



CONSTRUCTION PLAN

PRACTICE(S) STREAMBANK AND SHORELINE STABILIZATION (ATCP 50.88/NRCS 580)

LANDOWNER STEVE LERCH

ADDRESS [REDACTED]

LANDOWNER PHONE NO. [REDACTED] COUNTY POLK

TOWNSHIP BALSAM LAKE T 35 N, R 16 E/W 1 Sec. 07

FIELD OFFICE POLK COUNTY LWRD TELEPHONE NO. (715) 485-8699

DIGGERS HOTLINE

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811

Toll Free
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TDD
1-800-542-2289

Website
www.diggershotline.com



Not to
Scale

LOCATION MAP

NOTICE TO LANDOWNERS AND EXCAVATORS

Any representation made by the USDA, Natural Resources Conservation Service, or the POLK County LCD, as to the approximate location or nonexistence of above or under ground hazards does not relieve the owner of the property or the excavator that is hired to complete construction, from notifying Diggers Hotline of the pending construction. You will be liable for damages resulting from construction activities. (Call Diggers Hotline) Ticket # _____

Landowner Acceptance: See WI Jobsheet 819

Designed by: _____ Date: _____

Checked by: _____ Date: _____

Approved by: _____ Date: _____

The installed practices comply with applicable NRCS technical standards and specifications. The "redlined" construction plans (as-built drawings) reflect changes made during construction.

Construction Approved by: _____ Date: _____

Job Approval Class (580 - III WAVE HEIGHT)

CONSTRUCTION NOTES

1. ALL UNDERGROUND HAZARDS AND UTILITIES MUST BE INVESTIGATED PRIOR TO CONSTRUCTION. NOTIFICATION OF AFFECTED UTILITY COMPANIES IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTACT DIGGERS HOTLINE AT LEAST THREE DAYS PRIOR TO START OF CONSTRUCTION.
2. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED WITH POLK COUNTY LWRD PERSONNEL, THE CONTRACTOR, AND THE LANDOWNER PRIOR TO CONSTRUCTION START-UP.
3. THE CONTRACTOR AND/OR LANDOWNER SHALL NOTIFY POLK COUNTY LWRD AT LEAST 3 DAYS PRIOR TO START-UP OF CONSTRUCTION.
4. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH WISCONSIN NRCS CONSTRUCTION SPECIFICATIONS (SEE PROJECT MANUAL).
5. INITIAL SURVEY LAYOUT WILL BE PERFORMED BY POLK COUNTY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADDITIONAL GRADE STAKES DURING CONSTRUCTION AS NECESSARY, OR IF DAMAGED BY THEIR OPERATIONS.
6. ANY MATERIALS MUST BE ON-SITE AT THE TIME OF CONSTRUCTION AND MUST BE APPROVED BY THE ENGINEER/TECHNICIAN PRIOR TO INSTALLATION.
7. ALL DISTURBED AREAS SHALL BE SEEDED AS SOON AS POSSIBLE IN THE CONSTRUCTION SEQUENCE. SEED MIX TAGS SHALL BE DOCUMENTED BY THE TECHNICIAN.
8. EXISTING ROCK ON SHORELINE CAN BE REMOVED AND REPLACED AT THE BANK TOE FOLLOWING THE INSTALLATION OF THE TURF REINFORCEMENT MAT.
9. TURF REINFORCEMENT MAT SHALL BE INSTALLED FOLLOWING SEEDING AND SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATIONS FOR STAPLING PATTERNS AS WELL AS THE TECHNIQUES FOR TRENCHING SHOWN ON PAGE 7.
10. EROSION CONTROL MEASURES MAY BE REQUIRED TO ENSURE THAT BONE LAKE DOES NOT RECEIVE SEDIMENT MATERIAL FROM THE PROJECT SITE.
11. AVOID DISTURBANCE OF AQUATIC VEGETATION WHEREVER POSSIBLE.

