

AMERICAN IRON & STEEL WAIVER REQUEST REVIEW APPLICATION

Cape May County MUA
(Project Owner)

Wastewater – Various Regions
Pump Station Restoration
Phase 1 – Flow By-Passing
Contract No. - WW-19-15
(Name of Project)

NJDEP Project No. S340661-22
(NJSRF Clean Water Funded Project Number)

GENERAL

Description of the Construction Material: 24" Insertion Valve for wastewater application (EZ Valve, Advanced Valve Technologies, Inc.)

Quantity and Unit of Measure: 1 - Unit

Price: \$49,000

Time of delivery or availability: Special fabricated product (12 week lead time)

Location of the construction project: 32nd Street Pump Station, Ocean City, NJ

Name and address of proposed supplier and/or Manufacturer: Advanced Valve Technologies, Inc.

12601 S. Homan Ave., Blue Island, IL 60406. Phone: (708) 489-4900. Fax: (708) 489-4902

Detailed justification for the use of foreign construction materials: There is only one supplier of the 24 inch insertion valve, and the valve is made overseas.

AVAILABILITY WAIVER REQUEST

Domestic Supplier Information: Not Available (no domestic suppliers)

Project Schedule: December 1, 2016 (NTP) - May 29, 2016 (Completion)
(Provide NTP date and completion date along with project schedule)

List Supporting Documentation: (1) - Effort to Locate Record. (2) – Furmanite Email Correspondence
(3) – 24" Insertion Valve Submittal (foreign). (4) – Insertion Valve Specification

Efforts to Locate Available Domestic Source: See attached Record (1)

NJDEP Project Engineer: Robert M. Hopkins, P.E.

NJDEP Section Chief: William P. Machotka, P.E.

Record of Efforts to Locate Available Domestic Sources

* Product Criteria:

Specification Section 02631: Insertion Valves
Subsection 2.01-B: Acceptable Manufacturers:

- 1. Hydra-Stop
- 2. Team InsertValve
- 3. Advanced Valve Technologies EZ Valve Insertion
- 4. Approved Equivalent

* Hydra-Stop:

Hydra-Stop does not sell 24" insertion valves. The largest they make is 16". The Hydra-Stop website shows there manufactured products (<http://hydra-stop.com/index.html>). South State has purchased a 12" domestic insertion valve from Hydra-Stop for this project.

Hydra-Stop
Jason Baldauf (Inside Sales Supervisor)
(630) 756-5217

* Team InsertValve:

On 3/8/2016, South State reached out to Team InsertValve (Team Industrial Services Philadelphia), and spoke with Dave in regards to the 24" domestic insertion valves. Dave said they only make up to 12", and suggested Garrison Enterprises be contacted.

Team Industrial Services Philadelphia
Dave (Sales Rep.)
500 Pedricktown Road
Swedesboro, NJ 08085
(856) 294-9051

* Advanced Valve Technologies EZ Valve Insertion:

In February 2016, Roy Clark of Furmanite (buys direct from Advanced Valve Technologies) stated that no 24" insertion valves are made in America. This claim was reconfirmed on 3/7/2016 via email (see attached). Furmanite (through Advanced Valve Technologies) can provide a 24" foreign insertion valve.

Furmanite
Roy Clark (Business Development Manager)
1224 Forest Parkway, Ste.120
Paulsboro, NJ 08066
(856) 423-5600

* Garrison Enterprises:

On 3/8/2016, South State reached out to Garrison Enterprises, Inc., and spoke with Elbert in regards to the 24" domestic insertion valve. Elbert stated that he does not know of any 24" insertion valves made in America. The only 24" insertion valve he is aware of is from made by Advanced Valve Technologies.

