® Joint Pipe**  
Allowable Joint Deflection



Table No. 2-3

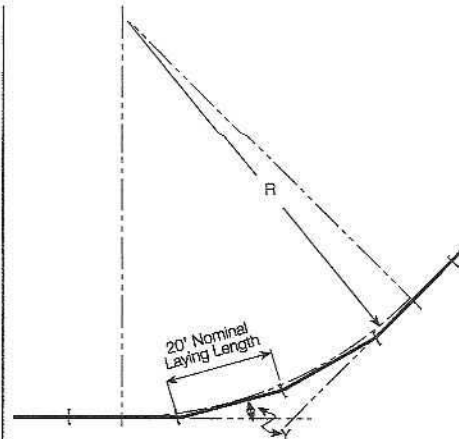
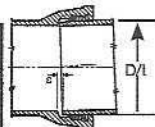
Size in.	Nominal Laying Length ft.	Maximum Recommended Deflection†					
		Standard Bell			Special Deflection Bell		
		X Offset per Nominal Length in.	Y Deflection Angle	Radius of Curve* ft.	X Offset per Nominal Length in.	Y Deflection Angle	Radius of Curve* ft.
4	20	21	5°	230	—	—	—
6	20	21	5°	230	—	—	—
8	20	21	5°	230	—	—	—
10	20	21	5°	230	—	—	—
12	20	21	5°	230	—	—	—
14	20	21	5°	230	—	—	—
16	20	21	5°	230	—	—	—
18	20	21	5°	230	—	—	—
20	20	21	5°	230	—	—	—
24	20	21	5°	230	—	—	—
30	20	21	5°	230	—	—	—
36	20	17	4°	285	21	5°	230
42	20	12	3°	380	21	5°	230
48	20	12	3°	380	17	4°	285
54	20	12	3°	380	17	4°	285
60	20	12	3°	380	17	4°	285
64	20	12	3°	380	17	4°	285

\*Approximate radius of curve produced by a succession of nominal lengths of pipe fully deflected.  
 †Special Deflection Bells must be specifically ordered and will be marked with white bell face for easy identification.  
 For easiest assembly, the joints should be assembled with the pipe in reasonably straight alignment. After joint assembly, the pipe may be deflected up to the maximum shown above. Offset distances are based on 20-ft lengths.

**Maximum Allowable Separation**

Table No. 2-4

Size in.	S Separation in.
4	3/8
6	3/16
8	3/4
10	15/16
12	1 1/8
14	1 5/16
16	1 1/2
18	1 5/8
20	1 7/8
24	2 1/4
30	2 3/4
36	2 5/8
42	2 1/4
48	2 1/2
54	2 7/8
60	3 1/8
64	3 3/8



R = Radius of Curve (ft.)

Y = Deflection Angle (degrees)

$$\text{Radius of Curve} = \frac{\text{Nominal Laying Length}}{2 \times \text{Tangent } (Y \div 2)}$$

Maximum Allowable Separation, "S", in Standard Bell pipe is approximately equal to the median pipe diameter in inches times the sine of the deflection angle. This is provided for information only and should not be used to determine precise joint deflection.





### AMERICAN Fastite® Joint Pipe Assembly Instructions

The AMERICAN Fastite Joint is a push-on type joint meeting all the rigorous requirements of AWWA C111. The ANSI/AWWA C600 Standard covers in detail the installation of ductile iron water mains, including assembly instructions for push-on joint pipe.

Field-cutting of AMERICAN Ductile Iron Pipe can be easily performed, thus eliminating the necessity for factory-made special lengths of Fastite pipe. The plain end of Fastite pipe cut in the field requires little or no preparation for assembly into the socket of a mechanical joint fitting. Where a cut pipe is to be assembled into a Fastite socket, the required beveling or rounding of the plain end can be easily accomplished by the use of a portable grinding wheel or other suitable apparatus. Methods of cutting ductile iron pipe are described in Section 3.

The AMERICAN Fastite Joint requires only one joint component, the rubber gasket\*, which when properly installed, fits snugly in the gasket recess in the bell socket. A special lubricant supplied with the pipe is applied to the plain end and the inside surface of the gasket before assembly. The pipe end is tapered or rounded to provide self-centering of the plain end in the gasket and ease of assembly. A circumferential stripe on the plain end provides a visual indication for checking the proper insertion of the joint. The stripe, shown in the photographs illustrating assembly methods, passes fully into the bell when the plain end is fully inserted into the socket with the two lengths of pipe in straight align-

ment. Joints can then be safely deflected up to the extent shown in Table No. 2-3. In deflected joints, the stripe will typically be visible to some extent after assembly.

Easier assembly is effected if the pipe is suspended an inch or so off the bottom of the trench during the jointing operation.

The following instructions should be followed in order to properly assemble the joints and to fully realize the maximum speed and ease of assembly of the Fastite Joint:

1. Clean socket and plain end thoroughly, removing mud, gravel, or any other matter that might cause the front of the gasket to protrude into the path of the entering spigot.

2. Insert gasket fully into the gasket recess of the socket, large end of the gasket entering first. Gasket may be installed with one or two V-shaped folds as shown (Photo 1). After the gasket is in place at the bottom, the top of the gasket is positioned fully into the gasket recess. Gaskets and lubricant to be installed in very cold weather should be warmed first (as by storage in a heated equipment cab or pick-up, etc.) for optimum assembly.

3. Apply a thin film of regular AMERICAN Fastite Joint Lubricant to the rounded or tapered spigot end of the pipe, the immediate outside pipe surface between the stripe and the nose of the pipe (Photo 2), and also to the inside surface of the gasket. **Special AMERICAN Fastite Joint Lubricant intended specifically for underwater or very wet installations can be supplied when requested.**



Photo 1



Photo 2

\*Gaskets not used immediately should be stored in a cool location, out of direct sunlight.



**Caution:** If a spigot end contacts the ground or trench side after lubrication, any adhering dirt or rocks should be cleaned off and the area re-lubricated prior to assembly.

