

NATURAL RESOURCES CONSERVATION SERVICE
INTERIM SPECIFICATION for DROUGHT RESILIENCE IMPROVEMENT PROJECT

FENCE

Issued March 21, 2013

(Feet)

CODE 382

For the purpose of the Drought Resilience Improvement Project (DRIP) Colorado NRCS is allowing the use of Temporary Fence to include “snow” fence or other similar material to be used in conjunction with other erosion control practices. Those other practices are limited to 329 – Residue and Tillage Management, No-till/Strip-till/Direct Seed; 484 – Mulching; 588 – Cross Wind Ridges; and 609 – Surface Roughening.

The temporary fence will be used to guide field operations to abate soil erosion from wind and provide some disturbance to wind movement and airborne soil particles.

ALLOWED FENCE MATERIAL

To meet the limited variance of this practice, producers must install wood slat snow fence or a woven plastic mesh (HDPE) snow fence. The plastic mesh will have openings that measure no more than three times the width of the material creating the weave with target porosity of 40-50%. Fencing material will be supported by steel T-posts or wood posts.

TEMPORARY FENCE INSTALLATION

- Use steel T-posts or wooden posts for a temporary installation. Set end posts at a spacing of five feet and brace with a third T-post attached diagonally. Note that the brace post is placed from the top of the end post to the bottom of the second post. Fasten brace post with heavy gauge wire. Reverse the process on the opposite end of the fence. Between both ends of the fence, set line posts at 8 foot centers. See Appendix A.
- Attach fence to posts. Fence must be a minimum of 42” high. Sandwich 1 or 2 in. treated wooden laths or battens between metal posts, the inside of the grid and outside of the grid. Wooden posts only require the outside lath. Use three wire or cable ties to attach the grid to the posts. Attach fence to the diagonal brace post using the same method. The wooden laths prevent the wires and steel posts from damaging the snow fence, ensuring longer life.
- Leave a gap equal to 10% of the total height of the snow fence between the ground and the bottom of the fence (example: 5 in. for a 4 ft. snow fence).
- Tension snow fence and attach to line posts. Attach a fence stretcher or weave a bar through the fence openings to evenly grip the fencing material. Fence should be tensioned about 1 ft. per 100 ft. of fence or in accordance with manufacturer’s recommendations, by using a fence stretcher, come- a-long or vehicle. For temporary short runs, you can tighten product by hand. While under tension, attach fence to posts.
- The fencing material shall be placed on the side of the post opposite the area being protected, except on curves where the fencing shall be placed on the outside of the curve. The binding and ties should be on the same side for security benefit and tampering.

APPENDIX B

- Fences should be set back at least 35 times the height of the fence from the area being protected (Example 4 ft. fence x 35 = 140 ft. back from area to be protected) and provide a minimum soil loss reduction of 65% as calculated by WEPS.
- Extend your fence beyond the protection limits to an angle of 30 degrees on either side of the prevailing wind direction.
- Although fences should be perpendicular to the prevailing wind direction, departures up to 45 degrees are permissible as long as required soil loss reduction is attained.
- Avoid stretching the fence around posts without a buffer between it and the post to protect the fencing from abrasion. We suggest wrapping the fence around corner posts to ensure a long-lasting, low-maintenance fence.

Check your fence regularly to make sure it's still securely anchored. Be sure to replace any damaged parts. For details on construction materials other than described above, Appendix B.

The following used materials are acceptable if they are in good condition and have the minimum life expectancy of 15 years: treated railroad ties, power or telephone poles, and steel or used well casing.

