

## CSI Specification

REV. 2

12/7/15

### Article I. GENERAL

#### Section 1.01 Scope

- (a) This specification shall govern the implementation, performance, material and fabrication pertaining to the **StormTank<sup>®</sup> Shield** Stormwater Treatment Device. The stormwater treatment device shall be manufactured by Brentwood Industries, Inc. 500 Spring Ridge Drive, Reading, PA 19610 (610-374-5109), distributed by XXXXX, and shall adhere to the following specification.
- (b) All work is to be completed per the design requirements of the Engineer of Record and to meet or exceed the Manufacturer's Design and Installation Requirements.

#### Section 1.02 Submittals

- (a) At least 10 days prior to bid, submit to Engineer the following to be considered for pre-qualification to bid:
  - i. A list of materials to be provided for work under this Article, including the name and address of the materials producer and the location from which the materials are to be obtained
  - ii. Three (3) hard copies of the following:
    - 1) Stormwater Treatment Devices: Brentwood Industries shop drawings, specification sheets, installation instructions and maintenance guidelines
  - iii. Stormwater Treatment Device Samples for review:
    - 1) Stormwater Treatment Devices; provide a single unit as specified for review.
      - a) Sample to be retained by Owner
      - b) Manufacturers named as acceptable herein are not required to submit samples

#### Section 1.03 Quality Assurance

- (a) Materials
  - i. All materials, methods of construction, and workmanship shall conform to applicable requirements of Brentwood Industries, unless otherwise specified.
  - ii. The quality of material and the finished components shall be subject to inspection by the Engineer. Such inspection may be made on-site upon delivery or at any point thereafter. The components shall be subject to rejection at any time if material fails to meet any of the specification requirements, even though sample components may have been accepted as satisfactory. Components rejected after delivery to the site shall be marked for identification and shall be removed from the site at once.

(b) Inspection

- i. All components shall be inspected for general appearance, dimensions, soundness, etc.
- ii. Upon completion of relevant structure installation, and prior to installation of the treatment device, the structure shall be inspected by Specifying Engineer or authorized representative and be signed off on by the Engineer of Record as acceptable and meeting manufacturer's recommendations (including watertight installation).
- iii. Upon completion of the installation of the stormwater treatment device (as specified), the structure shall be inspected by Specifying Engineer or authorized representative and signed off on by the Engineer of Record as acceptable and meeting manufacturer's recommendations.

(c) Defects

- i. Products with structural defects shall be immediately removed and replaced with acceptable parts. The Specifying Engineer, before final acceptance, shall carefully inspect repairs/replacements.

## Section 1.04 Division of Responsibility

(a) Stormwater Treatment Device Distributor/Manufacturer

- i. The Distributor/Manufacturer shall be responsible for delivering the stormwater treatment device to the site. The system includes all components necessary for the installation of the stormwater treatment device required per the Drawings and manufacturer's recommendations.

(b) Contractor

- i. The Contractor shall be responsible for preparing the structure for the installation including, but not limited to, installation of a watertight structure, ensuring the mounting surface is properly prepared and furnishing all labor, tools and materials needed.

## Section 1.05 Delivery, Storage, and Handling

- (a) Components shall be unloaded, handled and stored in an area protected and in a manner to prevent damage.

## Article II. Materials

### Section 2.01 Fasteners

- (a) Screws shall be a Tapcon® Brand meeting the following requirements:

- ii. ¼" diameter 2-1/4" long Envirex coated (blue) 5/16" hex washer head.
- iii. Shall meet ICC-ES Evaluation Report ESR-1671.

- (b) Washers shall be a sealing washer meeting the following requirements:

- i. Shall be a sealing washer with EPDM sealing material bonded to Galvanized Steel and be sized for ¼" fasteners with a minimum thickness of 0.17 inches.

## Section 2.02 Oil-Resistant Neoprene/Vinyl/Buna-N Foam

- (a) Oil-Resistant Neoprene/Vinyl/Buna-N Foam shall meet the following requirements:
- i. Material shall have a coarse-cell texture finish and be formed from a blending of Neoprene/Vinyl/Buna-N.
  - ii. Material shall be an adhesive back strip with a 2-5 psi firmness (extra soft), a density of 4-6 lbs./cubic foot and meet ASTM D1056 2C1 and 2C2, as well as UL 94HF1 standards.