4. Insert the plain end in the socket. For optimum assembly it is preferable that the entering pipe be in reasonably straight alignment; however, the Fastite Joint may be assembled if necessary with the pipe deflected within its rated deflection. (Exception: If Fast-Grip gaskets are being used, straight alignment must be maintained.) Push the plain end into the socket using any of the applicable assembly methods described hereinafter. If the joint cannot be assembled with a moderate force, remove the pipe and check for the cause of the difficulty, such as improper positioning of gasket, insufficient or wrong type lubricant, dirt under or behind the gasket, dirt adhering to the pipe, or any other cause which would result in obstruction or increased friction between pipe end and

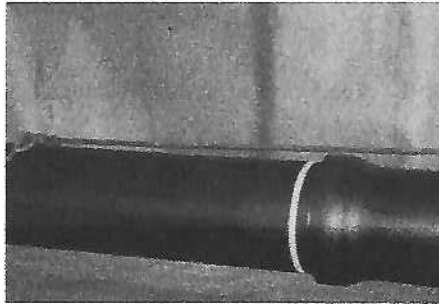
gasket surface. For assurance of proper assembly, a thin automotive, blade-type feeler gauge can also be used if desired for quick and easy probe confirmation of correctly installed axial gasket position around the joint.

5. "Backwards" installation. AMERICAN does not recommend "backward laying" (bells assembled over spigots, rather than spigots inserted into bells as pictured in this literature) of large-diameter ductile iron pipe in buried installations. AMERICAN can furnish bell and plain end fittings to minimize the need for backward pipe laying. Other devices such as sleeves and couplings may also be employed for this reason. However, if this condition cannot be avoided, we strongly recommend that installers contact AMERICAN for instructions on how to reduce the potential for problems that could occur when assembling pipe in this manner.

### AMERICAN Pipe Assembly Mechanisms

In general, Fastite joints or other Fastite gasketed pipes may be readily pushed or pulled together without the need for complicated tools or substantial manpower. This is most often accomplished with the procedures discussed on page 2-14. In general, the joints of AMERICAN push-on pipes are purposefully "tight," and most joints require an assembly force of about 100 to 200 pounds or more of assembly force per inch of pipe diameter (i.e. a 12" joint might require about 12 x 100 or 1,200 pounds of assembly force).

In pulling operations, simply wrap a sound wire rope choker cable or nylon sling around the barrel of the entering pipe. Secure the thimble eye or other end loop of the choker to a suitably anchored pulling device (e.g. backhoe, come-along, etc.). Use the mechanism to pull the cable taut in the

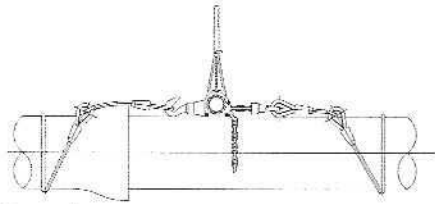


**Photo 3**

assembly direction (Photo 3). Continue pulling the cable in a smooth, continuous motion until the joint is in the fully assembled position. If desired for special conditions, AMERICAN can furnish suitable, simple come-alongs and choker cables for manpower assembly of



## AMERICAN DUCTILE IRON PIPE



**Figure 1**  
most 4"-24" pipes (See Figure 1 and specify pipe sizes involved).

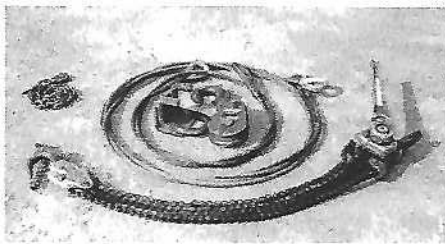
The joints may normally be disassembled in a similar manner, reversing the direction of the pull with the choker cable (Photo 4). It is also sometimes helpful to use rebating or wiggling deflection to aid in the disassembly of push-on joint pipes, particularly when pipes have been installed for some time prior to removal.

### 30"-64" Pipe



**Photo 4**

Large pipes are most often readily pushed or pulled together with heavy excavating/earthmoving equipment available on-site (see page 2-14). In cases where assembly of pipes by manpower is desired, AMERICAN can provide special assembly tools and rigging which can be used for assembling most pipes of all sizes (Photo 5). These tools consist of a heavy-duty roller chain hoist, a steel pipe-end hook and snatch block, and associated wire



**Photo 5**

rope and chain tackle (Photo 5) to attach all the rigging together to effect "double line" assembly from the top of the pipe (Photo 6). The snatch block pulley and twin line rigging approximately doubles the assembly force from the strong come-along, making possible



the assembly of up to 64" full-length pipe joints from the top of the pipe (Photo 7).

### Fittings and Short Pipes

**Photo 6**



**Photo 7**

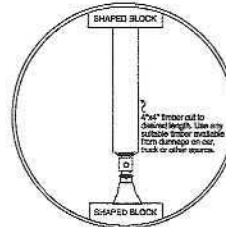
Push-on fitting or short pipe joint assembly is basically the same as that of standard length pipe, though special rigging may be necessary to hold these short items reasonably stable for assembly. See also Push-On Fittings Assembly Instructions in Section 4.

### Field Rounding

Occasionally, field rounding of pipe ends may be necessary to accomplish assembly, particularly when large-diameter pipes are cut to be assembled into mechanical joints or couplings. Need for rounding in assembly of mechanical or stuffing-box-type joints can be predetermined by a difficulty in sliding the gland or end ring over the end of the pipe. Rounding may be accomplished in the following manner using a mechanical jack and shaped blocks. (Note: This procedure may also be used with the assemblies involving push-on joint pipe, fittings, valves, etc.; however, rounding is less frequently necessary for assembly of push-on joints.)



1. Measure/determine the minimum (minor) diameter of the ends to be rounded.
2. Place the jack and the shaped blocks in line with the minor diameter as shown in the attached sketch using a sound 4" x 4" spacer timber cut square to the required length to take up the space.
3. Apply a load carefully with the jack only until the "minimum diameter equals the maximum diameter," or until the gland will easily slip over the end. No more jacking should be attempted or necessary - **DO NOT ATTEMPT TO PERMANENTLY ROUND END.**
4. When no mechanical joint restraint device is used, carefully relax and remove the jack and timbers from the pipe after joint assembly.
5. When using a mechanical joint restraint device not manufactured by AMERICAN, contact the applicable manufacturer of the restraint device regarding installation guidelines.