REFERENCES:

Colorado Department of Transportation at

<http://www.coloradodot.info/business/designsupport/standard-plans/2012-m-standards-plans/2012-m-standards-pdfs/40-picket-snow-fence/m-607-10-picket-snow-fence>

US Fence at <http://www.us-fence.com/HTML/snowInstructions.html>

Illinois Department of Transportation at <http://www.dot.state.il.us/blr/I002.pdf>

Easy Gardner at

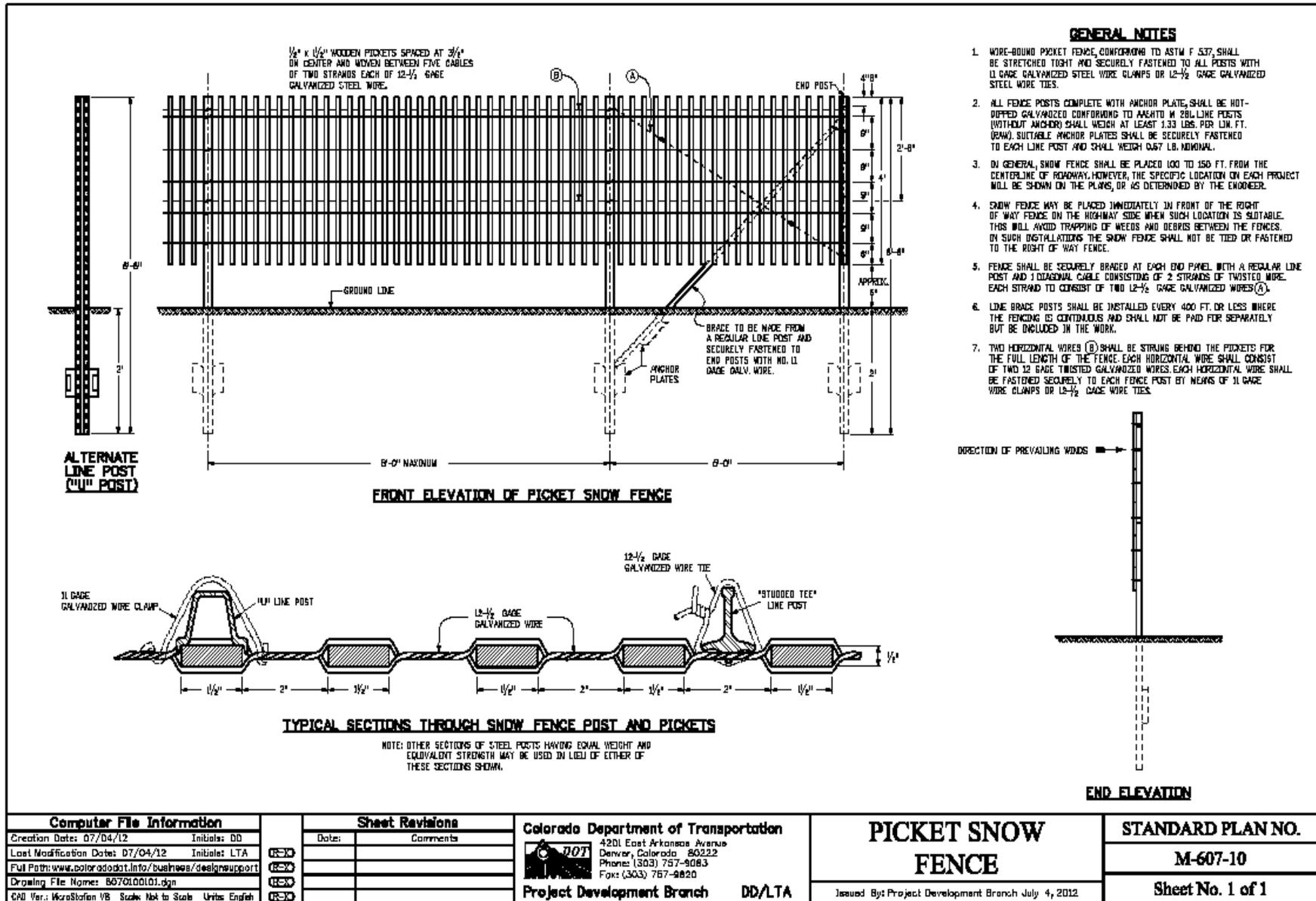
http://www.easygardener.com/index.cfm?fuseaction=feature.display&feature_ID=65&ParentCat=182