## Section 2.03 Carbide Tip Drill Bit

- (a) Carbide Tip Drill Bit shall be a Tapcon® Brand bit meeting the following requirements:
- i. The bit shall be constructed with a 3/16" bit size, 3/16" shank diameter and be 3-1/2" in length.
  - ii. The bit shall be manufactured by Tapcon® (Mfr. Model #790-1014) or approved equal.

## Section 2.04 Stormwater Treatment Devices

- (a) The Stormwater Treatment Devices shall be made from recycled Polyethylene to meet the following requirements:
- i. Polyethylene Material
    - 1) Thermoformed from ¼" thick Polyethylene sheet and trimmed to a dimension as specified by manufacturer.
  - ii. Stormwater Treatment Devices should be sized and positioned to fully cover the discharge opening.
  - iii. The bottom of the device shall extend downward a minimum of 12" below the bottom of the outlet pipe opening.
  - iv. Stormwater Treatment Devices to include the following features:
    - 1) A ventilation port built into the mounting flange
    - 2) An access port formed into the hood
    - 3) Hand grips locations to assist with mounting the device
    - 4) Pre-drilled mounting holes
  - v. Stormwater Treatment Devices to be supplied with an installation kit that includes the following:
    - 1) Installation Instructions
    - 2) Oil-Resistant Neoprene/Vinyl/Buna-N Foam
    - 3) Fasteners (Adequate number of screws and washers to fully install)
    - 4) Carbide Tip Drill Bit
- (b) Rejection
- i. The Stormwater Treatment Devices may be rejected for failure to meet any of the requirements of this specification.

## **Article III. EXECUTION**

### **Section 3.01 General Conditions**

- (a) Review manufacturer's installation procedures and coordinate Sub-surface Stormwater Storage System installation with other work affected, such as grading, excavation, utilities, construction access, erosion control, etc.

### **Section 3.02 Storm Structure Installation and Preparation**

- (a) The structure shall be installed to ensure a watertight seal of all joints and penetrations. All mounting surfaces shall be smooth and free of loose material or defects and all pipe penetrations shall be cut flush to the structure.
- (b) If Contractor fails to install the structure properly, the Contractor shall remove the unsuitable portion of the installation and install the structure to the requirements of the Engineer of Record and manufacturer's recommendations to ensure proper fit and watertight seal.
- (c) If in the opinion of Engineer of Record or authorized representative the structure is unsuitable for utilization; it shall be removed or repaired as directed by the Engineer of Record.

### **Section 3.03 Installation of Stormwater Treatment Device**

- (a) Installation procedure, as follows, shall be followed by the Contractor. The Contractor shall also reference the Manufacturer's Installation Guidelines, and where any discrepancy exists the Engineer of Record reserves the right to contact the Manufacturer's Representative prior to continuation.
- (b) Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.
  - i. Prepare the back of the mounting flange by cleaning and drying the surface
  - ii. Apply the oil-resistant foam to the mounting flange utilizing the adhesive strip side of the foam.
  - iii. Ensure the structure is smooth and free of loose material.
  - iv. Place the device as to align the top of the pipe with inside of the upper mounting flange.
  - v. Utilizing the pre-drilled holes, drill pilot holes for the fasteners on either side of the built-in vent and attach the device to the structure wall with the supplied fasteners.
  - vi. Once secured to the wall, continue to drill pilot holes for the remaining screw locations and attached fully attach the device to the wall utilizing the remaining fasteners.

### **Section 3.04 Cleaning**

- (a) Perform cleaning during the installation of work and upon completion of the work.
- (b) Remove from site all excess materials, debris, and equipment. Repair any damage to adjacent materials and surfaces resulting from installation of this work.

## **END OF SECTION**



Distributed by:  
R. H. Moore & Associates, Inc.  
(O): 813-988-0200 (F): 813-985-4533  
info@rhmooreassociates.com  
www.rhmooreassociates.com