Note: Field rounding operations should be conducted without backfill on any part of large-diameter pipes and prior to encasing any part of pipe in concrete. If the inside of the pipe cannot be accessed to remove jacking materials, pipe ends can alternatively be rounded using external clamping means.

### AMERICAN Fastite® Joint Lubricant Requirement by Size of Pipe



64" AMERICAN Fastite Joint pipe being installed in a wastewater application.

Table No. 2-5

Pipe Size in.	Approx. Pounds of Lubricant per Joint	Approx. No. of Joints per Pound of Lubricant
4	.03	33
6	.045	22
8	.06	17
10	.07	14
12	.08	12
14	.09	11
16	.11	9
18	.12	8
20	.14	7
24	.17	6
30	.30	3
36	.36	3
42	.44	2
48	.50	2
54	.59	2
60	.66	1
64	.71	1

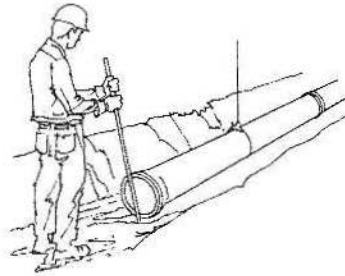


## AMERICAN Fastite® Joint Common Assembly Methods

In seeking ways to take even greater advantage of the cost-reducing features of the Fastite Joint, utility contractors have developed other methods of assembling this joint without special tools. The following methods are described for the information of the user, who may elect to use them at his discretion, keeping in mind that these methods may not be effective for all installations and under all field conditions.

### Spade or Crowbar Method

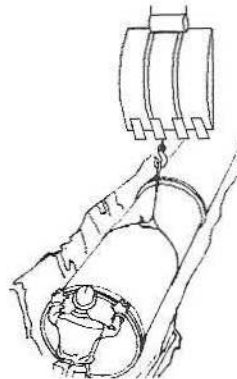
This is applicable to the smaller sizes of AMERICAN Fastite Joint Pipe, and consists of centering the lubricated end of the entering pipe in the gasket and then pushing against the bell face of the entering pipe with a spade or crowbar driven into the ground in front of the bell face. This method requires the trench bottom to be fairly firm soil. The method may not be effective in a rocky trench or with a trench that is soft, muddy or sandy. A wooden block between the bell face and the pry bar may increase the leverage. Easier assembly is effected if the pipe is suspended an inch or so off the bottom of the trench.



Spade or Crowbar Method

### Backhoe and Heavy Equipment Methods

These methods are usually applicable to the intermediate and larger sizes of AMERICAN Fastite Joint Pipe where the bar method might not be effective. It consists of centering the end of the entering pipe in the gasket as the pipe to be assembled is suspended from the backhoe. Then it can be pulled into the adjoining socket with the pipe sling by moving the backhoe arm toward the previously assembled pipe. In other instances, the pipe may be assembled by placing the backhoe or other earth mover bucket or blade against the bell face of the entering pipe and pushing it into the socket. When pushing against the bell face, care should be taken to avoid very small contact areas and possible damage to the pipe bells or spigots. Wood cushions between the backhoe bucket and the pipe are particularly effective in preventing damage.



Backhoe and Heavy Equipment Methods





**AMERICAN Ductile Iron Pipe**  
**ANSI/AWWA C150/A21.50**  
 and  
**ANSI/AWWA C151/A21.51**  
**Nominal Wall Thicknesses for Special Thickness Classes**

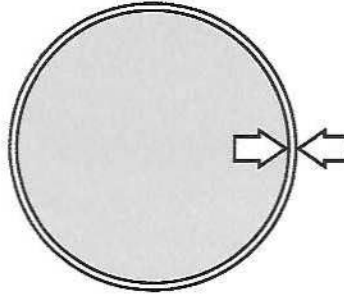


Table No. 3-12

Size In.	Outside Diameter In.	SPECIAL THICKNESS CLASSES—Wall Thickness in Inches*						
		50	51	52	53	54	55	56
4	4.80	-	.26	.29	.32	.35	.38	.41
6	6.90	.25	.28	.31	.34	.37	.40	.43
8	9.05	.27	.30	.33	.36	.39	.42	.45
10	11.10	.29	.32	.35	.38	.41	.44	.47
12	13.20	.31	.34	.37	.40	.43	.46	.49
14	15.30	.33	.36	.39	.42	.45	.48	.51
16	17.40	.34	.37	.40	.43	.46	.49	.52
18	19.50	.35	.38	.41	.44	.47	.50	.53
20	21.60	.36	.39	.42	.45	.48	.51	.54
24	25.80	.38	.41	.44	.47	.50	.53	.56
30	32.00	.39	.43	.47	.51	.55	.59	.63
36	38.30	.43	.48	.53	.58	.63	.68	.73
42	44.50	.47	.53	.59	.65	.71	.77	.83
48	50.80	.51	.58	.65	.72	.79	.86	.93
54	57.56	.57	.65	.73	.81	.89	.97	1.05

\*These are Special Thickness Classes as shown in AWWA C150 and C151. They were previously designated standard thickness classes. AMERICAN can furnish any thickness in between these Special Thicknesses if deemed economical for major projects.

Special classes are most appropriately used for some threaded, grooved, or ball and socket pipes or for extraordinary design conditions, and they are generally less available than standard pressure class pipe.

For pressure rating and maximum depth of cover capabilities of Special Thickness Classes, check AMERICAN. These capabilities can be estimated by comparing metal thickness and capabilities of those of Pressure Classes in Table No. 3-11, or may be calculated by using the design formulas shown in AWWA C150.



