

Suppliers of Liquid Caustic Soda

The following are verified suppliers of liquid Caustic soda 20% to 25% by volume; other suppliers may exist. A ten to fifteen-day lead time may be required when placing an order.

Midwest Lubricants

Fredericktown, MO

Contact: Mark Brewington, Tel: 314-808-1192

mark@midwestlubricants.com

PVS Nolwood Chemicals, Inc.

Detroit, MI

Contact: Michael McGuire, Tel: 800-284-9735 or 313-580-7692

MMcGuire@pvschemicals.com

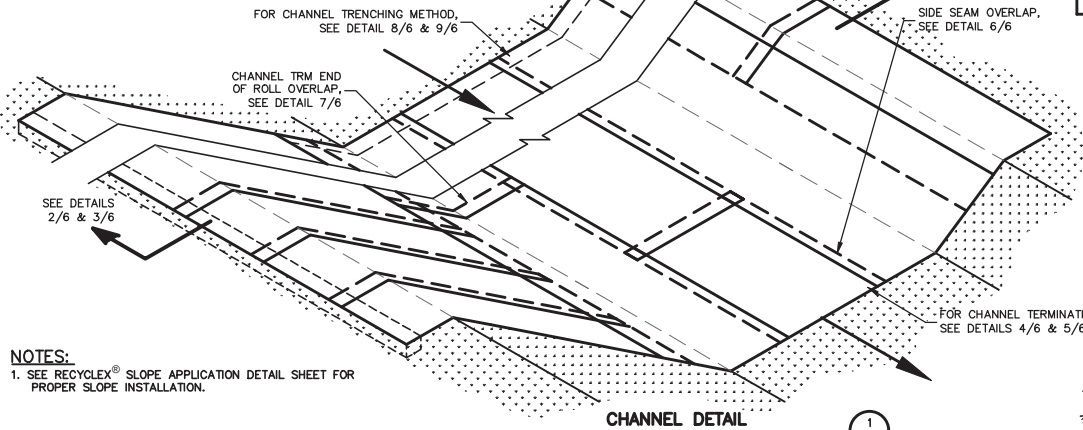
Barton Solvents

Des Moines, IA

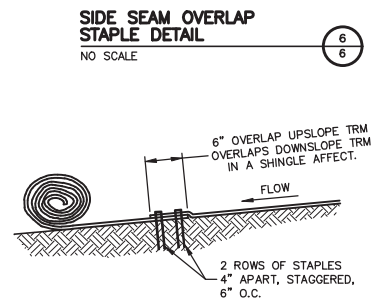
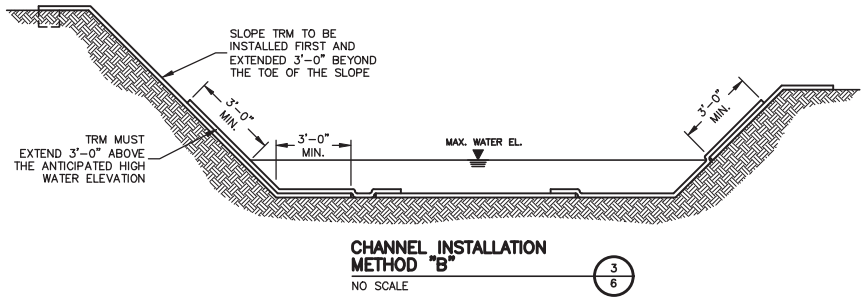
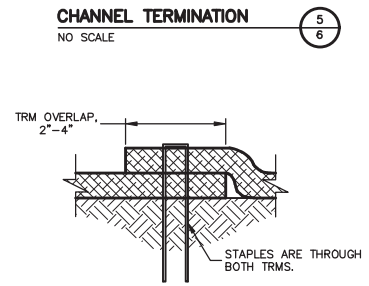
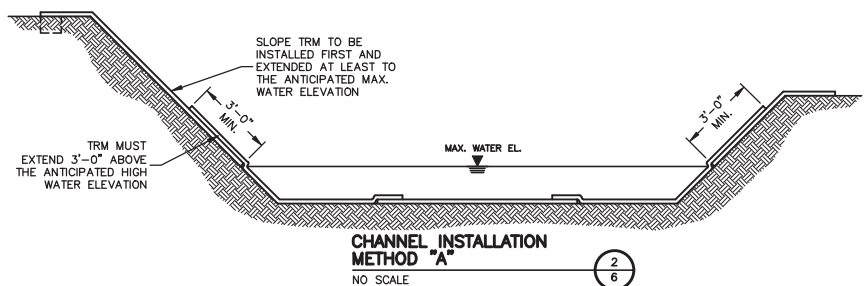
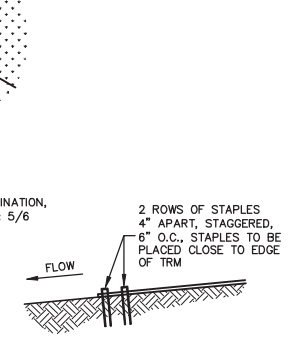
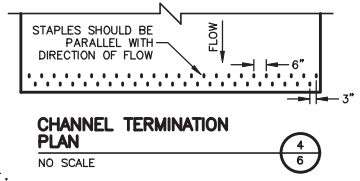
Contact: Dustin Penick, Tel: 515-729-2970

