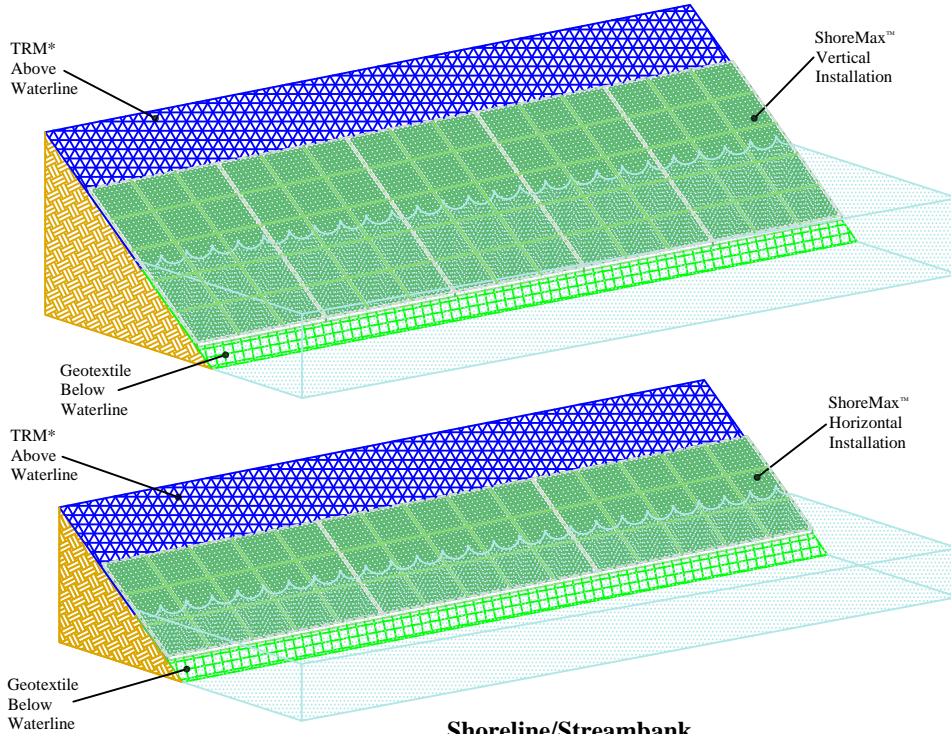
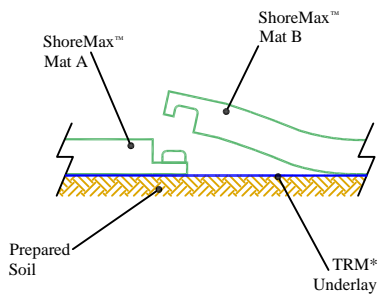


*ShoreMax™ Mats can be placed on slope in either direction.



