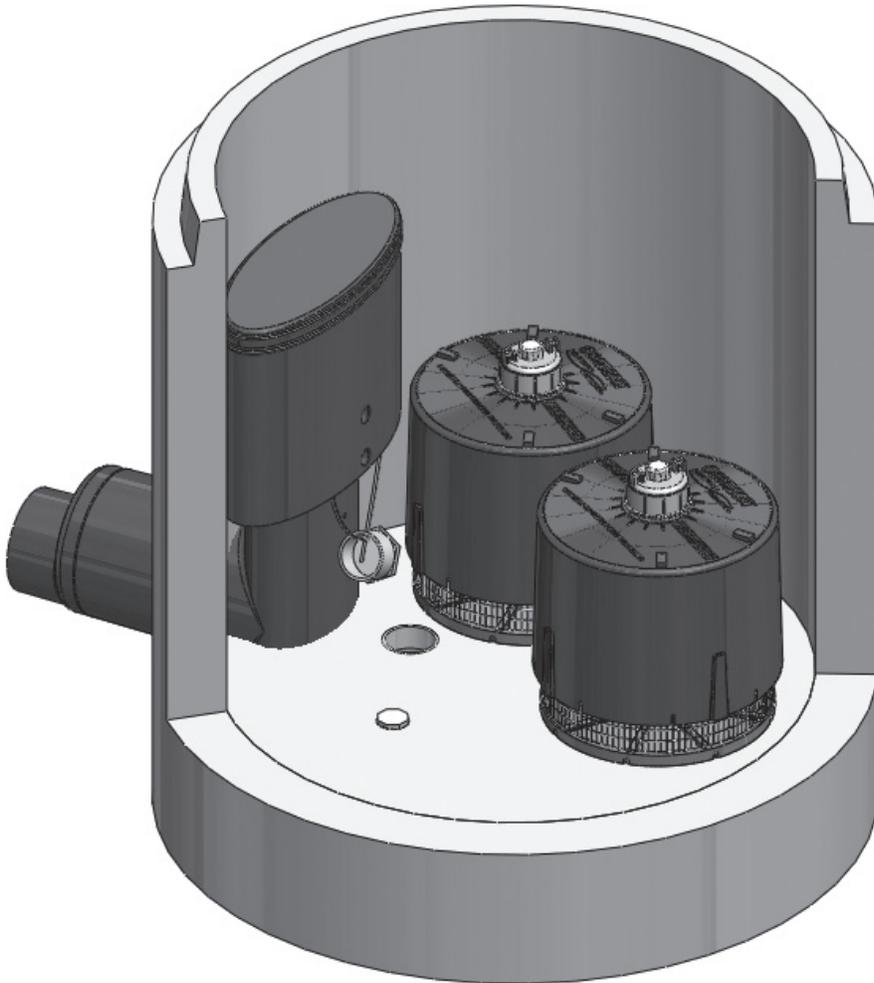

Installation Guide For Contractors



Safety Notice

Confined Space Entry

Secure all equipment and training to meet applicable local and OSHA regulations regarding confined space entry.

Unloading and Handling

Any unloading/handling suggestions or guidance is beyond our scope of work but can be obtained from the precaster. Contact Contech if contact information for the precaster is needed.