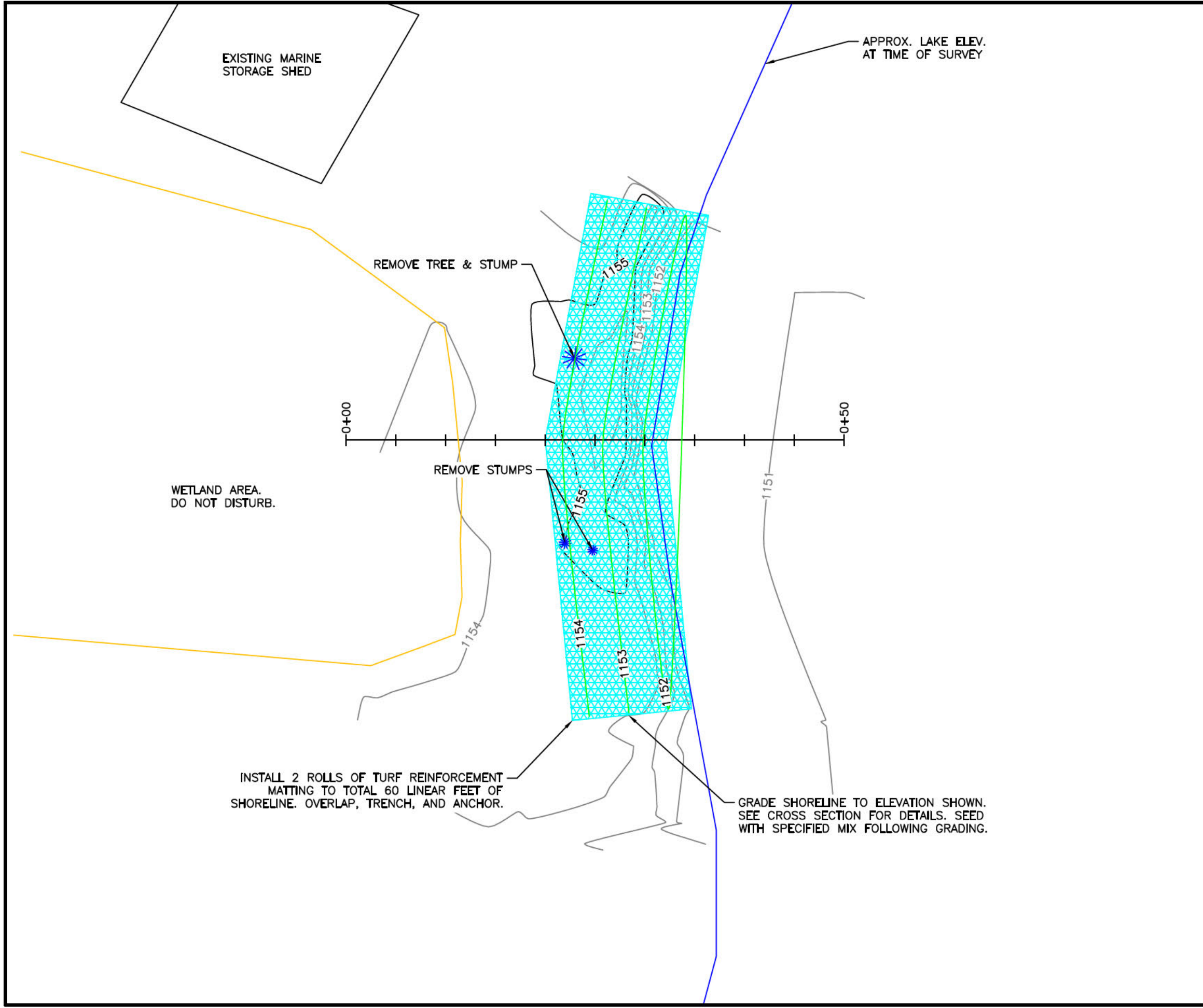


CONSTRUCTION NOTES

CLIENT: STEVE LERCH
 COUNTY: POLK

	Date
Designed <u>KBP</u>	<u>7/21</u>
Drawn <u>KBP</u>	<u>7/21</u>
Checked _____	
Approved _____	

Drawing Name
Date
Sheet 3 of 9



N

0 10 20
Feet

LEGEND

- TRM
- WETLAND EXTENTS
- EXISTING CONTOUR
- PROPOSED CONTOUR

BM#1 LOCATED ON TOP OF SOUTHWEST CORNER OF CONCRETE LIGHT BOX.
ELEV. = 1056.51'