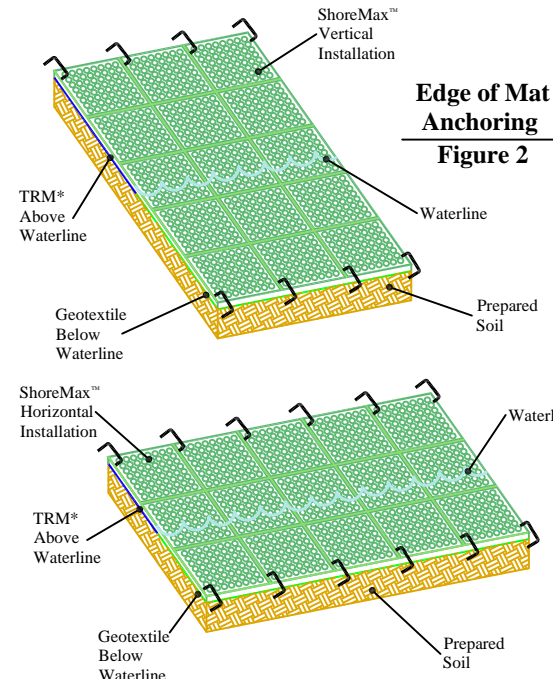
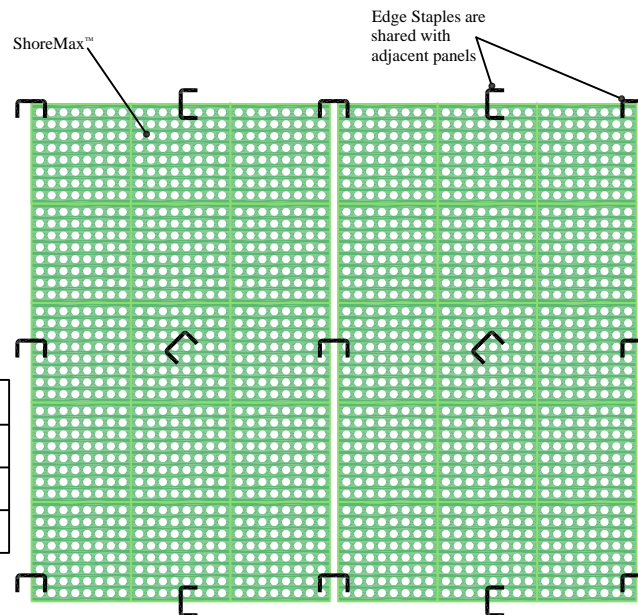
**Shoreline/Streambank
Plan View
Figure 1**



**Integrated Panel
Interlock System
Figure 3**

**Staple Pattern
Plan View
Figure 4**

Fastener Estimation for ShoreMax™ Mat Installation 3x5 ft (1x1.5 m)		
1 Panel	9 staples/panel	0.6 staples/sqft (6 staples/sqm)
2 Panels	7.5 staples/panel	0.5 staples/sqft (5 staples/sqm)
4+ Panels	6.25 staples/panel	0.42 staples/sqft (4.2 staples/sqm)



ShoreMax™

SHORELINE/ STREAMBANK/LEEVE DETAIL

* ShoreMax mats can be installed over a variety of underlays including: sod, turf reinforcement mats (TRMs), geotextiles, and in some cases erosion control blankets (ECBs).

1. Prepare soil before installing erosion control products, including any necessary application of lime, fertilizer, and seed (when installing TRMs or ECBs underlayment).
2. Install turf reinforcement mat above the waterline following manufacturer's recommendations. Note that a bottom anchor trench is not required when using ShoreMax mat in conjunction with a TRM or geotextile.
3. In areas below the normal water elevation, an appropriate geotextile should be installed beneath the ShoreMax mat.
4. Place ShoreMax mat over the installed TRM or geotextile (figure 1). When using multiple panels, connect the panels using the Integrated Panel Interlock System (figure 3). ShoreMax mat can be laid in either direction (figures 1 & 2).
5. Extend the ShoreMax mat to cover the transitional range where scour is predicted based on typical water level fluctuations and wave lap.
6. Place staples/pins in the appropriate pattern. When using 2 inch (5 cm) wide staples, perimeter staples can be shared between two adjacent panels (figure 4). In soft or highly erodible soils, percussion earth anchors may be required. View ShoreMax Anchoring Guide, for additional details.
7. Place 1 staple/pin per linear foot along the top and bottom edges of the ShoreMax system, placing one on each corner and gridline (figure 2).