dustinp@barsol.com

References to particular products, tradenames, or manufacturers are intended for clarity only and do not represent exclusion or endorsement by the division or the State of Iowa. Equivalent products or materials may be suitable subject to the approval of the engineer.

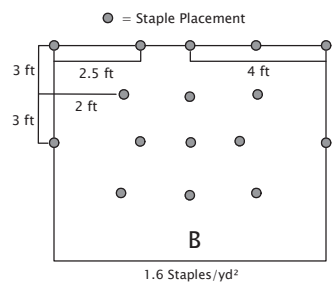


NOTES:
1. SEE RECYCLEX® SLOPE APPLICATION DETAIL SHEET FOR PROPER SLOPE INSTALLATION.



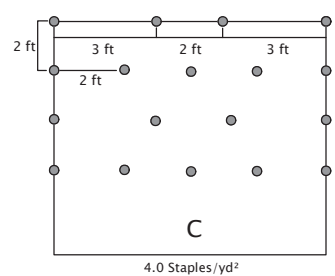
Recyclex® TRM Staple Pattern Guide

Application	Channel	
	≤ 2.3 lb/ft ² (110 Pa) Shear Stress ≤ 10.0 ft/sec (3.0 m/sec) Velocity	≤ 10.0+ lb/ft ² (480+ Pa) Shear Stress ≤ 17.0+ ft/sec (5.2+ m/sec) Velocity
Staple Pattern	B	C

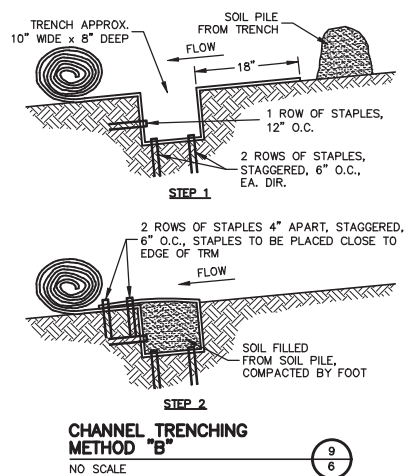
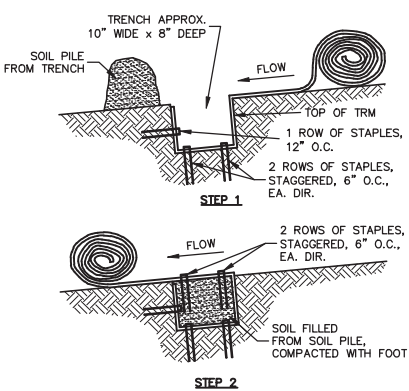


- Notes:**
1. For cohesive soil use a 6 in wire staple and for non-cohesive soil use an 8 in wire staple.
 2. For best results insert staples so heads are parallel to the flow of water.
 3. Adjust staple pattern so staples are placed in critical channel points (e.g. slope interface, channel bottom) as illustrated below.