Designed	KBP	Date	7/21
Drawn	KBP	Date	7/21
Checked			
Approved			

PLAN VIEW

OWNER: STEVE LERCH

COUNTY: POLK

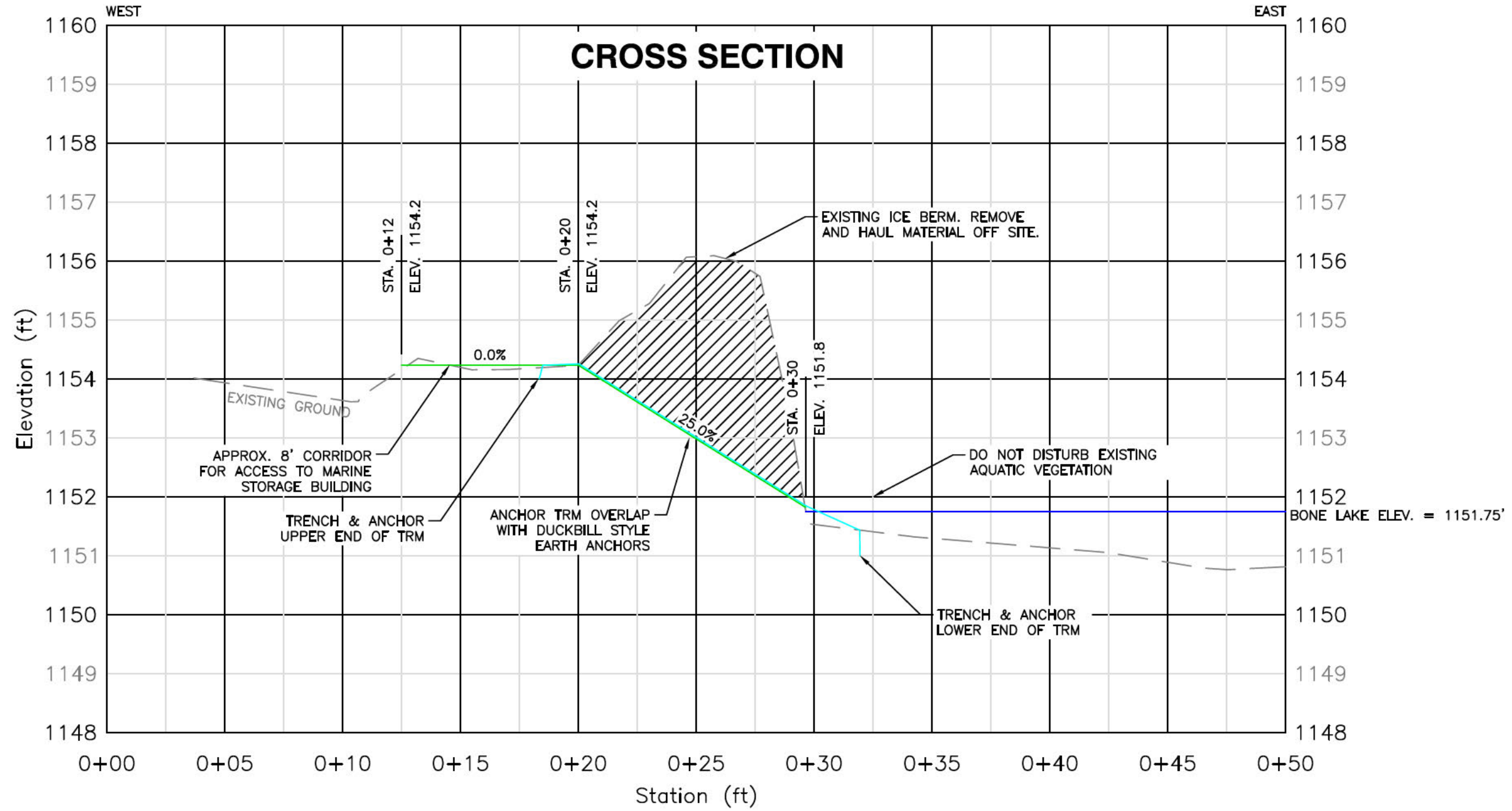


GPS	SURVEY
INTERNATIONAL FEET	DATE: 7/20/2021
USA COUNTY WI	DATE: 7/20/2021
WISCONSIN/POLK COUNTY	

File Name
WI-014A

06/2018

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GPS	SURVEY
INTERNATIONAL FEET	KBP 7/20/2021
USA COUNTY WI	KBP 7/20/2021
WISCONSIN/POLK COUNTY	KBP 7/20/2021