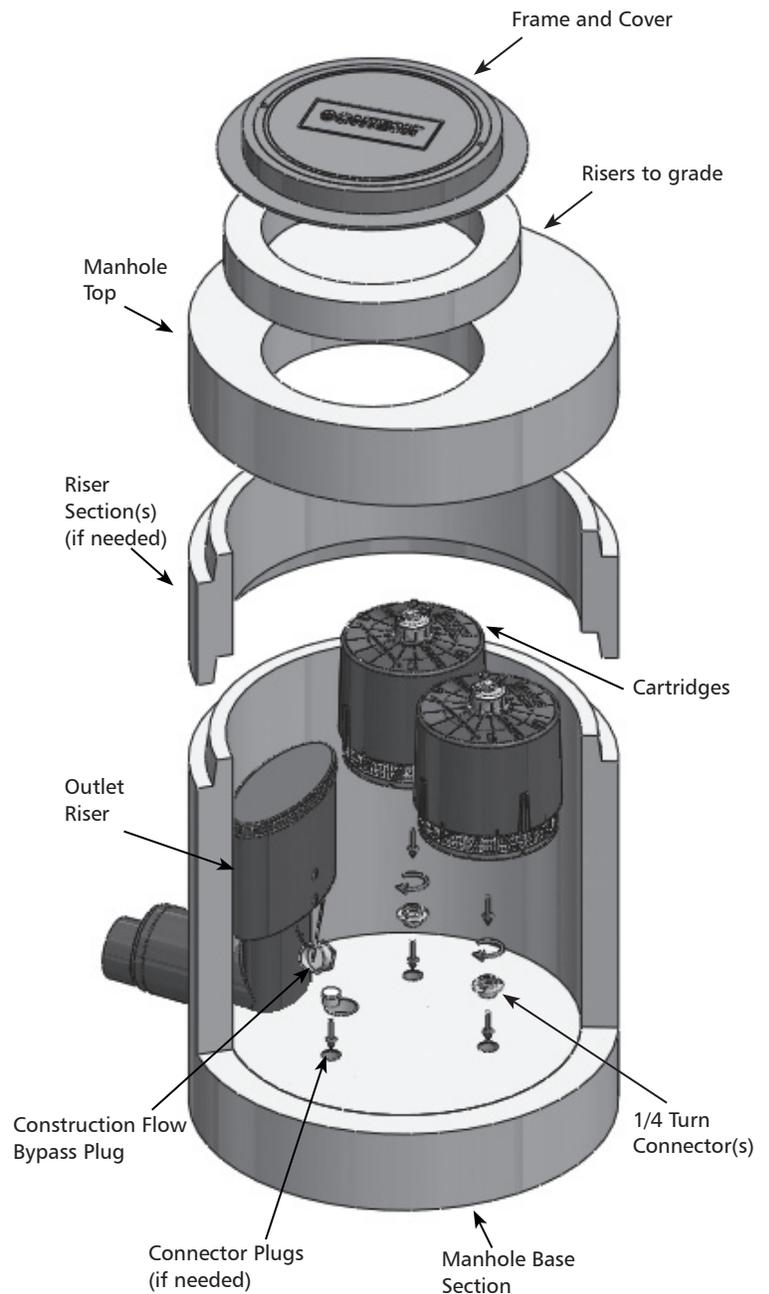
Personal Safety Equipment

- Fall protection equipment
- Gloves
- Hard hat
- Eye protection
- Ear protection
- Respiratory protection

Manhole StormFilter Parts List (what to expect)

Typically, the MHSF will arrive on site with components pre-installed

- Manhole Base Section (diameter per plans)
 - Flow Kit: embedded in MH base
 - Manhole Outlet Riser: embedded in MH base, outlet stub grouted through MH hole.
 - 1/4 Turn Connectors: glued to flow kit
 - Connector Plugs: all unused cartridge connections are plugged
 - StormFilter Cartridges: count, size and media type per plans (pre-installed)
- Construction Flow Bypass Plug (attached to outlet riser)
- Manhole Riser sections (if needed, per plans)
- Manhole Top/Cone (per plans)
- Risers to grade (per plans)
- Frame(s) and Cover(s) (per plans)
- Butyl mastic sealant



Contractor Supplied Material

Outlet pipe fitting — Select the appropriate fitting to join the 8"/12" MHSF outlet stub to the downstream pipe per plans

Grout — Non-shrink grout to connect the Inlet pipe(s) to the MHSF

Base Preparation

Compact undisturbed sub-grade materials to 95% of maximum density at +/-2% of optimum moisture content prior to placement of crushed rock. Crushed rock base material shall be six-inch minimum layer of ¾-inch minus rock. Unsuitable material below sub-grade shall be replaced per site engineer's recommendation.