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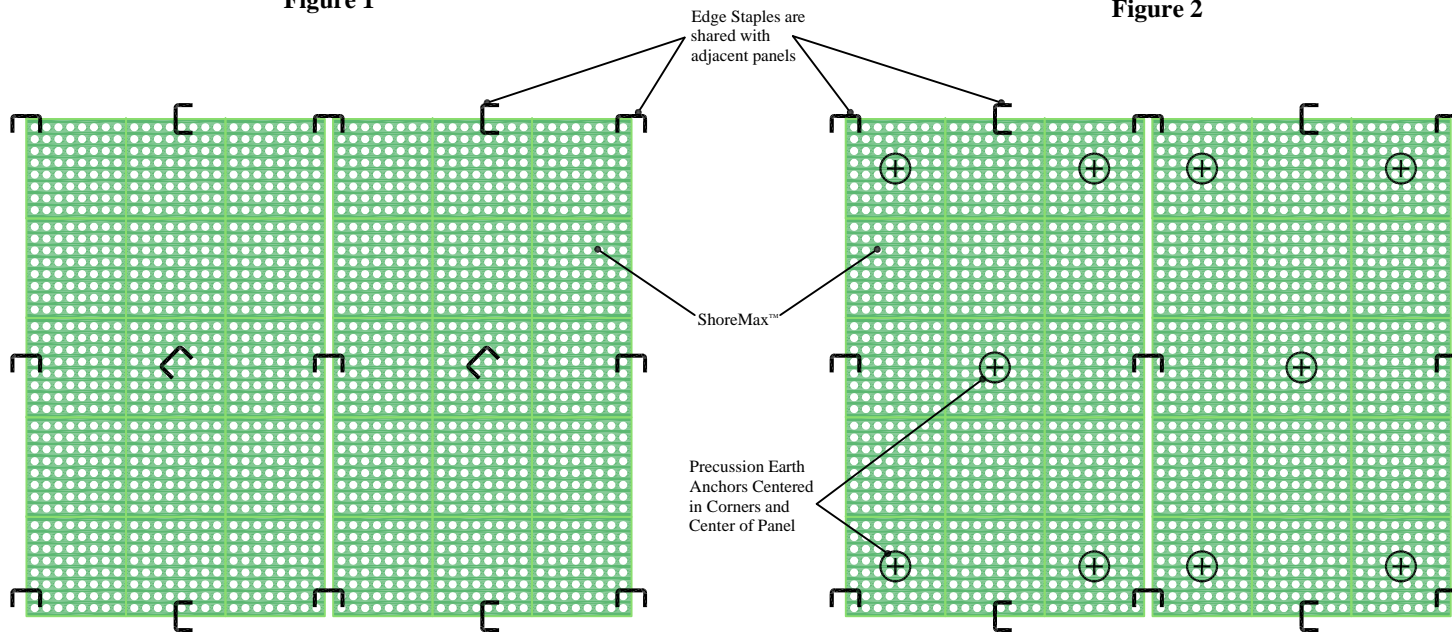
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ANCHORING GUIDE

Staple /Pins Only
Figure 1

Percussion Earth Anchors with Perimeter Staples/Pins
Figure 2



1. For cohesive soils, staples/pins can be used to install ShoreMax Mat. Staple length should be sufficient to reach compacted soils at least 6 inches in depth. Place staples/pins in the appropriate pattern. When using 2 inch (5 cm) wide staples, staples can be shared between two adjacent panels (figure 1).
2. Fasteners should be between 6-24 inches (15-60 cm) long and have sufficient pull-out resistance based on soil type and application as indicated by the consulting engineer.
3. In soft, highly erodible soils or in areas where extra pull-out strength is required, percussion earth anchors may be necessary. Install percussion earth anchors according to manufacturer's recommendations using a standard recommendation of 5 anchors per 3 x 5 ft (1 x 1.5 m) ShoreMax panel. Percussion earth anchors should be centered in each corner and the center of the panel. Place staples/pins in the appropriate pattern on edges of mat. When using 2 inch (5 cm) wide staples, staples can be shared between two adjacent panels (figure 2).

Fastener Estimation for ShoreMax™ Mat Installation with Staples/Pins 3x5 ft (1x1.5 m)		
1 Panel	9 staples/panel	0.6 staples/pins/sqft (6 staples/pins/sqm)
2 Panels	7.5 staples/panel	0.5 staples/pins/sqft (5 staples/pins/sqm)
4+ Panels	6.25 staples/panel	0.42 staples/pins/sqft (4.2 staples/pins/sqm)