File Name
WI-014A

06/2018

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CROSS SECTION VIEW

OWNER: STEVE LERCH

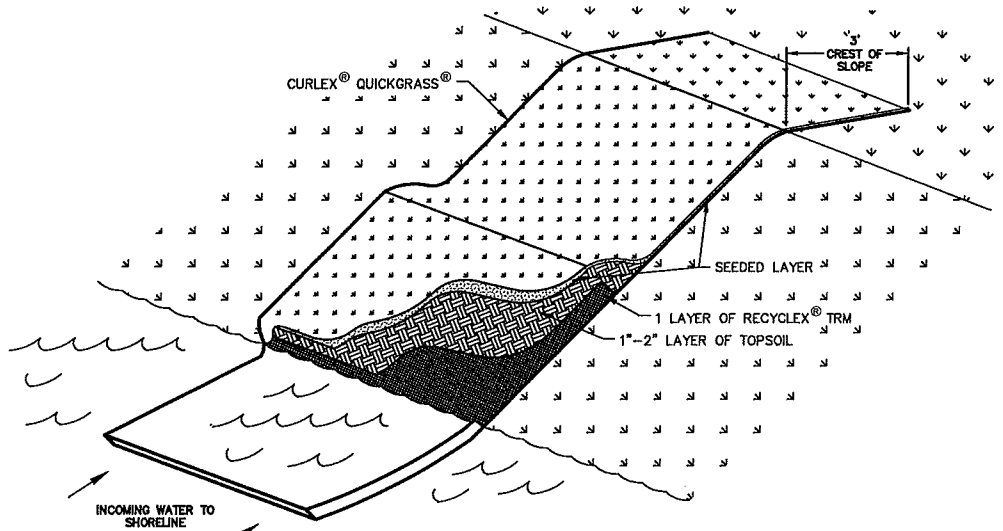
COUNTY: POLK

Designed KBP 7/21

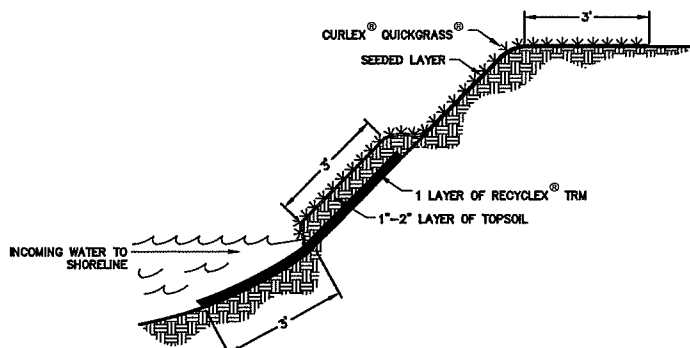
Drawn KBP 7/21

Checked

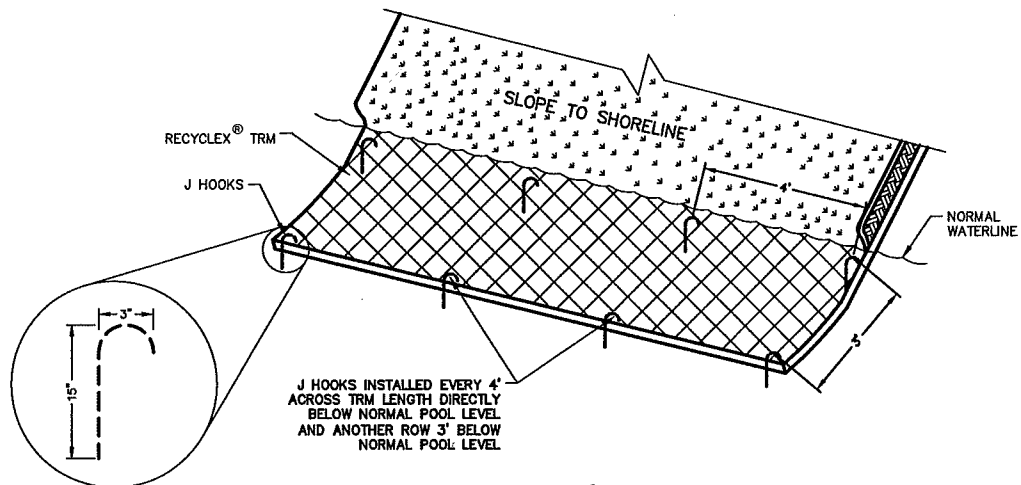
Approved



3D APPLICATION VIEW 1/20
NO SCALE



CROSS SECTION DETAIL 2/20
NO SCALE



J HOOK DETAIL 3/20
NO SCALE

NOTE:

- 1) INSTALL LAYER OF RECYCLEX® TRM 8' WIDTH, APPROXIMATELY 3' BELOW NORMAL POOL & 3' ABOVE NORMAL POOL.
- 2) INSTALL #3 (3/8) REBAR J-HOOKS (15" LENGTH WITH 3" CROWN) BELOW WATERLINE ALONG THE OUTSIDE EDGE OF RECYCLEX® TRM EVERY 4 LINEAL FEET AND REPEAT AT EDGE OF THE WATERLINE.
- 3) ABOVE THE WATERLINE ANCHOR THE RECYCLEX® TRM LAYER.
- 4) ABOVE WATERLINE, SOIL FILL TOPSOIL OVER RECYCLEX® TRM SO IT INTERMINGLES INTO AND ABOVE THE PERMANENT MATRIX 1"-2".
- 5) SEED TOPSOIL LAYER THAT WAS PLACED ON TOP OF RECYCLEX® TRM AND REMAINDER OF DISTURBED SLOPE WITH A MIXTURE SUITED FOR SITE CONDITIONS.
- 6) BEGINNING AT THE WATERLINE INSTALL CURLEX® QUICKGRASS® BLANKETS OVER THE SEED/TOPSOIL LAYER TO PROMOTE IDEAL GROWING CONDITIONS FOR GRASS SEED ON THE SLOPE ABOVE THE WATERLINE. TO PROTECT THE REMAINING BARE SOIL CONTINUE THE INSTALLATION OF CURLEX® QUICKGRASS® BLANKETS UNTIL IT HAS REACHED 3' OVER THE CREST OF THE SLOPE AND ANCHOR.
- 7) STAPLE PATTERNS ARE DEPENDENT ON SITE CONDITIONS. SEE CURLEX® AND RECYCLEX® TRM STAPLE PATTERN GUIDES FOR DETAILS.