Crane Selection

The contractor is responsible for selecting the appropriate equipment to unload and set the Manhole StormFilter. Contech will provide the contractor with the weights of the precast units. A representative from the crane company should visit the jobsite and review pertinent information (shop drawings, weights, etc) prior to the selection of the crane. The crane representative and/or contractor should determine the distance from center of the crane's position to the center of the final position of the precast units. The weight and the distance from the center of the crane's position to the center of the final position of the precast units determine the crane size. Locate the crane as close to the installation as possible and follow all recommendations of the crane supplier. The staging area for the crane must be stabilized and crane supplier should be prepared to supply outrigger mats.

Setting the Manhole StormFilter

Ensure the inlet(s) and outlet are oriented per the plans. Manhole floor shall slope ¼ inch maximum across the "width" and slope downstream 1 inch per 12 foot of "length" ("Length" is defined by a line running from the invert of the outlet through the center of the manhole and "width" is the perpendicular to the "length"). Manhole top finish grade shall be even with surrounding finish grade surface per the plans unless otherwise directed by the site engineer.

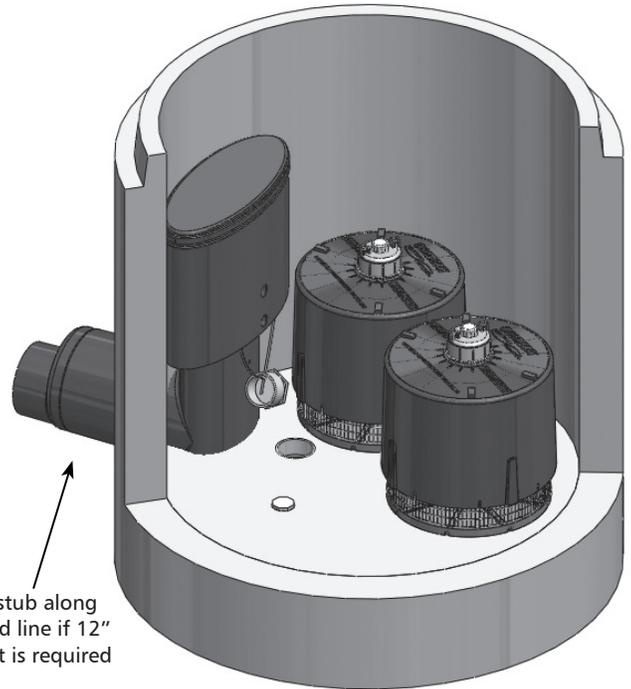
Assembling Internal Components

In most cases, internal components have been assembled inside the manhole before shipment and will arrive on site pre-installed. The contractor should:

- Verify flow kit and outlet riser assembly are installed securely and outlet stub is grouted

- Ensure all cartridges are attached to the ¼-turn connectors (some may have been disconnected to provide access to lifting points)
- Ensure all unused cartridge connections are plugged
- The top to the outlet baffle is securely in place

NOTE: in some cases, the Manhole StormFilter is designed without internal overflow. In these instances, there is no baffle on the riser, and the riser is sealed.



Pipe Connections

Inlet pipe(s) shall be stubbed in and connected to precast manhole according to Engineer's requirements and specifications. Contractor to grout all inlet pipes flush with or protruding up to 2 inches into interior of vault per plan and specifications.

Outlet Pipe stub shall be connected to the outlet pipe with a Fernco connection. If necessary, trim the stub along the scored line to enlarge the outlet pipe stub to meet the plans.

Ballast

When required, ballast shall be placed to the dimensions specified by the Engineer and noted on the plans. Ballast shall not encase the inlet and/or outlet piping and 12" of clearance should be provided between the ballast and the inlet/outlet pipes.

