

PLS means pure live seed, or seed that has been tested for purity and viability. This is done by most seed nurseries and should be included in your seed order. Dry denotes an area above the 1 year ponding or bank flow elevation. Wet denotes an area that is at or below the 1 year ponding or bank flow elevation.

Must use a minimum of 6 grass/sedge species and 8 forb species for each BMP. It is recommended that this list be provided to landscape contractors/buyers in case substitutions are required.

Section 7: Seed Mix List MSD Seeding Guide Seed: Shorter, less diverse mixes



RollMax Installation Guidelines:

North American Green is the world's leading provider of performance-guarante ed erosion control solutions. For more than 25 years, our line of erosion and sediment control products has kept our oustomers on solid ground. Our short-term and long-term Erosion Control Blankets (ECBs) and Turf Reinforcement Mats (TRMs) keep you one stepshead of just about any erosion challenge.

North American Green provides everything you need to know: for guide, accurate erosion control installation tallored to your site. From start to finish, the North American Green® RollMax System[®] product installation instructions are based on extensive research and field-proven techniques to ensure project success. The following pages offer instructions and guidelines for several scenarios you may encounter during the installation of the RollMax System.





EXPERIENCE YOU CAN RELY ON

control specialist who can assist you.

We are the industry leader when it comes to providing

comprehensive erosion and sediment control and turf

systems and products with the sole objective

reinforcement solutions. We have developed integrated.

to ensure absolute customer satisfaction. Our products are

backed by the most thorough quality assurance gractices

assistance for every North American Green system.

For additional installation assistance with the RollMax

System, please visit www.tanzarragreea.com, e-mail

customerservice-neg@negreen.com, or call 810-772-2040

and we will be happy to put you in touch with an erosion

in the industry. In addition, we provide comprehensive design

Installation Made Easy

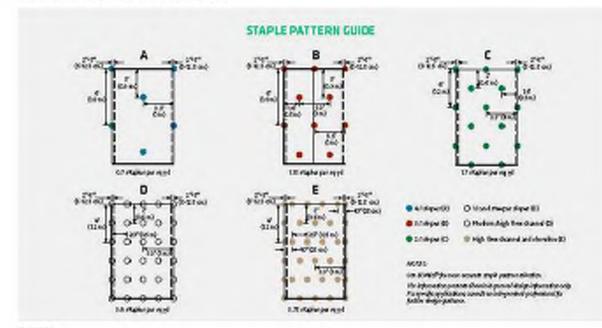
When under the pressure of severe conditions, even the best erosion control products can't function to their full potential without proper installation and anchoring. North American Green supplies a wilde variety of fastener options for nearly every application and soll type.

For use in cohesive soils, wire staples are a cost effective means to fasten RollMax** System Rolled Erosion Control Products (RECPs). Available in 6 in , 8 in , t0 in, and t2 in. lengths, our U-shaped staples reach various depths to ensure adequate pull-out resistance. For installation using our hands Pin Pounder installation tool, 6 in. V-top staples or 6 in. circle top pins are available.

Our biodegradable BioStale stare available in 4 in, and 6 in. lengths and provide an environmentally friendly alternative. to metal staples. For an even more durable, deeper reaching yet all-natural anchoring option, our wood EcoStale s* are available in 6 in., 12 in., 18 in. and 24 in. lengths.

For severe applications needing the ultimate, long-lasting hold, try our 12 in, and 18 in, rebar staples, our 12 in, plastic ShoreMax® stakes, or our complete line of percussion earth anchors. The earth anchors reach deep into the soil strata to offer enhanced anchoring in the worst conditions. Our variety of earth anchors are designed for durability and holding power under extreme hydraulic stresses and adverse soil conditions.

Proper staple patterns must be used to achieve optimal results in RECP installation. We recommend the following: general stapling patterns as guidance for use with our RECPs as seen in (Figure 1). Site-specific staple pattern recommendations based on soil type and severity of application may be acquired through our Erosion Control Materials Design Software (00 MDS*), nove some some



Slope Installation

The following slope guide outlines general recommendations for installing RollMax* System temporary and/or permanent RECPs on sloping applications. Consult the staple pattern guide (Figure 1) for fastener spacing recommendations based on the slope severity.