**American
Excelsior
Company®**
Earth Science Division

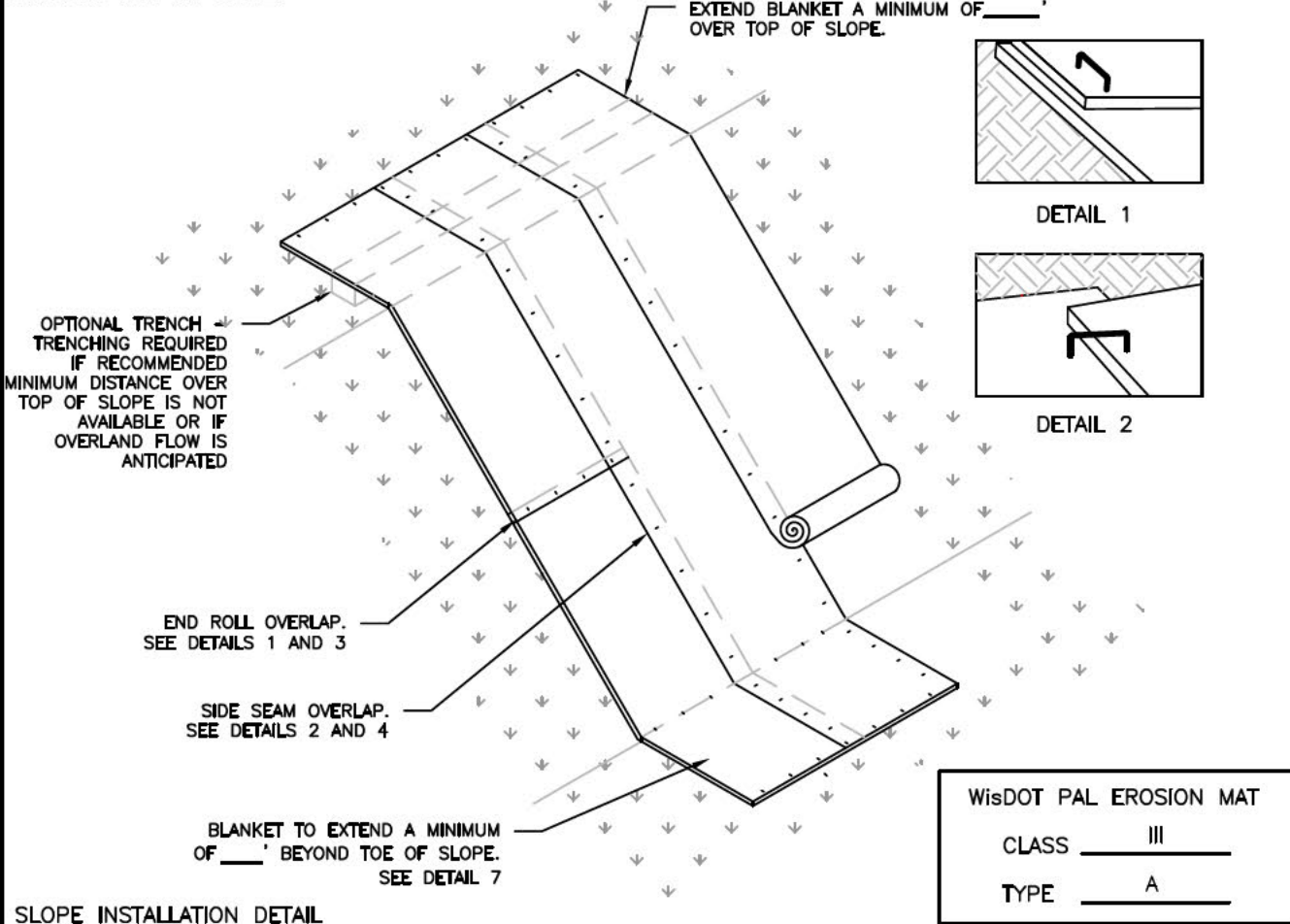
AMERICAN EXCELSIOR COMPANY
ARLINGTON, TEXAS

SHEET DESCRIPTION
SINGLE RECYCLEX®/CURLEX® SYSTEM
SHORELINE PROTECTION DETAIL

DATE 3/20/17
SCALE NONE

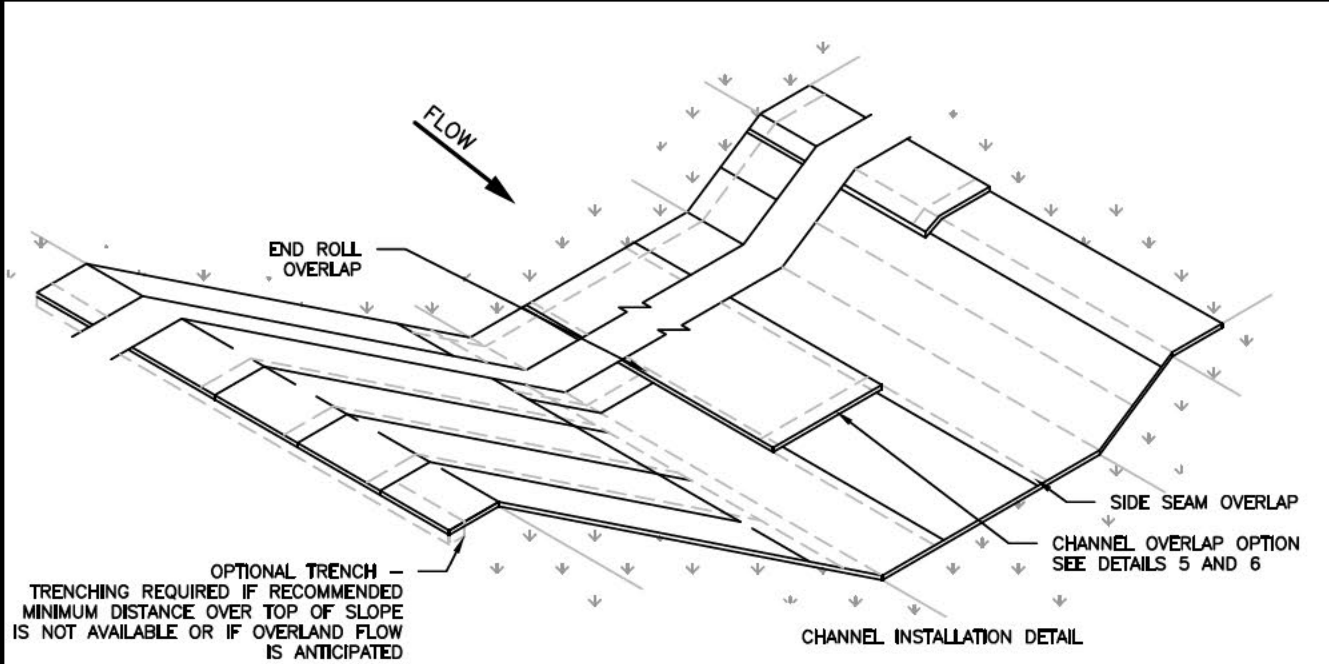
DRAWN BY
PROJECT NO. SHEET NO.
20

DRAWING NOT TO SCALE

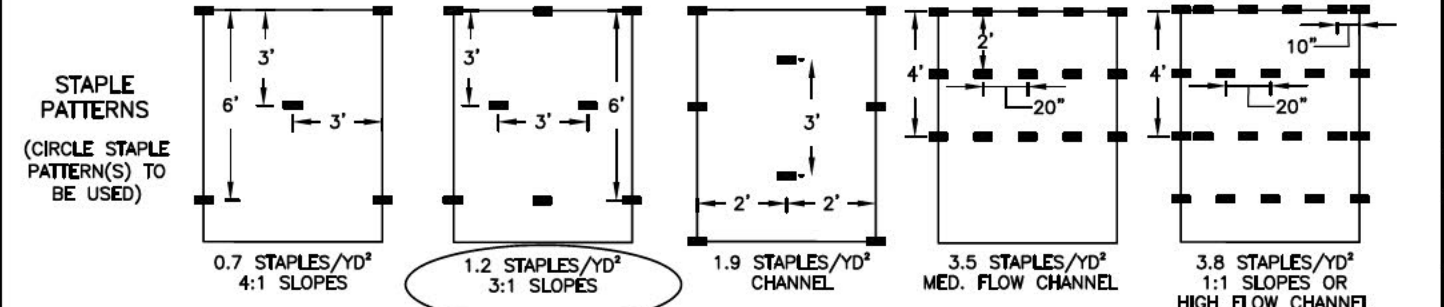
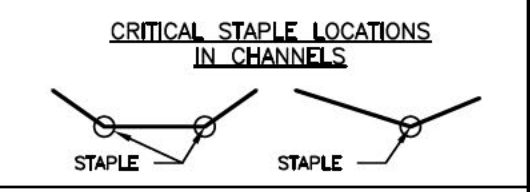