# AA Thread Seal Tape, Inc.

PTFE Thread Seal Tapes | PTFE Universal Joint Sealants

Polyethylene Encasements for Ductile Iron Pipe

PVC Pipe Wrapping Tapes | Industrial Tapes & Supplies

SINCE  
1979

## Linear Low Density Polyethylene – Black (8MIL) Polywrap Pipe Sleeves

### Specifications

**Application:** Barrier encasement of pipe to prevent corrosion in varying soil conditions

### Product Specifications

**Raw Material:** Linear Low Density Polyethylene

**Group:** 2 (Linear)

**Finished Material:** Linear Low Density Polyethylene Film

**Color:** Black

**Standard:** ANSI/AWWA C105/A21.5

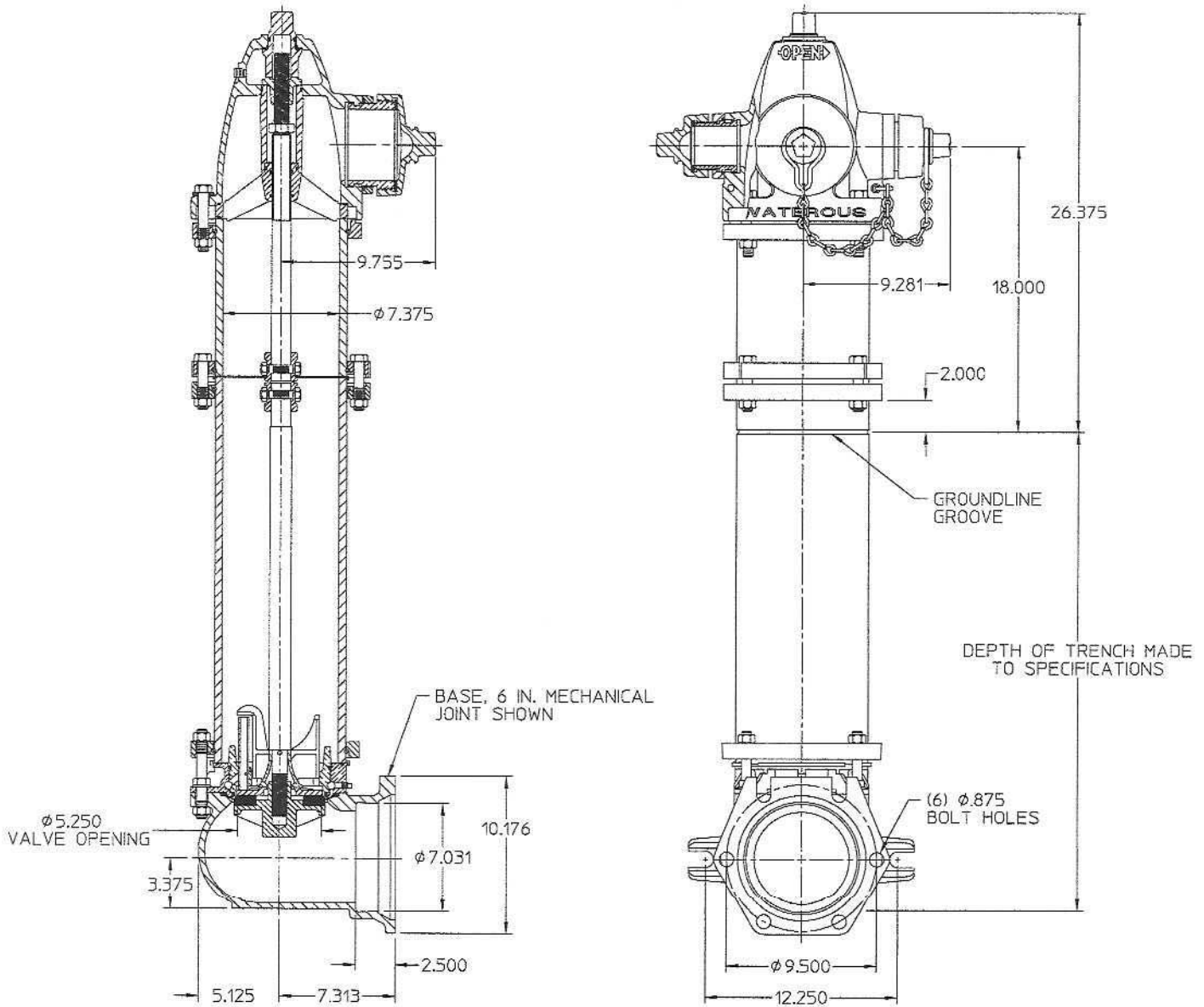
<u>Test</u>	<u>AWWA C105 Min. Req.</u>	<u>AA Thread's Film*</u>
Tensile Strength	3600psi MD/TD (ASTM D882)	MD-4495psi TD-4410psi
Elongation	800% Minimum MD/TD (ASTM D882)	MD-1073% TD-1126%
Dielectric Strength	800 V/MIL (ASTM D149)	1946V/MIL
Impact Resistance	600 grams (ASTM D1709)	1189 grams
Propagation Tear Resistance	2550 grams force MD/TD (ASTM D1922)	MD-4462 grams force TD-5539 grams force
Minimum Thickness	0.008" (8MIL)	0.008" (8 MIL)

\*Tests are averages performed by independent lab results.

**Markings:** Material printed with AWWA Spec No., Pipe Diameter, Year of manufacturing, Manufacturing Mark, Warning of Corrosion Protection/Repair Damage.

# AMERICAN Flow Control Submittal Information

## 5-1/4 WATEROUS PACER TRAFFIC MODEL WB67-250 FIRE HYDRANT



IL3576

### NOTES:

1. 250 psig rated working pressure.
2. This hydrant meets or exceeds all requirements of AWWA C502.
3. 10 in. upper standpipe (traffic section) is standard. 16 in., 22 in., 28 in. and 34 in. upper standpipes are available by special order. Nozzle elevation will vary accordingly.
4. 5-1/4" valve opening.
5. Hydrants are available with counterclockwise opening direction (open-left) or clockwise opening direction (open-right).
6. Operating nut and nozzle cap wrench nuts are available in various shapes and sizes.