TOP OF BERM ELEV-503.1

TOP OF BERM ELEV-490.0

BLOCK OPENING WHILE

BASIN IS BEING USED

48" DIAMETER

FOR SEDIMENT CONTROL

36" R.C.P. OUTFLOW

FL-482.17 -

BLOCK OPENING WHILE

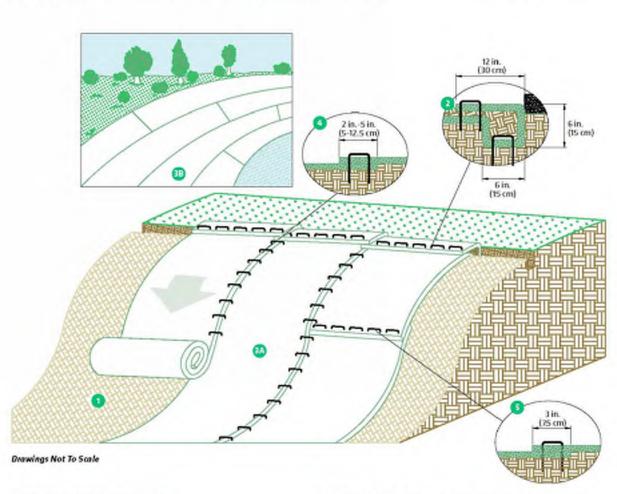
FOR SEDIMENT CONTROL

BASIN IS BEING USED

24" R.C.P. OUTFLOW PIPE @ 15.0%

FL-494.0 -/

PIPE @ 1.00%



SLOPE INSTALLATION STEPS

- Prepare soil before installing RECPs, including any necessary application of lime, fertilizer and seed.
- 2. Begin at the top of the slope by anchoring the RECPs in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench with approximately 12 in. (30 cm) of RECPs extended beyond the upslope 4. The edges of parallel RECPs must be stapled with an portion of the trench. Anchor the RECPs with a row of staples/stakes approximately 12 in. (30 cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12 in. (30 cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately

12 in. (30 cm) apart across the width of the RECPs.

- 3. Roll the RECPs (3A) down or (3B) horizontally across the slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations
- approximately 2 in -5 in (5-12.5 cm) overlap depending on the RECP type.
- 5. Consecutive RECPs spliced down the slope must be endover-end (shingle style) with an approximate 3 in. (7.5 cm) overlap. Staple through overlapped area, approximately 12 in. (30 cm) apart across entire RECPs width.*

as shown in the staple pattern guide.

*NOTE: In adverse soil conditions longer staples/stakes or earth anchors may be necessary to properly secure the RECPs.

Channel Installation

- FL IN-494.00

OUTFALL STRUCTURE 49 SIDE SECTION

MODIFIED FOR SEDIMENT CONTROL

"PLASTIC SOLUTIONS" 48"

ROUND TRASH RACK, SEE

DETAILS ON SHEET 8.5

- CREST OF BARREL

ELEV-488.0

APPROXIMATELY 14' OF 6"

SCHEDULE 40 P.V.C. PIPE AT

OUTFALL STRUCTURE 3 SIDE SECTION

MODIFIED FOR SEDIMENT CONTROL

"PLASTIC SOLUTIONS" 48"

APPROXIMATELY 15' OF 6"

