



October 14, 2019

Mr. Paul Brandl
Project Coordinator
Florida EPA DWSRF
Marjory Stoneman Douglas Building, 4th Floor
3900 Commonwealth Blvd.
Tallahassee, FL 32399-3000

**RE: *City of Hollywood, FL
Water Main Replacement Program Project No. 14-5122
SRF Loan Number DW-060470
24" Insertion Valve – AIS Waiver Request***

Dear Mr. Brandl,

As part of a citywide water main replacement program, the City of Hollywood is installing over 21 miles of new distribution water mains within an area bounded by Hollywood Boulevard, Moffett Street, S. Federal Highway and the Intracoastal Waterway. Some of these new mains will connect to an existing 24-inch transmission main along Funston Street and S. 14th Avenue. This transmission main currently feeds existing water distribution systems throughout the City, including some that serve critical facilities, so shutdowns must be kept to a minimum. During construction, City of Hollywood Underground Utilities staff realized that the few valves that exist along the 24-inch transmission main do not close properly. Therefore, in order to disconnect existing distribution mains to be abandoned from the transmission main, prevent loss of water and minimize down time, we are recommending the installation of one (1) 24-inch insertion valve on the 24-inch transmission main along Funston Street, just west of S. 17th Avenue.

According to the contractor's research in Appendix 3, no manufacturer in the U.S. currently produces 24-inch insertion valves that meet AIS program requirements. The one being proposed is manufactured by Advanced Valve Technologies, Inc., and based on the manufacturer's statement in Appendix 2 is only 75% American made. The material cost of the proposed insertion valve is approximately [REDACTED] installed, less than [REDACTED] of the overall contract cost of over \$20.5M. The estimated delivery period is 8 weeks (approximately December 13, 2019) and installation time is four to six hours. The insertion valve is considered an unforeseen condition and incidental to the Project.

Based on the product submittal (Appendix 1), the valve will meet or exceed AWWA Specification C509-09 for resilient-seated gate valves. The valve will be of ASTM 536 65-45-12 ductile iron construction with zinc alloy anodes for corrosion protection, and have a rated working pressure of 250 psi, exceeding the AWWA requirement of 150 psi.

Previously, the US Environmental Protection Agency (EPA) granted project waivers for 24-inch insertion valves pursuant to the "American Iron and Steel" requirements of the Clean Water Act, Section 608, under the authority of Section 608(c)(2), to the following:

- April 16, 2016 - Cape May County, New Jersey
- September 26, 2019 - Township of North Brunswick, New Jersey

Copies of the above approved AIS Project Waivers are included in Appendix 5. It is requested that a similar waiver be implemented for the purchase of one (1) 24-inch insertion valve as manufactured by Advanced Valve Technologies, Inc. and supplied by Core and Main (4310 NW 10th Avenue, Oakland Park, FL) for this project. The supporting documents are enclosed.

Should you have any questions or require additional information please do not hesitate to contact me at the office (305) 673-2025, mobile (786) 368-5365, or email at Juan.Jimenez@kimley-horn.com.

Sincerely,



Juan Jimenez, PE
Project Manager

Enclosures: Appendix 1 - Product specifications and cut sheet
Appendix 2 – Manufacturer's statement of % U.S. made
Appendix 3 - Email correspondence between Contractor and vendor
Appendix 4 – Email correspondence between City of Hollywood and EPA
Appendix 5 – Previous similar waivers approved or submitted to EPA

cc: Wilhelmina Montero, City of Hollywood Public Utilities
Phyllis Shaw, City of Hollywood Public Utilities
Clece Aurelus, City of Hollywood Public Utilities
Thomas Montgomery, FDEP
Sheryl Parsons, USEPA
Kirsten Anderer, USEPA
Chris Mancini, Ric-Man Construction Florida, Inc.

Specifications For Valve Insertion System

Equipment For Valve Insertion
Pipe Size: 14" (350mm), 16" (400mm),
20" (500mm) and 24" (600mm)

1.0 **SCOPE**

This specification covers the complete EZ Valve Insertion System.

1.1 **Equipment Capability:**

The equipment shall be capable of installation, without shutdown, at one location, of pipe sizes in the range of 16" diameter. 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**

<u>Quantity</u>	<u>Description</u>
1 each	End Mill Machine (14" - 24" Capability)
1 each	Drive Motor: Hydraulic
1 each	End Mill Cutter
1 each	Central Drill Hexagonal Screw Drive
1 each	Replaceable teeth
1 each	Rotating Feed Apparatus (14", 16", 20" or 24")
2 each	End Rings (14", 16", 20" or 24")
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 EZ Valve shall be capable of pressure-tight assembly around the exterior of the pipe in which flow is to be stopped at a working pressure not to exceed 250 PSI.
- 2.1.2 The EZ Valve assembly shall be designed as to be easily rotated 120 degrees, perpendicular across the top of the pipe, while riding on three (3) separate rubber gaskets constructed of (EPDM or SBR), by using a perpendicular rotary feed mechanism driven by a chain.
- 2.1.3 The EZ Valve shall be constructed of three pieces (one top and two bottoms) of Ductile Iron castings. These pieces are to be bolted together using Ductile Iron bolts with zinc alloy anodes for corrosion protection. All Ductile Iron is to be manufactured to the Ductile Iron specification of ASTM 536 65-45-12.
- 2.1.4 The EZ Valve shall meet or exceed AWWA Specification C509-09 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 that 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 E coating. A revolutionary process which allows the corrosion inhibitor to penetrate the host metal (ductile iron) NSF 61 as well as seal the ductile iron. Internal and external threads are completely penetrated and covered, unlike fusion bonded epoxy which can chip.
- 2.1.8 The EZ 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>
14"	15.30 - 15.65
16"	17.40 - 17.80
20"	21.60 - 22.06
24"	25.80 - 26.32

3.0 Equipment

The size and weights of each EZ Valve insertion unit shall be, once lowered into an excavation hole, light enough so that two (2) workers can mount the equipment onto the valve. The insertion equipment is designed as to be easily transported in a standard steel jobsite box.

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 same end of the Valve casting from the rotary chain feed drive, to prevent under or over rotation of the 120 Degree milling operation.

3.1.3 The End Mill cutting unit shall be able to cut size 14", 16", 20" or 24" pipe with three (3) sizes of end mill cutter 60 MM for 14", 90 MM for 16" and 20", and 100 MM for 24".

3.1.4 Drive motor shall be electric 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 worker 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, which through the rotation of the Valve casting, cuts a slot, 140 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 an isolation 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 90 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

A comprehensive instruction and maintenance manual shall be provided for the system.

6.0 Delivery

All equipment shall be bid F.O.B. with freight allowed to the purchaser. 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 Year warranty shall cover parts and labor for Equipment and Valves (Excluding Perishable Tooling and O-Rings) barring misuse or lack of routine maintenance.

This waiver request was submitted to the EPA by the state of Florida. All supporting correspondence and/or documentation from contractors, suppliers or manufacturers included as a part of this waiver request was done so by the recipient to provide an appropriate level of detail and context for the submission. There may be documents with project diagrams, schedules, and supplier correspondence in formats that do not meet the Federal accessibility requirements for publication on the Agency's website. Hence, these exhibits have been omitted from this waiver publication. They are available upon request by emailing DWSRFWaiver@epa.gov.