Fastener Estimation for ShoreMax™ Mat Installation with Earth Anchors & Staples/Pins 3x5 ft (1x1.5 m)		
1 Panel	5 Earth anchors/panel 8 staples/panel	0.3 anchors/sqft (3.3 anchors/sqm) 0.5 staples/pins/sqft (5.3 staples/pins/sqm)
2 Panels	5 Earth anchors/panel 6.5 staples/panel	0.3 anchors/sqft (3.3 anchors/sqm) 0.4 staples/pins/sqft (4.3 staples/pins/sqm)
4+ Panels	5 Earth anchors/panel 5.25 staples/panel	0.3 anchors/sqft (3.3 anchors/sqm) 0.35 staples/pins/sqft (3.5 staples/pins/sqm)



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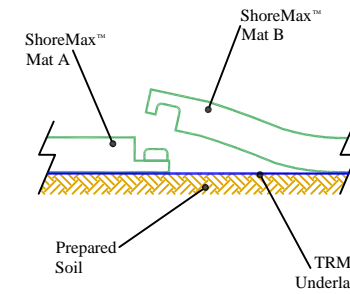
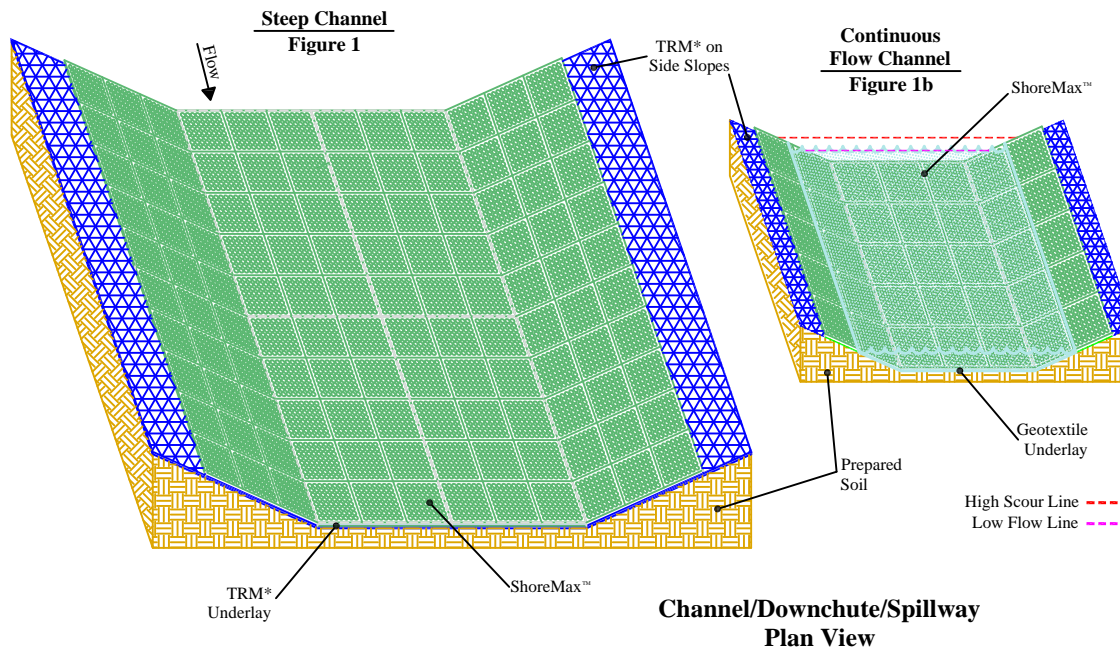
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STEEP CHANNEL/ CHUTE/SPILLWAY DETAIL

* ShoreMax mats can be installed over a variety of underlayments including: sod, turf reinforcement mats (TRMs), geotextiles, and in some cases erosion control blankets (ECBs).