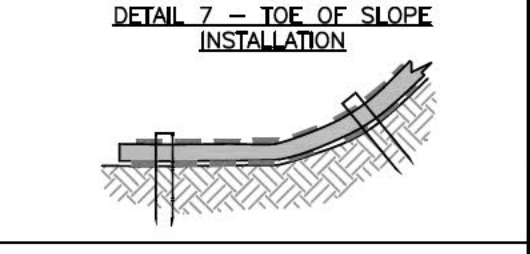
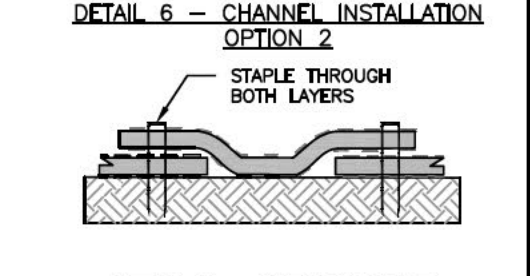
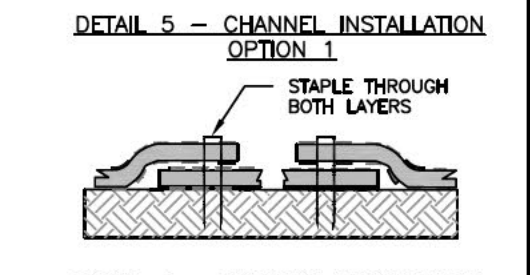
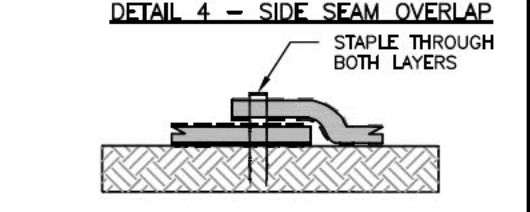
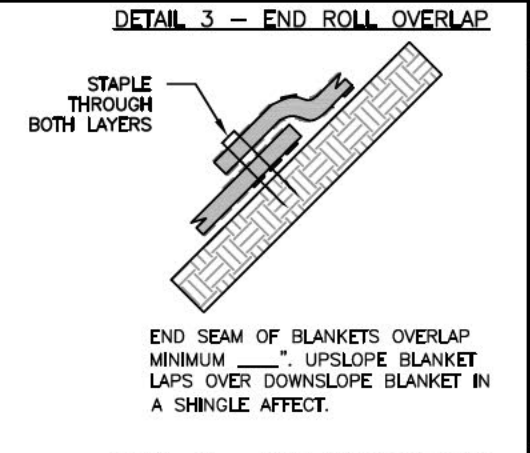
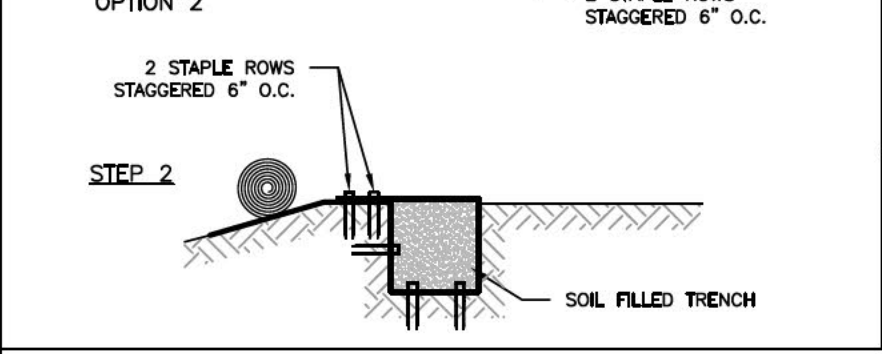
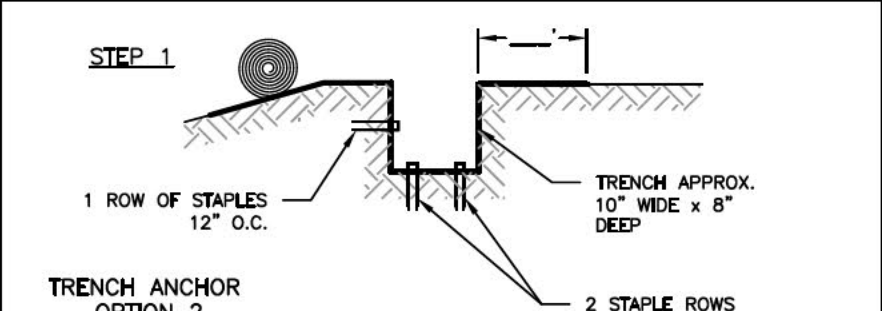
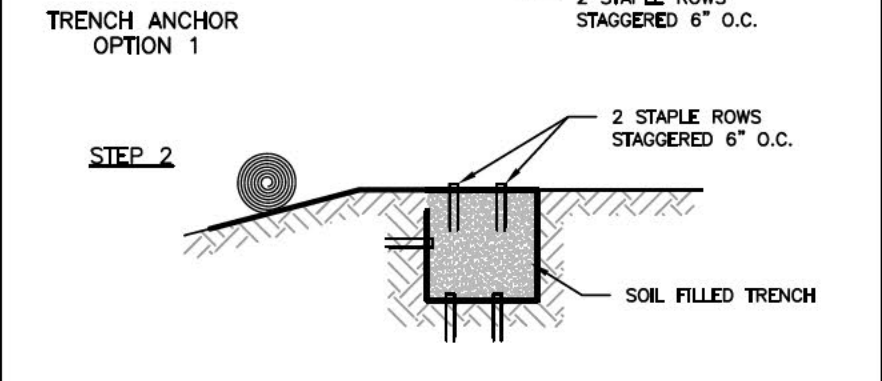
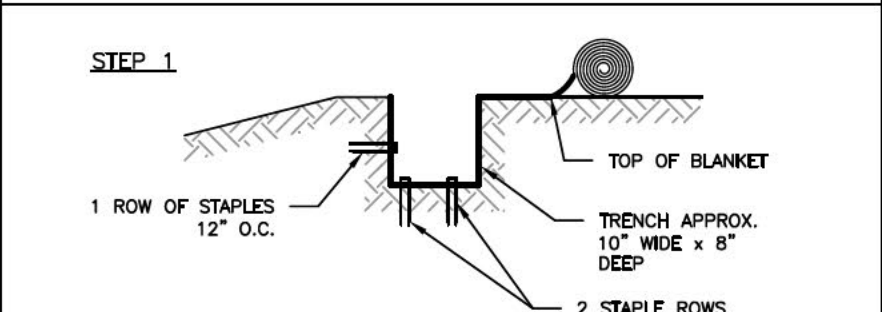
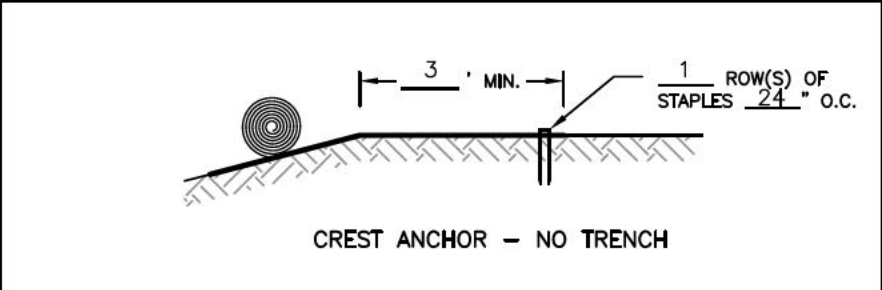