Protecting the Filter System from Construction Run-off

The Manhole StormFilter was selected by Engineer as a **Post-Construction** Stormwater Treatment Best Management Practice. It is the responsibility of the contractor to ensure appropriate erosion control measures and Construction BMPs are in place to protect the Manhole StormFilter from sediment and other debris until construction is complete and the site is stabilized. Methods for protecting the cartridges include:

1. Remove cartridges from the manhole and store appropriately. Cartridges shall be reinstalled when the system is placed on-line after construction is complete
2. Leave cartridges in the vault and plug the outlet of an upstream flow splitter or bypass structure to prevent run-off from reaching the MHSF
3. Ensure the construction bypass hole is open and the plug is attached to the outlet riser for installation after construction is complete

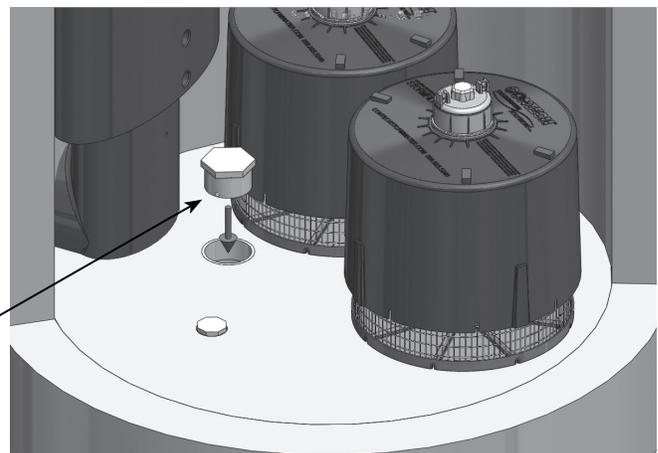
The method ultimately selected shall be at the Contractor's discretion and the Contractor's risk

Risers, Covers and Closing the System

The Manhole StormFilter is delivered with the necessary risers and covers to bring the unit to grade. It is the contractor's responsibility to assemble the Manhole StormFilter per the plans and as directed by the Engineer.

- Place a layer of 1/4 x 1 1/2 butyl mastic manhole sealant between the manhole base, riser sections and top
- Manhole access opening should be oriented over steps (if provided) and oriented away from the outlet riser according to the contract drawing

Insert Construction Flow Bypass Plug



Backfill

Backfill material and placement method should be performed in accordance with the construction plans and as directed by the Engineer.

Activating the System

Once construction is complete, landscaping is in place, and the site has stabilized, the contractor is responsible for activating the Manhole StormFilter system. Depending on the method of protecting the MHSF from construction runoff, the contractor should:

1. Inspect the system to ensure maintenance is not required (see **StormFilter Inspection and Maintenance Procedures**)
2. If the cartridges were stored outside the vault during construction, install the cartridges and ensure all empty connectors are plugged
3. Remove all upstream pipe plugs that were used to prevent runoff from reaching the StormFilter. (Standing water should be pumped out prior to entering any underground structure).
4. Plug the construction bypass port in the floor of the manhole with supplied 4" pvc plug.

Support

- Drawings and specifications are available at www.ContechES.com.
- Site-specific design support is available from Contech Stormwater Design Engineers.

©2013 Contech Engineered Solutions LLC

Contech Engineered Solutions LLC provides site solutions for the civil engineering industry. Contech's portfolio includes bridges, drainage, sanitary sewer, stormwater and earth stabilization products. For information on other Contech division offerings, visit ContechES.com or call 800.338.1122

Nothing in this catalog should be construed as an expressed warranty or an implied warranty of merchantability or fitness for any particular purpose. See the Contech standard Conditions of Sale (viewable at www.ContechES.com/cos) for more information.

800.925.5240
www.ContechES.com