1.6 Staples/yd²



4.0 Staples/yd²



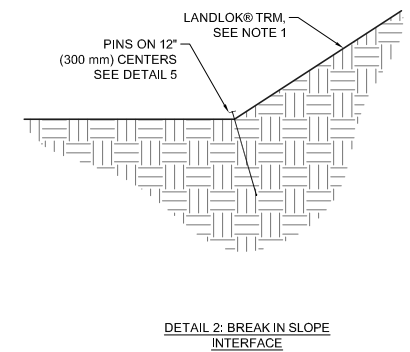
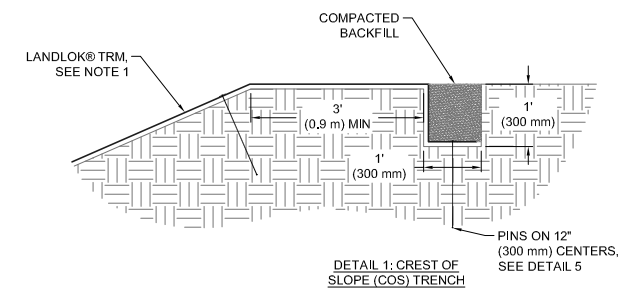
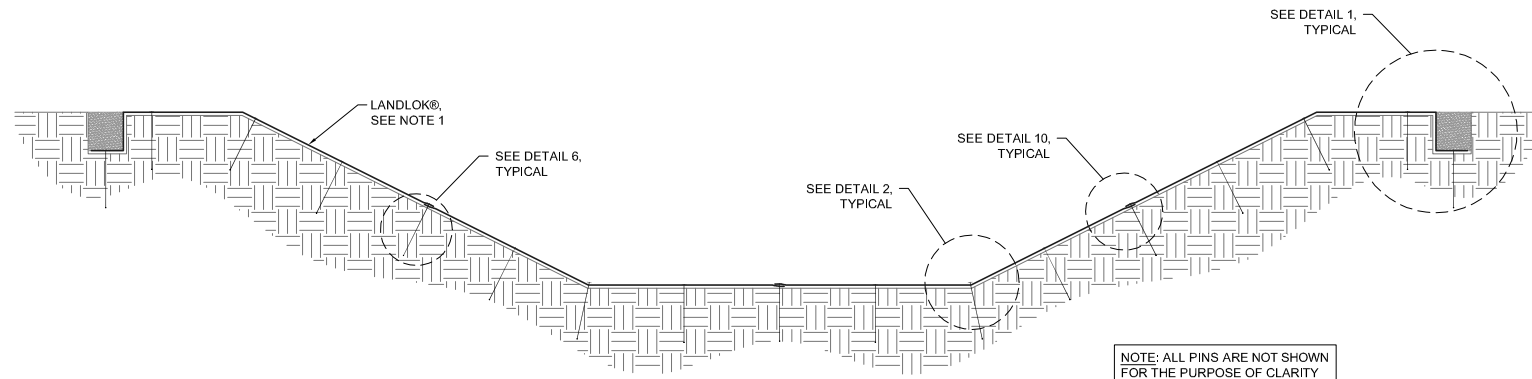
This detail contains installation requirements recommended by this product's manufacturer. These requirements may also be applicable for the installation of approved equivalent products subject to approval of the Engineer. This document is neither intended to express preference for one product over another nor exclude other equivalent products.