WisDOT PAL EROSION MAT
 CLASS III
 TYPE A

SLOPE INSTALLATION DETAIL



- NOTES:**
1. STAPLE PATTERNS ARE DEPENDENT UPON SLOPE CONDITIONS AND MANUFACTURER'S RECOMMENDATIONS.
 2. STAPLES OF 11 GAUGE OR HEAVIER SHALL BE USED TO HOLD MATS AND NETS IN PLACE.
 3. STAPLES SHALL BE U-SHAPED WITH A 1-INCH CROWN.
 4. STAPLE LENGTHS ARE DETERMINED BASED ON SOIL CONDITION. SEE WI STANDARD 484-MULCHING FOR STAPLE LENGTH REQUIREMENTS. STAPLES SHALL BE 6" LONG.
 5. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR BOTH END AND EDGE OVERLAP LENGTH.
 6. CONSIDER THE USE OF BIODEGRADABLE STAPLES IN LOCATIONS WHERE WIRE STAPLES ARE DETERMINED TO BE A RISK.



Date 7/21
 Designed KBP
 Drawn KBP
 Checked _____
 Approved _____

EROSION CONTROL MAT INSTALLATION
 OWNER: STEVE LERCH
 COUNTY: POLK

United States Department of Agriculture
 Natural Resources Conservation Service
 Drawing Name WI-790
 Date 11/2017
 Sheet 7 of 9

SEEDING DATES

TIME PERIOD	DATES			TYPE OF SEEDING
Spring	April 15	through	June 1	Permanent
Summer	June 2	through	see WI-710 pg. 2	Temporary *
Late Summer	August 1	through	August 22	Permanent
Fall	August 23	through	see WI-710 pg. 2	Temporary *
Late Fall	November 1	through	snow cover	Dormant
Winter	snow cover	through	April 14	Frost Seed Not Allowed

MATERIALS

If no soil test is available, apply a minimum of 150 pounds of 20-10-10 fertilizer per acre. This is equivalent to 30 pounds nitrogen (N), 15 pounds phosphate (P205), and 15 pounds potash (K20) per acre. Apply two tons/ac of 80-89 lime or equivalent. (see page 2 for equivalent)

* Seed a temporary cover crop of Oats at a rate of 64 pounds/acre. (2 Bushels/acre)
 A permanent seeding shall be completed during the next acceptable time period following a temporary seeding.