SCHEDULE 40 P.V.C. PIPE AT

2.0% SLOPE

ROUND TRASH RACK, SEE DETAILS THIS SHEET

- CREST OF BARREL

ELEV-501.50

2.3% SLOPE

STANDARD 48" DIAMETER MSD

CONCRETE MANHOLE STRUCTURE; WITH

8" THICK WALLS AND ONE ROW OF

REINFORCING STEEL

48" DIAMETER

FL-482.5 -

LOW FLOW PIPE HEADWALL

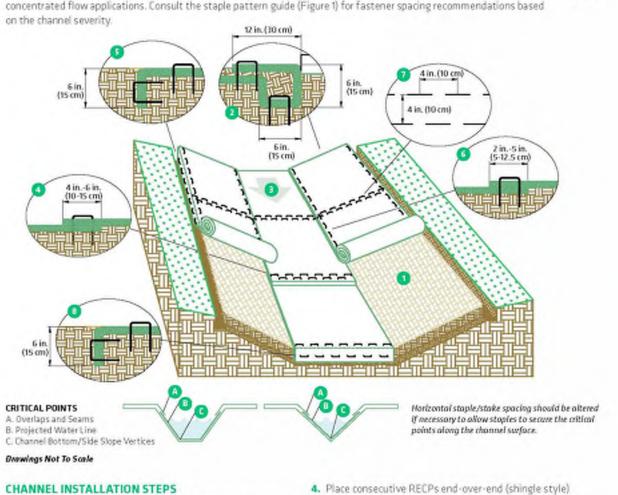
SEE DETAIL THIS SHEET

The following channel guide outlines general recommendations for installing RollMax System temporary and/or permanent RECPs in concentrated flow applications. Consult the staple pattern guide (Figure 1) for fastener spacing recommendations based on the channel severity.

FL-494.5

LOW FLOW PIPE HEADWALL

SEE DETAIL THIS SHEET



CHANNEL INSTALLATION STEPS

1. Prepare soil before installing RECPs, including any necessary application of lime, fertilizer and seed.

2. Begin at the top of the channel by anchoring the RECPs in

- a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench with approximately 12 in. (30 cm) of RECPs extended beyond the upslope portion of the trench. For supplemental scour protection, use RevetMax* System ShoreMax* Mat at the channel/ culvert outlet as needed. Anchor the RECPs with a row of staples/stakes approximately 12 in. (30 cm) apart in the bottom of the trench. Backfill and compact the trench after 7. In high flow channel applications a staple check slot is stapling. Apply seed to the compacted soil and fold the remaining 12 in. (30 cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12 in. (30 cm) apart across the width of the RECPs.
- 3. Roll center RECPs in direction of water flow in bottom of channel. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
- with a 4 in -6 in. (10-15 cm) overlap. Use a double row of staples staggered 4 in. (10 cm) apart and 4 in. (10 cm) on center to secure RECPs.

ISSUE REMARKS/DATE

CITY REV. 10-16-17

CITY REV. 10-27-17

INSTALL TEMPORARY PERFORATED

ELEVATION - 487.60. STANDPIPE

TO BE WRAPPED WITH GEOTEXTILE

REMOVED ONCE SITE'S VEGETATION

4" PVC STANDPIPE, CREST

FABRIC. STANDPIPE TO BE

- STACK MINIMUM 6" DIA STONE

NEENAH TRASH RACK

GRATE, SEE DETAIL THIS

- INSTALL TEMPORARY PERFORATED

4" PVC STANDPIPE, CREST ELEVATION — 500.5. STANDPIPE O BE WRAPPED WITH GEOTEXTILE

REMOVED ONCE SITE'S VEGETATION

— STACK MINIMUM 6" DIA STONE

FABRIC. STANDPIPE TO BE

AROUND STANDPIPE.

NFFNAH TRASH RACK GRATE, SEE

DETAIL THIS SHEET

IS 75% ESTABLISHED.

IS 75% ESTABLISHED.

AROUND STANDPIPE.

INITIAL SUBMITTAL 07-25-2017 CITY & CLIENT REV. 09-08-17

- 5. Full-length edge of RECPs at top of side slopes must be anchored with a row of staples/stakes approximately 12 in. (30 cm) apart in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench. Backfill and compact the trench after stapling. 6. Adjacent RECPs must be overlapped approximately 2 in.-
- 5 in. (S-12.5 cm) (depending on RECP type) and stapled.* recommended at 30 to 40 ft (9-12 m) intervals. Use a double row of staples staggered 4 in. (10 cm) apart and 4 in. (10 cm) on center over entire width of the channel.
- 8. The terminal end of the RECPs must be anchored with a row of staples/stakes approximately 12 in. (30 cm) apart in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench. Backfill and compact the trench after stapling.

*NOTE: In adverse soil conditions longer staples/stakes or earth anchors may be necessary to properly secure the RECPs.

JECT



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Civil Engineer

P+Z No. 02-17.01

City No. Date: Nov. 7, 2017

Job No. 16-09-274

Page No.