Garrison Enterprises, Inc.
Elbert (Sales Rep)
211 West Elmer Road
Vineland, NJ 08360
(856) 692-6696

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Dylan Skinner

From: Roy Clark <rclark@furmanite.com>
Sent: Monday, March 7, 2016 9:59 AM
To: Dylan Skinner
Subject: RE: CMCMUA Pump Stations - Submittals - SSI Job #12045

Follow Up Flag: Follow up
Flag Status: Completed

From: Dylan Skinner [mailto:dskinner@southstateinc.com]
Sent: Monday, March 07, 2016 9:28 AM
To: Roy Clark
Subject: RE: CMCMUA Pump Stations - Submittals - SSI Job #12045

Roy,

~~The clearance is definitely critical. I've brought the issue to the attention of the Engineer, and expect a prompt response.~~

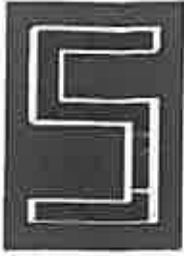
Also, I'm completing the 24" Insertion Valve AIS Waiver Application, and need your help to complete (please see attached).

Here are some of the critical questions:

- 1 – Price (Please provide price of insertion valve) \$49,000
- 2 – Detailed justification for the use of foreign construction materials (predicated on there being no domestic suppliers) Only one supplier of the 24" insertion valve and the valve is made overseas
- 3 – Domestic Supplier Information (are there any?) NO

Any other comments/supporting documentation

Thanks,



**South State, Inc.
General Contractors**

P.O. Box 68
Bridgeton, NJ 08302
Ph: (856) 451-5300
Fax: (856) 455-3461

SUBMITTAL

TO:

Cape May County MUA
1523 Route 9 North
Swainton, NJ 08210

Date: 2/29/2016	Job No.: 12045
Attention: Mike McClerman, PE	
Re: Various Wastewater Regions	
Pump Station Restoration	
Phase I - Flow Bypassing	
Contract No. WW-19-15	

SUBMITTAL NUMBER	SPEC SECTION	DESCRIPTION
221	02631	Insertion Valves, 24in

<u>AGENCY APPROVAL</u>	<u>DESIGNER APPROVAL</u>
<u>CONTRACTOR APPROVAL STAMP</u>	<u>AGENCY SEAL</u>

South State Inc.
APPROVED

By: *[Signature]*

Date: 2/29/2016

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.