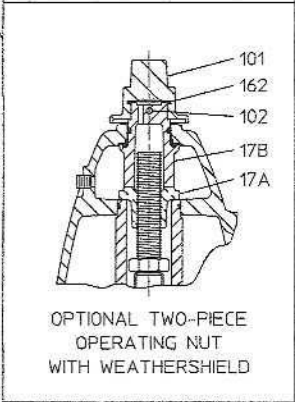
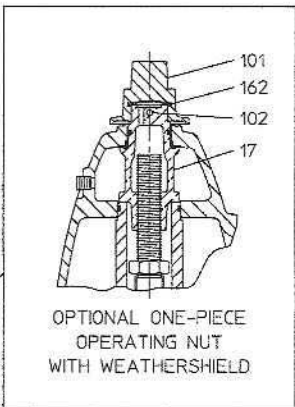
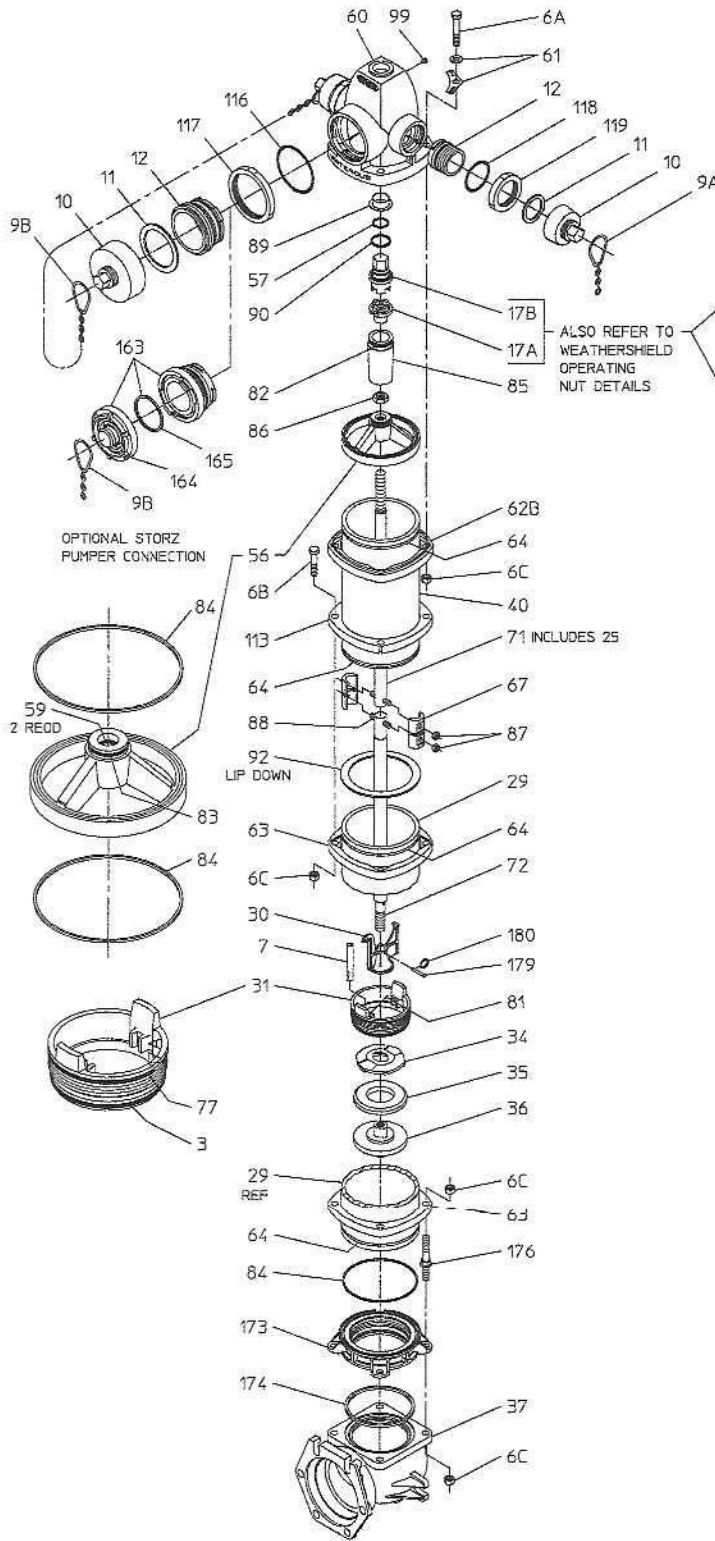
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THE RIGHT WAY

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P.O. Box 2727  
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125 Hardman Avenue South  
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TRAFFIC MODEL WB67-250

IL3566



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REF NO.	DESCRIPTION	MATERIAL
3	O-ring (Lower Valve Seat)	Buna-N
6A	Hex Head Bolt, 5/8-11 x 3-3/4"	Zinc Plated Steel, ASTM A307
6B	Hex Head Bolt, 5/8-11 x 3"	Zinc Plated Steel, ASTM A307
6C	Hex Nut, 5/8-11 (Above Ground)	Zinc Plated Steel, ASTM A307
6C	Hex Nut, 5/8-11 (Below Ground)	Stainless Steel, Type 304, ASTM F594
7	Drain Plunger	Red Brass, ASTM B135, UNS C23000
9A,9B	Nozzle Cap Chain, Single or Double	Zinc Plated Steel
10	Nozzle Cap, Hose or Pumper	Ductile Iron, ASTM A536 Grade 65-45-12
11	Cap Gasket, Hose or Pumper	Neoprene
12	Nozzle, Hose	Brass, ASTM B505, UNS C83600
12	Nozzle, Pumper	Bronze, ASTM B584, UNS C87600
17	Operating Nut (One-Piece)	Bronze, ASTM B763, UNS C86500 or UNS C86700
17A	Lower Operating Nut	Bronze
17B	Upper Operating Nut	Ductile Iron, ASTM A536 Grade 65-45-12*
25	Rod Bushing	Red Brass, ASTM B135, UNS C23000
29	Lower Standpipe	Centrifugally Cast Ductile Iron Pipe, ANSI A21.51 (AWWA C151)
30	Crossarm	Bronze, ASTM B763, UNS C99500
31	Valve Seat	Bronze, ASTM B584, UNS C87600
34	Upper Valve Washer	Ductile Iron, ASTM A536 Grade 65-45-12
35	Main Valve Rubber	Urethane
36	Lower Valve Washer	Ductile Iron, ASTM A536 Grade 65-45-12 / Epoxy Coated, AWWA C550
37	Hydrant Bottom	Ductile Iron, ASTM A536 Grade 65-45-12 / Epoxy Coated, AWWA C550
40	Upper Standpipe	Centrifugally Cast Ductile Iron Pipe, ANSI A21.51 (AWWA C151)
56	Support Wheel	Ductile Iron, ASTM A536 Grade 65-45-12
57	O-ring (Operating Nut)	Buna-N
59	O-ring (Support Wheel)	Buna-N
60	Nozzle Section	Ductile Iron, ASTM A536 Grade 65-45-12
61	Bury Depth Plate	Aluminum
61	Bury Depth Plate Washer	Zinc Plated Steel
62B	Upper Standpipe Flange	Ductile Iron, ASTM A536 Grade 65-45-12
63	Standpipe Flange	Ductile Iron, ASTM A536 Grade 65-45-12
64	Flange Lock Ring	Stainless Steel, Type 430
67	Coupling Sleeve (two-halves)	Gray Iron, ASTM A48 Class 30B
71	Upper Rod	Steel Rod, ASTM A575
72	Lower Rod	Steel Rod, ASTM A575
77	O-ring (Upper Valve Seat)	Buna-N
81	Groove Pin, 3/32 x 7/16"	Beryllium Copper
82	O-ring (Upper Tube Seal)	Buna-N
83	O-ring (Lower Tube Seal)	Buna-N

