

# INSTALLATION GUIDE

Consult local regulations, guidelines and permitting/engineering requirements prior to beginning a Flex MSE project



#### **FILLING & CLOSING FLEX MSE GTX BAGS**

Fill the Flex MSE Bags with a mix of 70% clean granular soils and 30% high quality organic materials by volume. Clayey and silty granular soils are not permitted. Fill the Bags consistently to the top and seal them tightly with a standard 50lb/23kg cable tie. Re-bar ties, sewing, stapling and hog rings are also acceptable.



### PREPARATION

Dig a trench a minimum of 12"/300mm deep and 12"/300mm wide for the length of your structure. Add 6"/150mm of coarse, clean granular material to the trench for leveling. The purpose of the trench is to lock the base into place and protect the structure from being undermined by erosion. Taller or in-water structures may require deeper entrenchment, per a designing Engineer's specification. For water applications, armoring the base layers of Flex MSE bags with appropriate hard material is considered best practice.



## **PLACE FLEX MSE BAGS & INTERLOCKING PLATE AT BASE**

Place the Flex MSE interlocking Plate on the ground below the first row of Bags for added strength. Place the interlocking Plate so that you are reading the "This Side Up" label and the Plate's Arrow is pointing toward the front of your structure. Space the interlocking Plate so that it will lie directly below the joint of each Bag (approx. 30"/750mm apart).

Place the first row of Bags lengthwise in your trench, spacing them with no more than 1"/25mm between the ends of the Bags. Use a hand tamper or light compactor to flatten the Bag into the open spaces and create a uniformly level course. \*\*Bag seams should face the back of the wall.



#### PLACING SUBSEQUENT ROWS

Place a Flex MSE interlocking Plate over the joints of all Flex MSE Bags on each row. \*\*Offset each new row of Bags in a "running bond" pattern over the previous row so that the interlocking Plates and Bag joints lie below the middle of Flex MSE Bag on top. After placing the Bag with the desired set back, tamp or walk on top of Bags to lock them onto the interlocking Plate. The Bag face may shift forward with compaction so monitor your set-back as you build the structure. It is recommended to use a batter board or other method of measure to ensure that your angle is consistent.



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#### Where required - GEOGRID PLACEMENT

Where soil reinforcement is needed place the lengths of appropriate Geogrid from the front face of the Bags toward the back of the fill area. \*\*Orient the Geogrid in the correct direction of its strength. Place the interlocking Plate over, or under, the Geogrid at the joints between the Flex MSE Bags. Pull the Geogrid snug, removing folds and wrinkles. Place the next layer of Bags as per Step 4 over the interlocking Plate and Geogrid. Walk on or tamp the row to engage the Flex MSE Plate. Place backfill soil from the front face of the structure to the back of the fill zone; this technique keeps the Geogrid flat and tightly connected to the face.

#### **BACKFILLING & COMPACTING THE STRUCTURE**

Backfill and compact the fill materials after every two rows of Bags, or per Engineer. Structures with a very gentle angle may require partial backfilling every row to prevent Bags from slumping back. Compaction should be done on no more than 10"/250mm thick layers of fill. A vibrating plate compactor is preferred. \*\*The typical clean gravel fill used behind concrete units is not recommended for Flex MSE structures. Vegetation will penetrate the Flex MSE Bag and grow into the backfill zone, further stabilizing the structure.



Live Planting



Live Staking/ Brush Layering

#### VEGETATION

Vegetation can be installed during or upon completion of construction. Brush Layering and Live Staking are done as you build the wall. Live Planting and Hydroseeding are done upon completion.

When Live Planting the wall, make up to three small 3"/75mm by 3"/75mm plant pocket ( $\mathbf{L}$ ) cuts in each Bag to insert up to a 4"/100mm plant plug. \*\*Thoroughly saturate the structure prior to planting.

Vegetation choices are the owner's preference and should be discussed with local experts. Choosing low growing grasses, small bushes and groundcover that are suitable for the local climate and exposure will decrease water needs and increase plant viability.

# QUESTIONS? Call 1-877-349-5945 Or Visit www.FlexMSE.com/install