Technology News at http://www.intrans.iastate.edu/ltap/tech_news/2008/sept-oct/fenced_in.pdf

Fence Traders at <http://www.fencetraders.com/how-to-install-snow-fence.html>

Louis E. Page at <http://www.louispage.com/blog/bid/8155/How-To-Install-Snow-Sand-Fence-Guidelines>

APPENDIX A



APPENDIX B

GENERAL MATERIAL AND INSTALLATION CRITERIA

APPLICABLE TO TEMPORARY FENCES

Staples/Clips – Use at least 9 gauge galvanized staples, which are at least 1 ½ inches long for softwoods (pine) and 1 inch for hardwoods (Juniper, Cedar, Oak, Mulberry, mesquite, and black locust). Drive staple(s) diagonally and at a slight downward angle which allows staple to open, so wire can have movement. Woven wire shall be attached at alternate horizontal strands. The fencing shall be fastened to steel or concrete posts with either two turns of 14 gauge galvanized wire or the post manufacturer’s appropriate wire clip

Line Posts –

Wood – Most materials must be new with a life expectancy of 15 years. Posts shall have a minimum top diameter of 3 inches and set approximately 18 inches in the ground. Top wire staple shall be a minimum of 2 inches from the top of the post. Post should not be spaced more than 8 feet apart. Total length of post should accommodate all measurements for the specific fence (normally a 5.5 foot post length).

Steel – Standard T-posts, 1 3/8 x 1x3/8 x 1/8 inches or U and Y shaped, 2 x 1 ¼ x 3/32 steel post with anchor plate (1.25 lbs/ft excluding plate). Post shall be a minimum of 6.5 feet long and set into the ground a minimum of 2.0 feet or to the top of the anchor plate. Steel post 0.085 gauge, similar in quality to “Staple Grappler,” shall also be acceptable. Metal rod or pipe of the same equivalency may be used.

H-Brace – Minimum of 7 feet in length to be set 3 feet in the ground, spaced 6 feet apart. All brace post assemblies shall have a minimum of two (2) posts in line to provide a suitable anchor for the fence. They shall be spaced at a maximum of 80 rods (1320 feet) or at corners and points of abrupt changes. An abrupt change can be a change of 15 degrees or more in vertical topography or where the alignment of the fence varies more than 12 inches from planned fence line between corners or brace posts. Reasonable deviations in alignment shall be permitted where rocky ground or steep slopes exist.

Wood - A minimum of 5 inch top diameter (inside of bark) of treated timber or durable wood listed above for upright post. A 6 inch top diameter (inside of bark) can be used for the outside upright post. The horizontal post shall be a minimum of 3.5 inches in diameter or a 4x4 inch timber. The minimum length shall be 6 feet and shall not exceed 10 feet. Top wire will be mounted 12 inches below the top of the end post or a minimum above the ground being 2/3’s height of top wire height.

Corner and End/Gate Post

Wood - (Pressure treated or durable wood) shall have minimum top diameter of 5 inches, 7 feet in length, and be set firmly 3 feet in the ground. Cross post will have a minimum 3.5 inch top diameter.

Metal pipes used must be permanently capped to exclude rainwater and all metal components used must be painted with a durable permanent rust resistant coating or be galvanized; components will be repainted if rusting occurs.

Brace wire shall be No. 9 gauge galvanized smooth wire or 12 ½ gauge barbed wire. Brace wires will be composed of two complete loops fastened 4 inches below the top of the post and 4 inches above the ground.

Wire clips or fasteners must be galvanized and similar to strength of fence wire.

Allow newly installed braces and assemblies to settle and/or pack dirt sufficiently around all post; do not over-tighten wires. Deadman anchors are not required for temporary fences.

The NRCS State Resource Conservationist must certify variations that meet or exceed this temporary fencing practice standard.

Single Post Corner Or Angle Brace Assembly