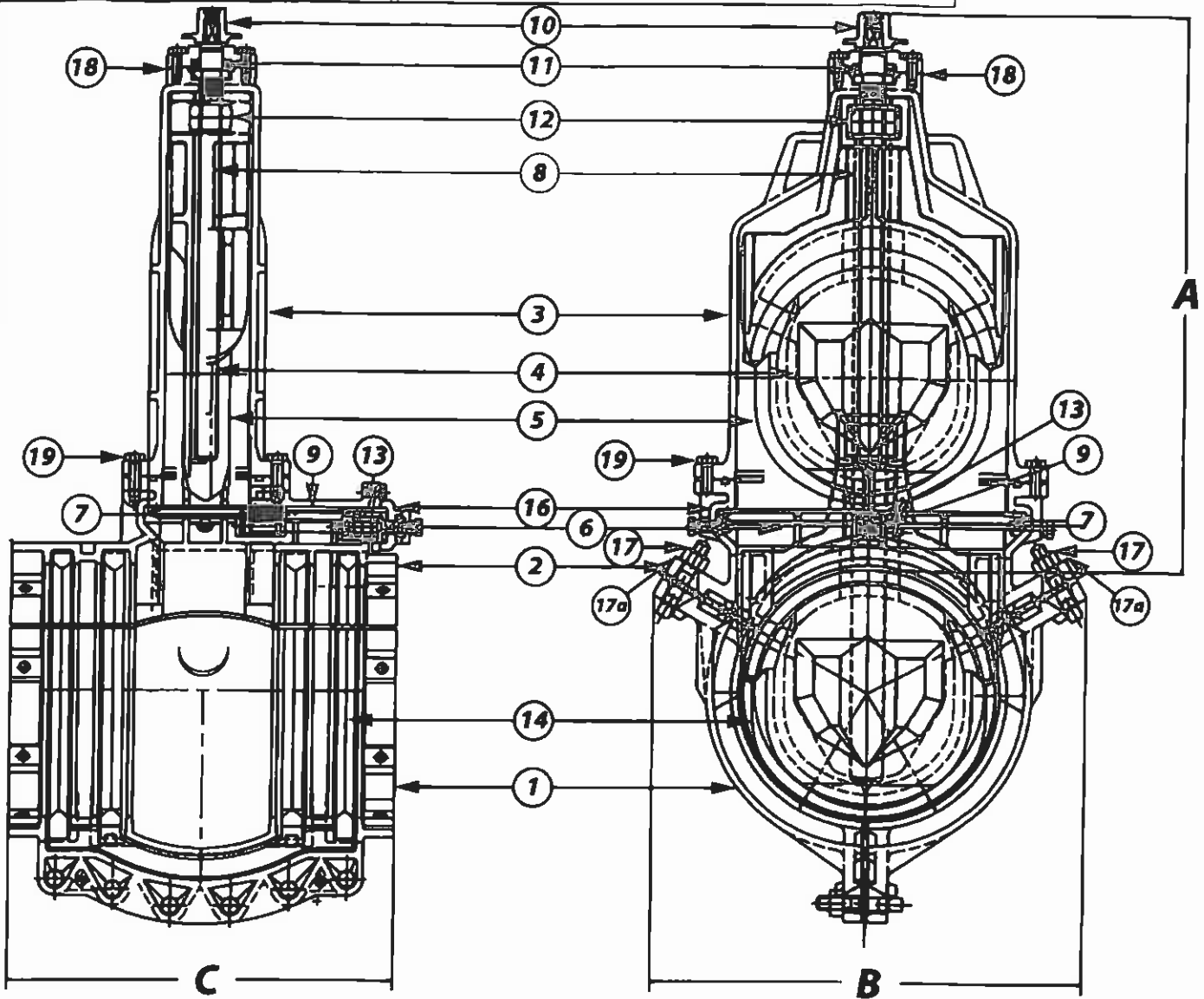
7.0 **Demonstration**

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.

14" ~ 24" EZ VALVES DIMENSIONS AND SPECIFICATIONS



Item No.	Description	Material
1	Bottom Half of Body	DUCTILE IRON
2	Upper Half of Body	DUCTILE IRON
3	Bonnet Body	DUCTILE IRON
4	Gate	DUCTILE IRON
5	Gate Rubber	EPDM
6	Isolation Gate	DUCTILE IRON
7	Isolation Gate Rubber	EPDM
8	Stem (Feed Screw)	STAINLESS STEEL
9	Isolation Gate Stem	STAINLESS STEEL
10	Wrench Nut	DUCTILE IRON
11	Set Collar	BRASS
12	Stem Nut	BRONZE
13	Isolation Gate Stem Nut	BRONZE
14	Gasket	EPDM
15	Chip Flushing Port	
16	EM Cutting Port	
17	Bolts/ Nuts	DUCTILE IRON
17a	Sacrificial Anodes	ZINC
18	O-Rings	EPDM
19	Bonnet Bolts	STAINLESS STEEL



ADVANCED VALVE TECHNOLOGIES

EZ VALVE™

	MEETS AWWA C-509-01		
	A	B	C
14 inch	38	29	26
16 inch	43	31	28
20 inch	46	36	34
24 inch	53	41	44

RATED at 250 PSI



ADVANCED VALVE TECHNOLOGIES, Inc.

**Phone: 708.489.4900 Toll Free: 877.489.4909 Fax: 708.489.4902 Web: www.avtfitings.com
12801 S. Homan Ave, Blue Island, IL 60408**

EZ Valve Specifications For Nominal Size 14" - 24"

- 1.) **Bottom Pieces of Body:** DI. ASTM A536 65-45-12 (AWWA C-509-01)

- 2.) **Upper Piece 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)

SECTION 02631 INSERTION VALVES

PART I - GENERAL

1.01 DESCRIPTION

A. Work Included:

- 1. This Section includes the material requirements and installation information for Insertion Valves.