MINIMUM PURE LIVE SEED (PLS)¹ RATE PER ACRE AND TOTAL POUNDS OF SEED NEEDED

SEEDING MIX <u>1</u>			LOCATION <u>0.1</u> ACRES			SEEDING MIX _____			LOCATION _____ ACRES		
SPECIES	RATE	POUNDS	SPECIES	RATE	POUNDS	SPECIES	RATE	POUNDS	SPECIES	RATE	POUNDS
Fox Sedge	0.3	.03									
Canada Wildrye	3.0	.30									
Prairie Cordgrass	2.5	.25									
Canada Milkvetch	0.1	.01									
Red Clover	0.1	.01									
Birdsfoot Trefoil	0.2	.02									


** 1. PLS = (% Germination X % Purity)
 ** Companion Crop

Total % Germination may also be termed Total % Viable Seed on a tag. If a tag only shows % Germination, the user must include percentage of the seed that germinated during the lab test (% Germination) plus the percentage of hard and/or dormant seed. Hard seed and dormant seed are seeds that are still capable of germinating and producing a plant but did not germinate under the conditions of the test in the lab.

Additional native seeds may be required by permitting agencies. These additions are allowed. Seed mixture shall meet all requirements of the WI weed laws. Species identified as restricted or prohibited by law shall not be planted. Certified seed shall be used, and the seeding rates will be based on pure live seed. For dormant seedings, increase the seeds per square foot by 15%.

SEEDBED PREPARATION

Seedbed preparation shall immediately follow construction activities. Prepare a fine, firm seedbed to a minimum depth of three inches. A seedbed is considered firm when a footprint penetrates less than 1/4 inch deep.

 United States Department of Agriculture Natural Resources Conservation Service	NATIVE SPECIES SEEDING ESTABLISHMENT		Date <u>9/21</u> Designed <u>KBP</u>	File Name <u>WI-710</u>	
	CLIENT: <u>STEVE LERCH</u>		Date <u>9/21</u> Drawn <u>KBP</u>	Date <u>12/2019</u>	
	COUNTY: <u>POLK</u>		Checked _____	Approved _____	Sheet 8 of 9

SEEDING

Inoculate legumes with the specific inoculum for the species in accordance with the manufacturer's recommendations. When using a hydroseeder, five times the recommended rate of inoculant shall be added to the hydroseeder. Inoculant shall not be mixed with liquid fertilizer.

Seed may be broadcast or drilled as appropriate to the site.
Seed, fertilize, and lime as soon as possible after construction.
Seeding perpendicular to direction of flow is required to limit erosion.
Seed grasses and legumes no more than 1/4 inch deep.
Consider seeding at a lower rate and making 2 passes to ensure more uniform distribution.

TEMPORARY SEEDING OPTIONS

Select one of the following species for temporary cover if:

- 1) The required seeds or plant stock are not available or the normal permanent seeding period for the species has passed
 - Forage Sorghum - 1/2 bushel per acre (May 15-July 15)
 - Sorghum - Sudangrass Hybrid - 1 bushel per acre (May 15-July 15)
 - Sudangrass - 1 bushel per acre (May 15-July 15)
 - Winter Wheat - 2 bushels per acre (Aug 1-Oct 1)
 - Winter Cereal Rye - 2 bushels per acre (Aug 1-Oct 15)
 - Oats - 2 bushels per acre (Apr 1-Sept 1)
 - Annual Ryegrass - 20 Pounds per acre (Apr 1-Sept 1)

- 2) Triazine herbicide carryover will not allow establishment of permanent cover immediately.
 - Forage Sorghum - 1/2 Bushel per acre (May 15-July 15)
 - Sorghum - Sudangrass Hybrid - 1 Bushel per acre (May 15-July 15)
 - Sudangrass - 1 Bushel per acre (May 15-July 15)

DORMANT SEEDING

Seed is broadcast and incorporated, no-tilled, or drilled into the seedbed. Seedbed preparations and conditions are similar to conventional seeding.

MULCHING

(Mulching is required.)

(Mulching is not required.)

Mulching shall be done immediately after seedbed preparation and seeding. Mulch shall be applied immediately after final grading for areas seeded at a later date.

Mulch material shall be relatively free of disease, pesticides, chemicals, noxious weed seeds, and other pests and pathogens.

Spread straw and hay mulch uniformly and at the rate of 1.5-2.0 tons per acre (60-70 bales). This application results in a layer of 6 to 7 stems, 1 to 2 inches thick, and provides a minimum 70% ground cover. Some soil surface can be seen after the application. Crimping (disking), wood cellulose fiber, tackifiers, netting, pinning, or other acceptable methods of anchoring will be used if needed to hold the mulch in place.

If other mulch materials are used, the rate of application shall meet the manufacturer's recommendations.

Two (2) tons/ac of 80-89 lime or equivalent from UW-EXT A3671

Lime Quality	Tons/AC.
40-49	3.9
50-59	3.2
60-69	2.7
70-79	2.3
90-99	1.9
100+	1.6



United States Department of Agriculture

Natural Resources Conservation Service

NATIVE SPECIES SEEDING ESTABLISHMENT

CLIENT: STEVE LERCH

COUNTY: POLK

Designed	<u>KBP</u>	Date	<u>9/21</u>
Drawn	<u>KBP</u>	Date	<u>9/21</u>
Checked	_____	Date	<u>12/2019</u>
Approved	_____		

File Name	<u>WI-710</u>
Date	<u>12/2019</u>
Sheet	<u>9 of 9</u>