REF NO.	DESCRIPTION	MATERIAL
84	Support Wheel / Lower Standpipe Gasket	Buna-N
85	Support Tube	Ductile Iron, ASTM A536 Grade 65-45-12
86	Stop Nut, 1"-8	Zinc Plated Steel
87	Coupling Nut, 1/2-20	Brass
88	Coupling Stud, 1/2-20 x 2-9/16"	Stainless Steel, Type 430
89	Nozzle Section Bushing	Brass
90	Thrust Ring	Polymer Bearing
92	Upper Standpipe Gasket	Neoprene
99	Pipe Plug, 1/4 NPT	Brass
101	Weathershield Nut	Ductile Iron, ASTM A536 Grade 65-45-12
102	Heavy Spirol Pin, 1/4 x 2-1/4"	Stainless Steel, Type 302
113	Breakable Flange	Ductile Iron, ASTM A536 Grade 65-45-12
116	O-ring (Pumper Nozzle)	Buna-N
117	Pumper Nozzle Retainer	Ductile Iron, ASTM A536 Grade 65-45-12
118	O-ring (Hose Nozzle)	Buna-N
119	Hose Nozzle Retainer	Ductile Iron, ASTM A536 Grade 65-45-12
162	Weathershield Nut Gasket	Nitrile
163	Nozzle, Pumper, Storz (with cap and gasket)	Bronze and Aluminum
164	Nozzle Cap, Pumper, Storz	Aluminum
165	Cap Gasket, Pumper, Storz	Buna-N
173	Valve Seat Insert	Bronze, ASTM B584, UNS C87600
174	Valve Seat Insert Gasket	Nitrile
176	Stud, 5/8-11 x 5.650"	Stainless Steel, Type 304, ASTM F593
179	Clevis Pin, 1/4 x 1-11/16"	Stainless Steel, Type 18-8
180	Kickout Ring	Stainless Steel, Type 18-8

\*Bronze material optional for some nut sizes.

Open Direction:  Left (C.C.W.)  Right (C.W.)



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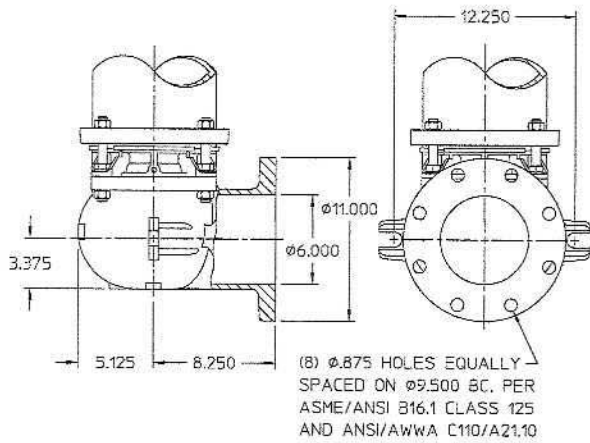
THE RIGHT WAY

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P.O. Box 2727  
Birmingham, Al. 35202-2727  
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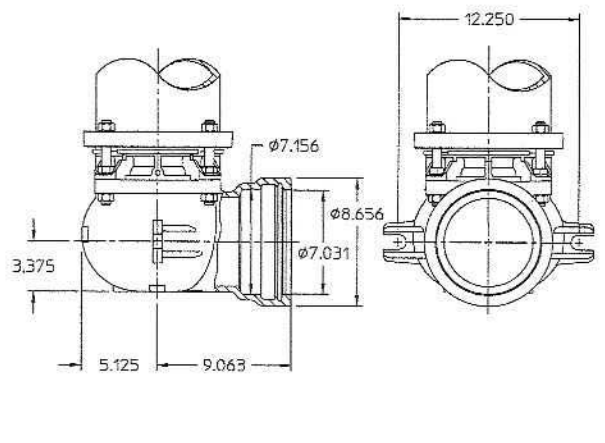
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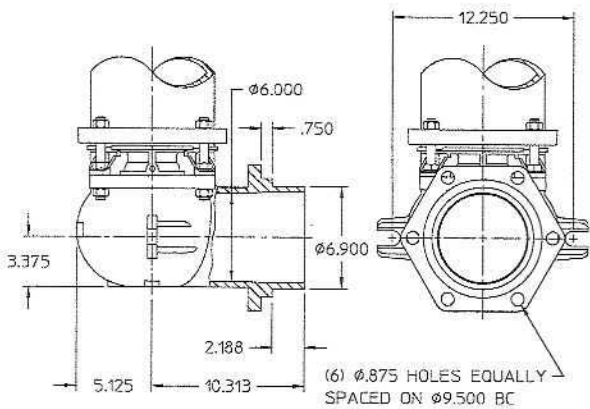




