SECTION 22 1319.33 – BACKWATER VALVE (BMU)

PART 1.0 - GENERAL

1.1 SCOPE OF WORK

A. This specification covers the manufacturers 'requirements for PVC Backwater Valves. Backwater Valves shall meet or exceed all applicable ASTM, NSF and CSA standards.

1.2 SECTION INCLUDES

A. This Section includes the following:

1. Backwater Valve

1.3 RELATED REQUIREMENTS

A. SECTION 01 3000 – ADMINISTRATIVE REQUIREMENTS

B. SECTION 33 3100 – SANITARY SEWER UTILITIES (BMU)

1.4 PRIOR APPROVAL

A. Approval prior to bidding is necessary if it is intended to use materials and equipment other than those specifically named in Approved Manufacturers. Instructions for obtaining such approval are specified in the General Requirements. Prior approved manufacturers shall be named by Addendum.

1.5 CONTRACTOR LICENSE AND PERMITS

A. Any Contractor installing or repairing private water services, shall obtain a City of Brookings PLUMBING CONTRACTOR LICENSE as specified in Section 22-161-"Required" as found in Article III-PLUMBING of the City of Brookings Code of Ordinances.

B. The Contractor shall be required to obtain any other permits or license required by the project manual. It shall be the Contractor sole responsibility to determine which license and permits are needed for the completion of the project.

1.6 QUALITY CONTROL

A. Testing and/or retesting of materials because of nonconformance to the specified requirements shall be performed by an independent firm as per the instructions of the Engineer of Record.

B. Payment for retesting performed during the Contract period and during the warranty period will be the responsibility of the Contractor.

1.7 SUBMITTALS

A. The Contractor shall submit the number of copies that the contract requires plus one copy that the Engineer of Record will retain. The Contractor shall obtain shop drawing approval before any of the work related to that material is performed.

B. Shop drawings and data shall be submitted for, but not be limited to, the following items:

1. Manufacturer's Literature and Data Including:

a. materials of fabrication,

b. dimensions,

c. operating characteristics,

d. size and

e. location of each pipe connection, furnished specialties, and accessories.

PART 2.0 - PRODUCTS

2.1 BACKFLOW PREVENTERS

A. Backflow preventer or backwater valve shall be designed as sewage check valve to prevent water from flowing back from the wastewater collection system into a residence.

B. Valve assembly shall include threaded cover to allow for access and valve flapper which seals closed while not in use. Flapper shall be installed into valve body via removable carrier and allow unrestricted, unidirectional flow.

C. Valve body shall be adaptable to either shallow or deep bury installations and be designed in accordance with South Dakota Plumbing Code and ASME A112.14.1. Valve shall be made of PVC or ABS plastic and shall be solvent welded to sewer service piping.

D. Acceptable manufacturers of backflow preventer shall be Oatley model 439XX, Sioux Chief 869 Series, IPS Corporation Model No. BWV4A, NDS Model 475P/R or engineer approved equal.

PART 3.0 - EXECUTION

3.1 OWNER OPERATE

A. No pumps, valves, or other appurtenances of the existing sanitary sewer collection shall be operated for any purpose by the Contractor. BMU staff shall be the only authorized operator of existing collection system.

3.2 BACKFLOW PREVENTER INSTALLATION

A. Backflow preventers shall be installed on all new construction with sub-grade levels. Slab on grade buildings or basement injector pumps are exempt from this requirement. The backflow preventer shall be plumbed on the main sewer service main to protect sub-grade levels from surcharges in the public sanitary sewer collection system. Sanitary sewer flows from the at-grade and/or above-grade levels shall be plumbed to by-pass the backflow preventer.

B. Installer shall follow backflow preventer manufacturer’s installation requirements and ensure the 2% minimum slope on the sewer service line continues through the backflow preventer valve installation. All new construction shall have the backflow preventer installed within the building footprint for accessibility and maintenance purposes. An exterior located backflow preventer valve will not be allowed on new construction.

C. Backflow preventers, installed with new construction, shall be installed in the mechanical, or utility room. Plumber shall be responsible for installing the backflow preventer per the requirements of these specifications and SD State Plumbing Code. Backflow preventers installed in finished areas or areas that will be finished at a later date (future living rooms, bedrooms, etc.) shall not be allowed and shall be relocated to an approved location.

D. The access cover for the backflow preventer shall be brought up to the sub-grade finished floor for ease of access and maintenance as required by SD State Plumbing Code 710.6.

E. Installer shall install a 4.5”x4.5” (minimum size) adhesive-backed sticker indicated that a backflow preventer is installed at this location and be affixed in a visible spot near the backflow preventer installation. Sticker shall include information to let the customer know that there is backflow preventer installed in this location and that regular maintenance is required with this type of equipment.

PART 4.0 - MEASUREMENT AND PAYMENT

4.1 X” BACKFLOW PREVENTER

A. Payment for coupling adapters shall be at the contract unit price per each type and size of sanitary sewer backflow preventer. Payment shall be full compensation for all materials, labor, equipment, and incidentals necessary to complete the work, included but not limited to backflow valve, notification sticker, PVC riser and incidentals necessary to complete the work.

END OF SECTION 22 1319.33