AMERICAN EXCELSIOR COMPANY
ARLINGTON, TEXAS

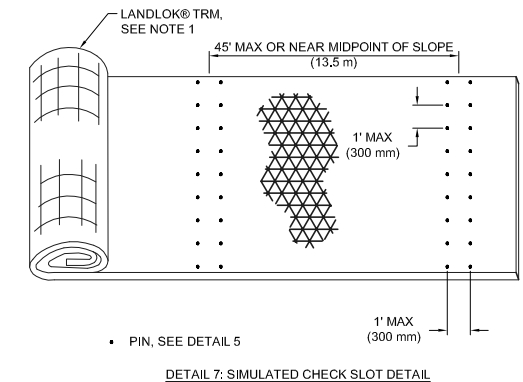
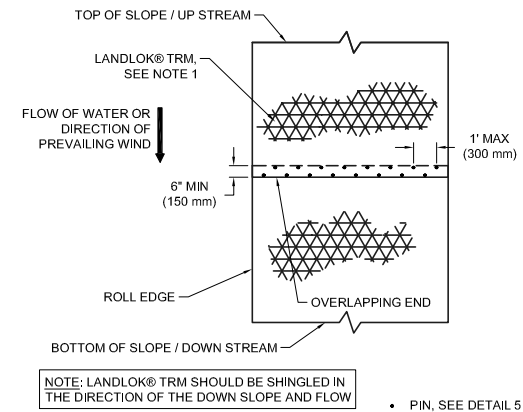
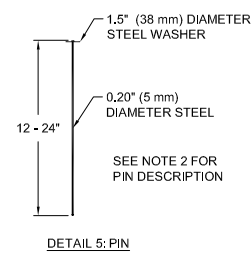
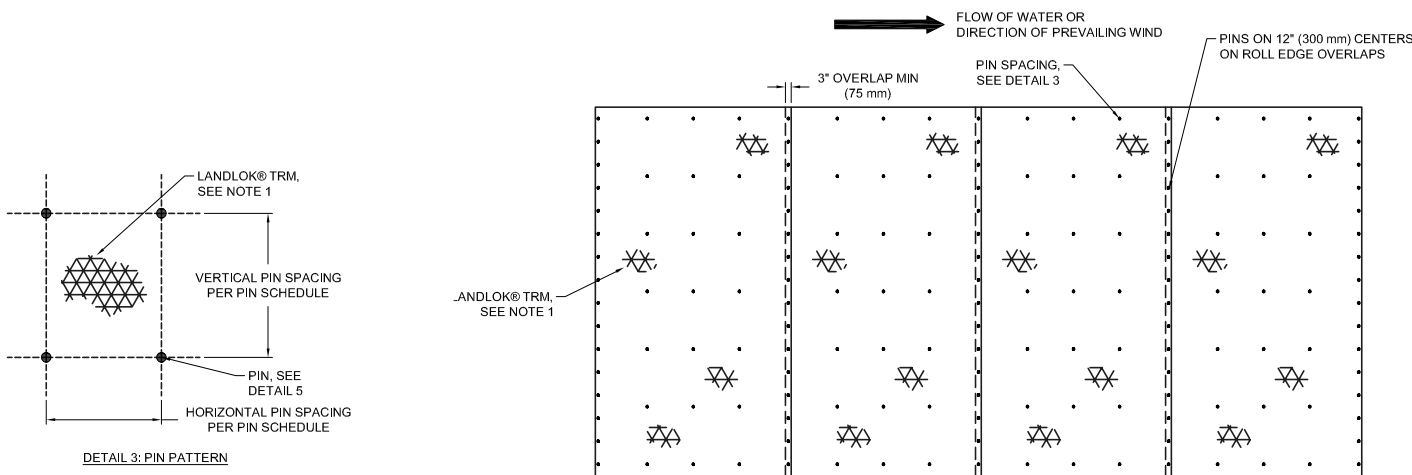
SHEET DESCRIPTION
RECYCLEX® TRM CHANNEL
APPLICATION DETAIL

DATE 03/01/18	DRAWN BY	
SCALE	PROJECT NO.	SHEET NO.
NONE		6

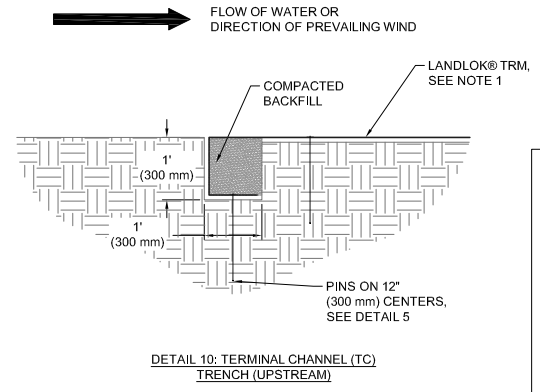
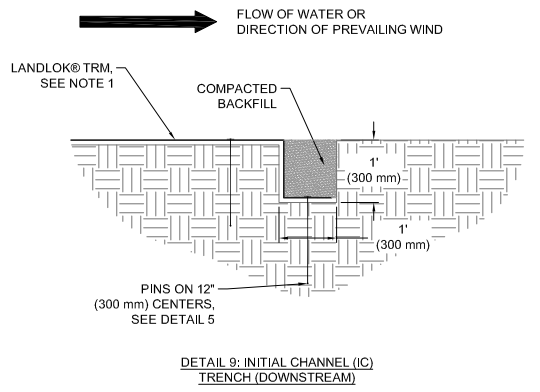
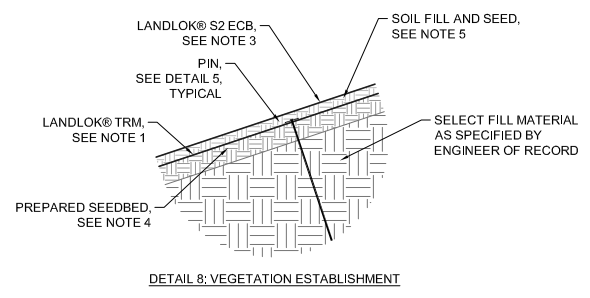


ELEVATION 1: PARALLEL INSTALLATION OF LANDLOK TRM IN A CHANNEL

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DETAIL 4: PIN PATTERN



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LANDLOK TRM IN A CHANNEL FOR EROSION CONTROL GENERAL INSTALLATION GUIDELINES

