

# ArmorFlex Field Cabling Instructions



THESE INSTRUCTIONS ARE INTENDED FOR USE BY FIRST TIME INSTALLERS, INCLUDING GENERAL AND SUBCONTRACTORS, OF ARMORFLEX BLOCK BY THE METHODS OF PLACING AND LACING IN A FIELD ENVIRONMENT. THE USERS OF THIS INSTRUCTION SHEET SHOULD BE FAMILIAR WITH THE ITEMS LISTED IN THE "EQUIPMENT AND PARTS" SECTION OF THE INSTRUCTIONS. THIS PAPER SHOULD BE PROVIDED DURING THE BID PROCESS AND DURING ANY CONSTRUCTION PHASE WHEREAS QUESTIONS MAY ARISE.

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## **Instructions for Placing and Lacing of ArmorFlex Block in a Field Environment**

If you have a basic understanding of construction methodologies and practices, you can install ArmorFlex Erosion Control Mattresses by the placing and lacing method, in a cost effective method. ArmorFlex Erosion Control blocks provide a great alternative to rip rap crushed stone. Once ArmorFlex is installed properly it provides an aesthetically pleasing, permanent erosion control solution.

The installation of ArmorFlex block can be divided in these steps: (1) Preparing the Sub-grade, (2) Installing the geotextile, (3) Installing the ArmorFlex Block, (4) Installing cable to lace ArmorFlex Mattresses, (5) Finishing Installation

### **Equipment and Parts**

In order to install ArmorFlex correctly you will need the following tools:

- ❖ Rakes
- ❖ Shovels
- ❖ Sand and / or additional stone (0.5" -1.0" diameter)
- ❖ Geotextile Fabric
- ❖ Fabric staples
- ❖ 5,000lb capacity forklift
- ❖ Quantity of ArmorFlex block to fulfill appropriate area of coverage
- ❖ 3/16" Galvanized Aircraft Cable
- ❖ 3/8" ID x 1 ½" OD Flat Fender Washers
- ❖ 3/16" Aluminum Duplex Sleeves
- ❖ Hammer
- ❖ Excavator
- ❖ Optional:
  - ❖ Plate Compactor
  - ❖ Backfill materials with seeding

## Preparing the Sub-grade for ArmorFlex Installation

**WARNING:** Sub-grade Preparation is CRITICAL.

**NOTE:** Due to the area of coverage is the determining factor of material quantities required, calculate the area to be covered prior to purchasing the accessory materials, by measuring the square footage area using length and width calculations.

### Purchase the block, fabric and cable.

1. Order the block equal to the amount area of coverage required.  
**NOTE:** Purchase 3% extra block to take into account normal installation breakage.
2. Order cable by calculating the square footage and multiplying it by two.
3. Order Fabric by calculating 20% above area of coverage to allow for overlap.

ArmorFlex block can be installed on any slope and in any soil conditions, best results can be achieved by providing a level, smooth sub-grade. In order to ensure an aesthetically pleasing installation, the following steps are required to be followed to ensure a level sub-grade.

1. Clear the area of any foreign debris. Use of small hand tools, such as rakes and shovels to obtain a smooth slope is recommended.
2. Soft soils may require the use of additional stone (0.5"-1.0" diameter) to be dispersed among the sub-grade.



Figure 1. Preparing the Sub grade

## Installing the Geotextile Fabric

1. Roll the fabric out across the sub-grade.
2. Install fabric staples every 3 feet around the outer edges of the rolled out fabric.



Figure 2. Installing the Geotextile

## Installing the ArmorFlex Block

1. Individual blocks are shipped on pallets. Typical pallets weigh approximately 2,600 lbs. Blocks are shipped upright.
- WARNING:** Blocks do **NOT** need to be “flipped” for installation.
2. Place ArmorFlex blocks side-by-side, getting the block as close together as possible.
  3. Each individual block is surrounded by six adjacent units; two above, two below and one on each side.
  4. Upon reaching the right / left outer edges of coverage area, proceed down to next row and repeat steps 2 and 3 until you reach the bottom edge of coverage area.



Figure 3. ArmorFlex on Pallets



Figure 4. ArmorFlex Block in Matrix

## Installing Cable to Lace ArmorFlex Mattresses

1. Feed cable through both cable ducts on each and every block.

**NOTE:** The ducts are located on the horizontal side of the ArmorFlex Block.

2. Continue feeding the cable through the block from the top of the slope towards the bottom of the slope.
3. One cable has been fed through the blocks, cut the cable with approximately 6"-10" of slack.
4. Install the washer on the cable protruding from the block.
5. Feed on (1) aluminum duplex sleeve onto exposed cable.

6. Take exposed cable, form and form a loop by placing the cut edge of the cable back through the duplex sleeve.

**NOTE:** Larger loops are acceptable.

7. Smash the aluminum sleeve with a hammer.
8. Repeat steps 3-7 for at the top and bottom of edge of the blocks.



Figure 5. Washer Installed



Figure 6. Loop Formation



Figure 7. Loop Formation Complete

## Finishing Installation

1. Fill the sides of the mattresses with a “half” block to even out the finished edges.
2. Take a backhoe to backfill soil material on the outside edges of blocks for the top, sides, and bottom.
3. Optional: Take soil and seed material to fill in vegetative void spaces to enhance vegetative properties.



*Figure 8. Complete ArmorFlex Block installed*



*Figure 9. Seeded ArmorFlex*



*Figure 10. Six months after Installation*

Now that you have installed your first ArmorFlex place and lace project, enjoy the aesthetic and environmentally friendly future of your project.



*Figure 11. One Year after Installation.*