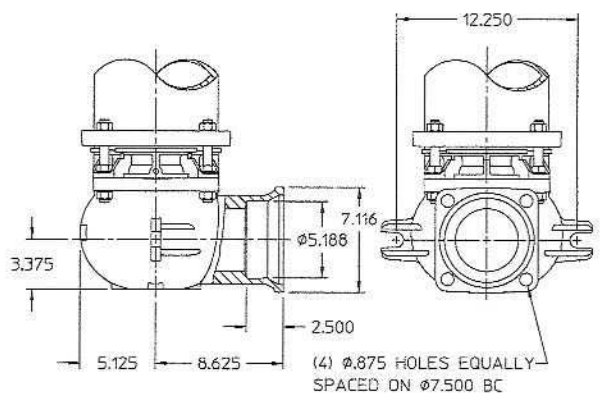
6 INCH FLANGED INLET CONNECTION \*\*\*\*\*



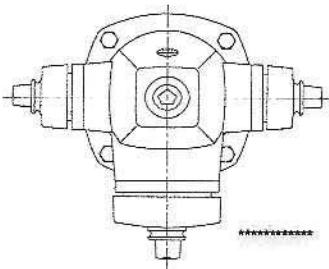
6 INCH TYTON INLET CONNECTION



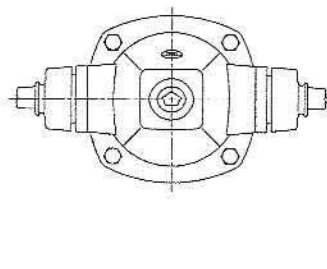
6 INCH PLAIN END W/INTEGRAL MJ GLAND INLET CONNECTION



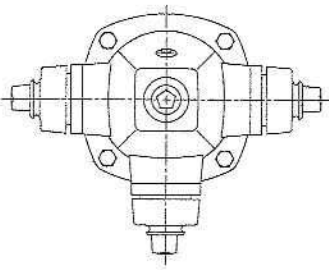
4 INCH MECHANICAL JOINT INLET CONNECTION



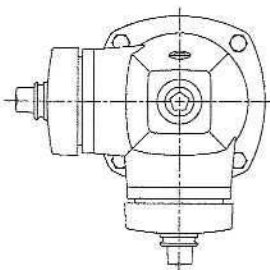
TWO 2-1/2 IN. HOSE NOZZLES AND ONE PUMPER NOZZLE



TWO 2-1/2 IN. HOSE NOZZLES



THREE 2-1/2 IN. HOSE NOZZLES



TWO PUMPER NOZZLES

NOZZLE ARRANGEMENTS

NOTE: THE NOZZLE SECTION MAY BE ROTATED IN THE FIELD TO ANY POSITION.

IL3579



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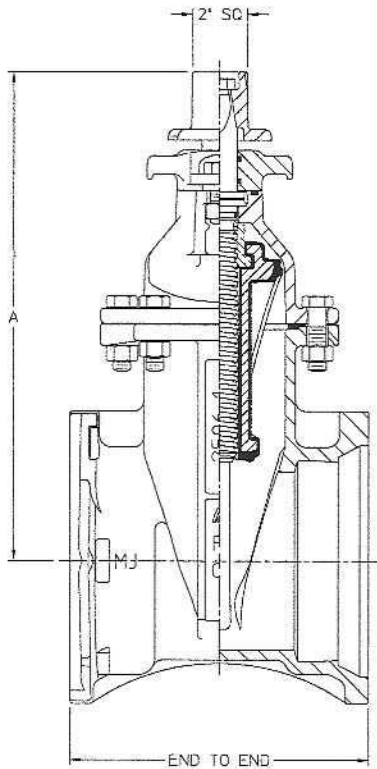
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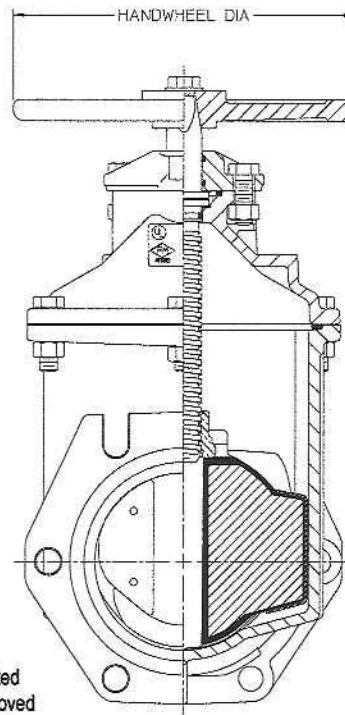
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# AMERICAN Flow Control Submittal Information

## 4" - 12" SERIES 2500-1 RESILIENT WEDGE GATE VALVE, NRS



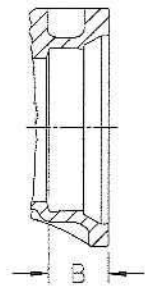
SHOWN WITH 2" OPERATING NUT



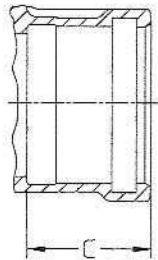
UL Listed  
FM Approved  
AWWA

SK20041101-1

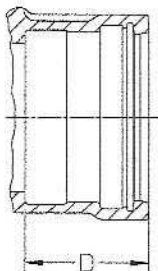
SHOWN WITH OPTIONAL HANDWHEEL



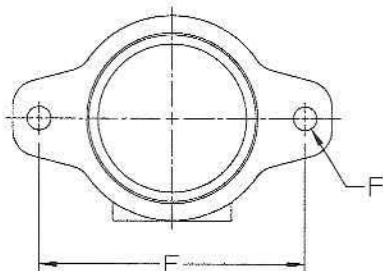
MECHANICAL JOINT (MJ)



PVC  
(NOT AVAILABLE FOR UL/FM)



TYTON<sup>®</sup> (TY)