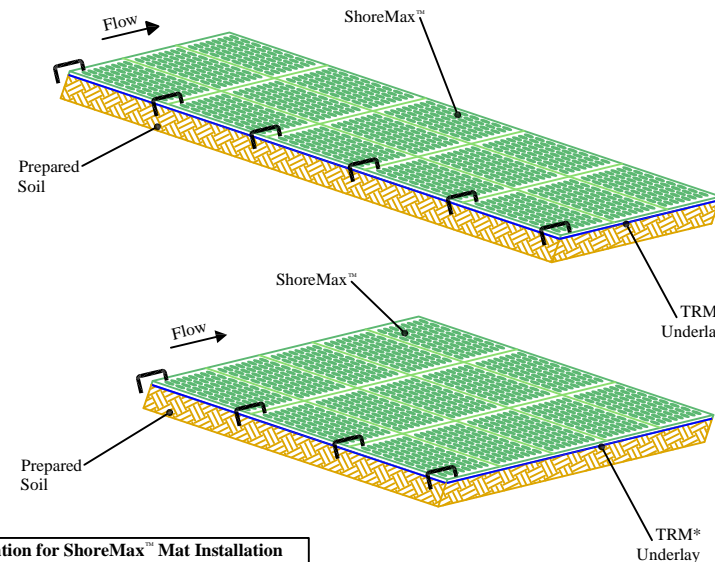
1. Prepare soil before installing erosion control products, including any necessary application of lime, fertilizer, and seed (when installing TRM or ECB underlayment).
2. Install turf reinforcement mat (TRM) over prepared soils according to manufacturer's recommendations.
3. Place ShoreMax mat in the bottom of the channel over the TRM (figure 1). The ShoreMax mat should be installed up to the appropriate elevation on the side slope as determined by the engineer. When using multiple panels, connect the panels using the Integrated Panel Interlock System (figure 2). ShoreMax mat can be laid in either direction.
4. For channels carrying continuous water flows, an appropriate geotextile should be placed under the ShoreMax mat for submerged applications (figure 1b).
5. Place staples/pins in the appropriate pattern. When using 2 inch (5 cm) wide staples, perimeter staples can be shared between two adjacent panels (figure 3). In soft or highly erodible soils, percussion earth anchors may be required. View ShoreMax Anchoring Guide, for additional details.
6. At beginning of channel and areas where significant concentrated flows are directed onto the ShoreMax mat, place 1 staple/pin per linear foot along the leading edge of the ShoreMax system, resulting in 1 staple/pin on each corner and gridline (figure 4).

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**Integrated Panel
Interlock System**
Figure 2

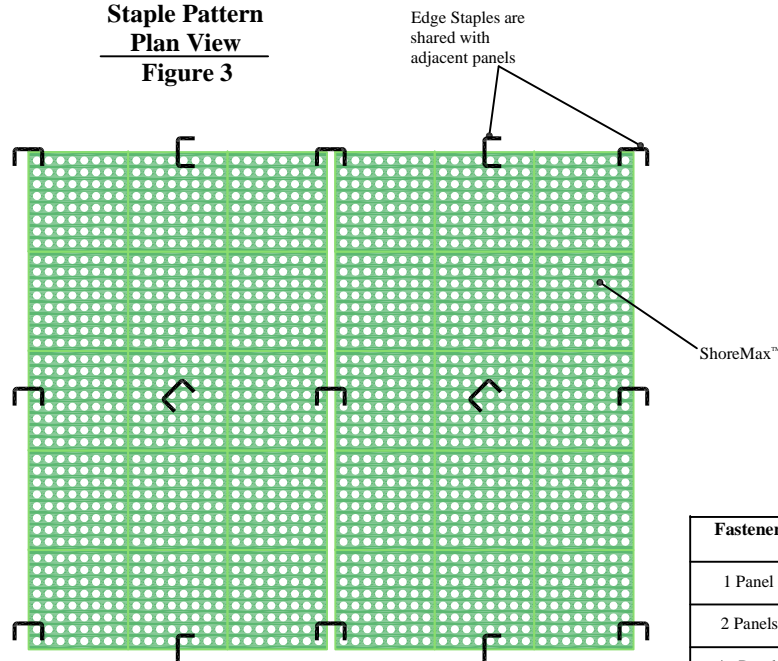
**Channel/Downchute/Spillway
Plan View**