B. Related Work:

- 1. Other sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of this work.
- 2. Section 02220: Site Excavating, Filling and Grading
- 3. Section 02615: Ductile Iron Pipe and Fittings
- 4. Section 02641: Valves And Piping Appurtenances

1.02 SUBMITTALS

A. Comply with provisions of Section 01300, Submittals

B. Manufacturer's product data:

- 1. Complete materials list of all materials proposed to be furnished and installed under this section.
- 2. Specifications and other data required to demonstrate compliance with the specified requirements.

C. Submit a copy of the manufacturer's warranty.

D. Manufacturer's recommended installation procedures.

1.03 QUALITY ASSURANCE

A. Qualifications of manufacturer:

- 1. Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the ENGINEER.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- B. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the ENGINEER and at no additional cost to the OWNER.
- C. Delivery and storage:
 - 1. During loading, transporting, and unloading, exercise care to prevent damage to materials.
 - 2. Do not drop pipe or fittings.
 - 3. Assure that materials are kept clean.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Proprietary Products: Whenever materials or equipment are described using a certain brand, make, supplier, manufacturer or by specification, such naming shall be regarded as a standard and be intended to convey function, design features, general style, type, materials of construction, character and quality of material or equipment, serviceability and other described essential characteristics.
- B. Acceptable manufacturers:
 - 1. Hydra-Stop
 - 2. Team Insert Valve
 - 3. Advanced Valve Technologies EZ Valve Insertion.
 - 4. Approved Equivalent

2.02 MATERIALS

- A. Ductile Iron Construction:
 - 1. The ductile iron body, bonnet and wedge shall meet the strength and a pressure rating requirements of AWWA C515 or AWWA C509. Insertion Valve shall be ductile iron construction meeting ASTM A536 Grade 65-45-12.

2. Working pressure shall be at least 200 psi. The pressure rating markings must be cast into the body of the Insertion valve.
3. After the installation of the Insertion valve body on to the existing pipe a pressure test of 150 psi shall be sustained for 15 minutes. Once the pressure test is affectively achieved the Insertion valve body must not be moved in accordance with AWWA Standards. If the Insertion valve is moved the pressure test must be completed again. The Insertion valve must not be moved or repositioned once the pressure test is achieved.

B. Resilient Wedge Gate Assembly:

1. The construction of the Resilient Wedge shall comply with ASTM A536 Grade 65-45-12.
2. The ductile iron wedge shall be fully encapsulated with EPDM rubber.
3. The wedge shall be symmetrical and seal equally well with flow in either direction.

C. Fusion-Bonded Epoxy:

1. The Insertion valve is fully epoxy coated on the interior and the exterior.
2. Valve shall be coated with a minimum of 8 mils epoxy in compliance with AWWA C550 and certified to ANSI/NSF-61.

D. All valves shall be non-rising stem and opened by turning 2" square wrench nut to the left or counterclockwise

F. Hardware: Bolting materials shall be made of stainless steel.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Prior to installation of the work of this section, carefully inspect the installed work of all other trades and verify that such work is complete to the point where this installation may properly commence.
- B. Verify that work may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the *ENGINEER*.
- C. Do not proceed until unsatisfactory conditions are corrected.

3.02 INSTALLATION

- A. Valves shall be set and joined to the pipe in the manner specified in Section 02615 "Ductile Iron Pipe and Fittings" for installing and joining ductile iron pipe.

- B. Valves shall be set be encased in polyethylene in the manner specified in Section 02615 "Ductile Iron Pipe and Fittings" for installing polyethylene encasement. Flat sheets can be used to wrap the valves.

(END OF SECTION)