- GENERAL NOTES**
- The LANDLOK TRM is a three-dimensional, lofty, stitch-bonded polypropylene geotextile which is specially designed for erosion control applications on steep slopes and vegetated waterways. The matrix is composed of a dense web of crimped, interlocking fibers featuring X3® technology positioned between two biaxially oriented nets and mechanically bound together by parallel stitching with polypropylene thread. The material exhibits very high interlock and reinforcement capacity with both soil and root systems, demonstrates superior UV resistance, and enhances seedling emergence.
 - The 12", 18", and 24" Securing Pins are composed of a wire, mushroomed at the top. A washer is then placed on the wire and the wire is crimped or swaged about 3-12" below the top so the washer will not slide off. The end of the wire is cut at a 45 degree angle for easy penetration of the soil. These Pins with washers conform to industry standards for erosion control pins with washers.
 - LANDLOK S2 Erosion Control Blankets consist of 100% wheat straw mechanically bound and covered on both sides by netting. The straw is homogeneously blended and evenly distributed throughout the blanket. The netting is photodegradable polypropylene with mesh openings of approximately 3/8 in. by 3/8 in. (11 mm by 11 mm). The blanket is sewn on approximately 2 in. (51 mm) centers with photodegradable polypropylene thread. This product is NTPEP approved for AASHTO standards.
- VEGETATION ESTABLISHMENT**
- Prepare seedbed by loosening 50 to 75 mm (2 to 3 in) of soil above final grade. Apply seed in an amount equivalent to 60% of the total mixture required to be installed on the soil surface, to scarified surface prior to installation of the LANDLOK TRM. Select and apply soil amendments and fertilizer, to scarified surface prior to installation of the LANDLOK TRM. A site specific soil test should be performed to help determine what soil amendments, such as lime and fertilizer, need to be incorporated into the soil to promote healthy vegetation.
 - The installed LANDLOK TRM shall be soil filled and seeded with the remaining 40% of the seed mixture. Do not place excessive soil above material. Once soil fill and additional seed is in place, surficial protection should be accomplished by installing LANDLOK S2 Erosion Control Blanket (ECB) atop the seed layer. LANDLOK S2 ECB is to be secured using 6" U-shaped staples with a frequency of 2.0 staples per square meter (1.7 staples per square yard).
 - Irrigate as necessary to establish and maintain vegetation until 75% of vegetation has established and has reached a height of 2 inches. Frequent, light irrigation will need to be applied to seeded areas if natural rain events have not occurred within two weeks of seeding.
- BEFORE INSTALLATION BEGINS**
- Coordinate with a Propex Representative: A pre-construction meeting is suggested with the construction team and a representative from Propex. This meeting should be scheduled by the contractor with at least a two week notice.
 - Gather the Tools Needed: Tools that you will need to install the LANDLOK TRM include a pair of industrial shears to cut the LANDLOK TRM and tape measure.
 - Determine how to Establish Vegetation: The method of vegetation establishment should be determined prior to the start of installation. Different vegetation establishment methods require different orders of installation. Refer to Establish Vegetation for further guidance.
 - Please consult the Propex Website for the most up to date installation guidelines.

EROSION CONTROL INSTALLATION DETAILS

Please note that the information presented herein is general information only. It is for conceptual use only and not intended to be used for construction. While every effort has been made to ensure its accuracy, this information should not be used for a specific application without independent professional examination and verification of its suitability, applicability, and accuracy. This engineering drawing is protected by the Copyright Act, 17 U.S.C. §101 et seq. and may be used ONLY with the express written permission of Propex in connection with Propex products. Any copying, distributing, and/or creation of a derivative work without permission of Propex is prohibited and is subject of actual damages, statutory damages and attorney's fees under the Copyright Act.

1 of 1	LANDLOK TRM TURF REINFORCEMENT MAT (TRM)		
	LANDLOK TRM INSTALLATION DETAILS FOR CHANNELS		
Date:	Drawn By:	Scale:	*ALL DIMENSIONS ARE TO BE VERIFIED BY ENGINEER OF RECORD
02/10/2017	J. HILL	NTS	

PIN SCHEDULE	
SECURING DEVICE	PIN
HORIZONTAL PIN SPACING	2' (0.60 m)
VERTICAL PIN SPACING	2.5' (0.75 m)
EMBEDMENT DEPTH	PER MANUFACTURES DESIGN