**Leading Edge
Anchoring**
Figure 4

Fastener Estimation for ShoreMax™ Mat Installation 3x5 ft (1x1.5 m)		
1 Panel	9 staples/panel	0.6 staples/sqft (6 staples/sqm)
2 Panels	7.5 staples/panel	0.5 staples/sqft (5 staples/sqm)
4+ Panels	6.25 staples/panel	0.42 staples/sqft (4.2 staples/sqm)

**Staple Pattern
Plan View**
Figure 3

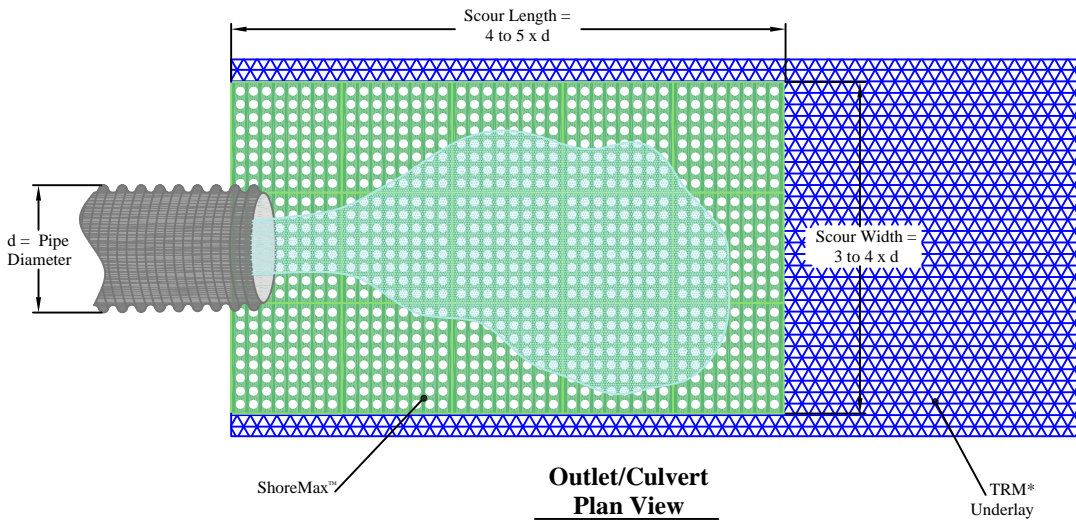


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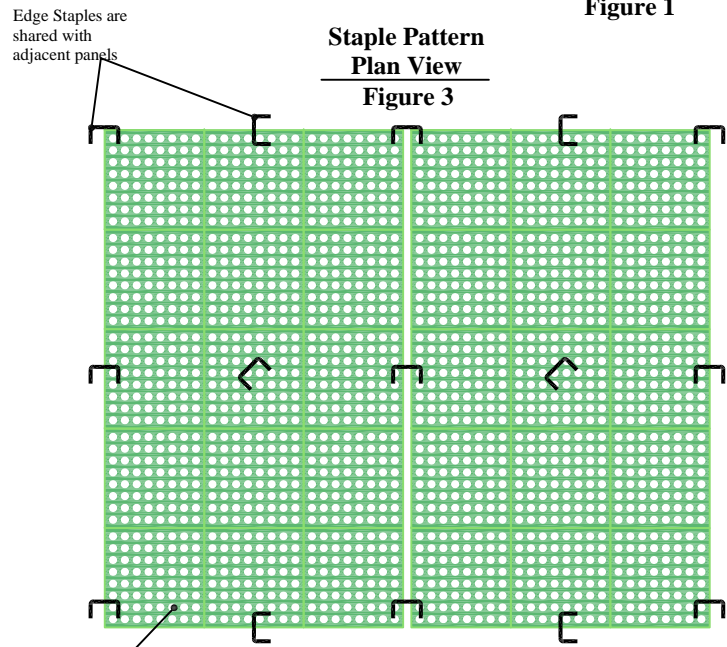
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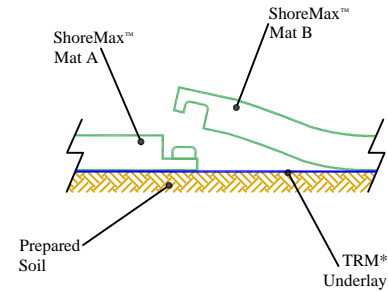
Outlet/Culvert Plan View
Figure 1