OPTIONAL END CONNECTIONS

DIMENSION	VALVE SIZE				
	4"	6"	8"	10"	12"
End to End - MJ/MJ	10.00	10.50	11.50	12.50	13.50
End to End - FL/FL	9.00	10.50	11.50	13.00	14.00
End to End - TY/TY	13.00	15.88	17.50	18.75	19.75
End to End - FL/MJ	9.50	10.50	12.38	13.62	14.38
End to End - FL/TY	11.00	13.19	14.50	15.88	16.88
End to End - PVC/ PVC	13.00	15.88	17.50	-	-
A	13.91	17.12	20.47	24.06	27.59
B	2.50	2.50	2.50	2.50	2.50
C	4.00	5.22	5.50	-	-
D	4.00	5.22	5.50	5.62	5.62
E	9.00	11.19	13.50	15.88	18.00
F DIA	1.00	1.00	1.00	1.31	1.31
Handwheel Diameter	10.00	12.00	14.00	15.50	15.50
No. of Turns to Open	14	20	26	32	38



**AMERICAN**

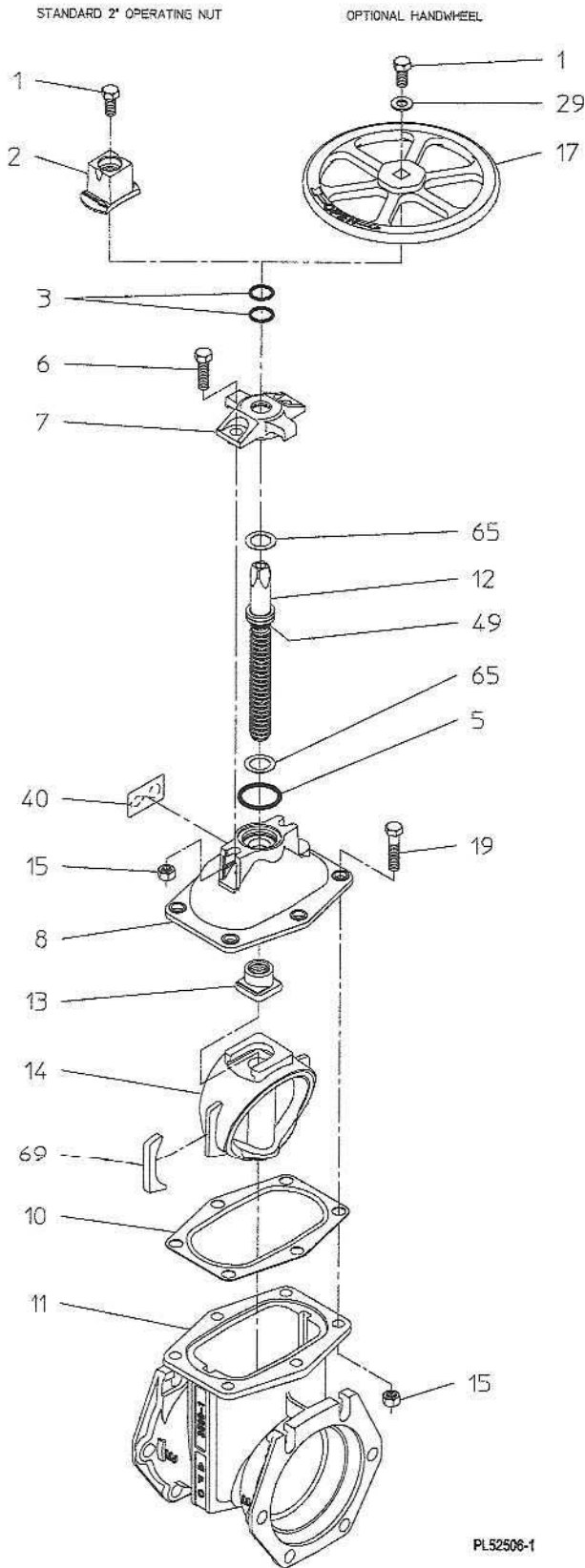
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REF NO.	DESCRIPTION	MATERIAL
1	Hex Head Bolt, 5/8-11 x 1"	304 Stainless Steel
2	Operating Nut, 2" Square	Ductile Iron, ASTM A536
3	O-Ring	Rubber
5	Stuffing Box Gasket	Rubber O-ring
6	Hex Head Bolt, 5/8-11 x 1-3/4"	304 Stainless Steel
7	Stuffing Box	Ductile Iron, ASTM A536
8	Bonnet	Ductile Iron, ASTM A536
10	Bonnet Gasket	Rubber
11	Body	Ductile Iron, ASTM A536
12	Stem	Manganese Bronze, ASTM B763, UNS C86700
13	Wedge Nut	Manganese Bronze, ASTM B763, UNS C86700
14	Resilient Wedge	EPDM Rubber Encapsulated Ductile Iron ASTM A536
15	Hex Nut, 5/8-11	304 Stainless Steel
17	Handwheel	Ductile Iron, ASTM A536
19	Hex Head Bolt, 5/8-11 x 2-1/4"	304 Stainless Steel
29	Flat Washer, 5/8	304 Stainless Steel
40	UL/FM Label	Pressure Sensitive Acrylic Film
49	O-Ring	Rubber
65	Thrust Washer	304 Stainless Steel
69	Wedge Cover	Acetal Polymer

**OPTIONAL MATERIALS ARE AS FOLLOWS**

BOLTS and NUTS: 316 Stainless Steel  
 STEM: Cast NDZ-S Bronze, ASTM B763, UNS C99500  
 STEM: Stainless Steel  
 WEDGE NUT: Silicon Bronze, ASTM B584, UNS C87600

Open Direction:  Left (C.C.W.)  Right (C.W.)

**NOTES:**

1. Available in configurations that are UL Listed and FM Approved with 250 psig rated working pressure.
2. Meets requirements of ANSI/AWWA C515 with 250 psig rated working pressure.
3. Fusion-bonded epoxy-coated in accordance with ANSI/AWWA C550.
4. Certified to ANSI/NSF Standard 61.

Construction shown is typical of the 6-inch size with mechanical joint end connections and is illustrative only. Construction of other sizes and end connection types vary slightly. See elsewhere on this submittal for specific details.

PL52506-1



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