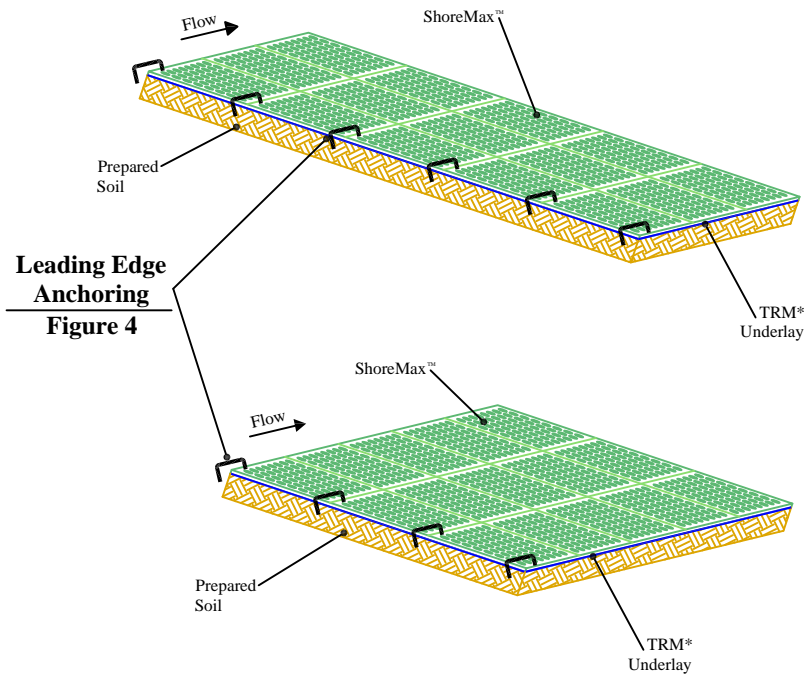
Staple Pattern Plan View
Figure 3

Fastener Estimation for ShoreMax™ Mat Installation 3x5 ft (1x1.5 m)		
1 Panel	9 staples/panel	0.6 staples/sqft (6 staples/sqm)
2 Panels	7.5 staples/panel	0.5 staples/sqft (5 staples/sqm)
4+ Panels	6.25 staples/panel	0.42 staples/sqft (4.2 staples/sqm)

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Integrated Panel Interlock System
Figure 2



Leading Edge Anchoring
Figure 4

ShoreMax™

OUTLET/CULVERT PROTECTION DETAIL

* ShoreMax mats can be installed over a variety of underlays including: sod, turf reinforcement mats (TRMs), geotextiles, and in some cases erosion control blankets (ECBs).

1. Prepare soil before installing erosion control products, including any necessary application of lime, fertilizer, and seed.
2. Install turf reinforcement mat (TRM) over prepared soils according to manufacturer's recommendations.
3. Place ShoreMax mat over the installed TRM (figure 1). When using multiple panels, connect the panels using the Integrated Panel Interlock System (figure 2). ShoreMax mat can be laid in either direction.
4. For culvert and outfall applications, ShoreMax mat scour protection should extend a minimum width of 3-4 times the pipe diameter and a minimum length of 4-5 times the pipe diameter (figure 1). With steeper channel gradients, the length of scour protection may need to be extended.
5. Place staples/pins in the appropriate pattern. When using 2 inch (5 cm) wide staples, perimeter staples can be shared between two adjacent panels (figure 3). In soft or highly erodible soils, percussion earth anchors may be required. View ShoreMax Anchoring Guide, for additional details.
6. Place 1 staple/pin per linear foot along the leading edge of the ShoreMax system, resulting in one staple/pin on each corner and gridline (figure 4).



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