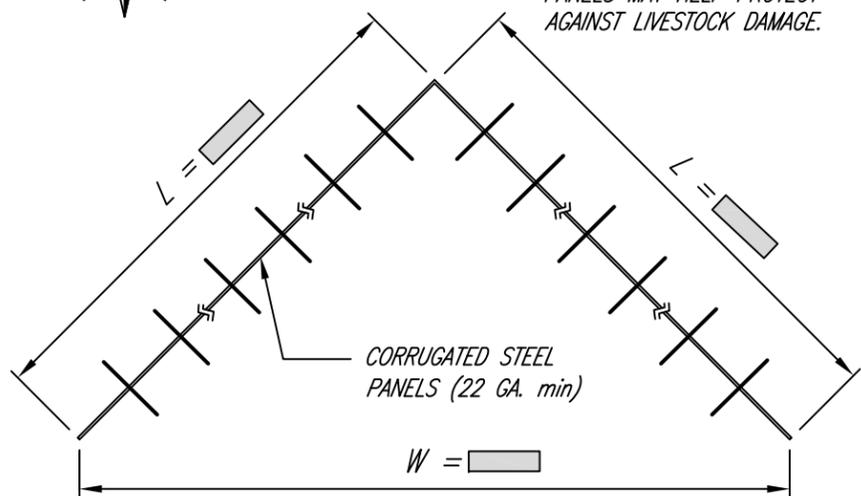


Draw North Arrow

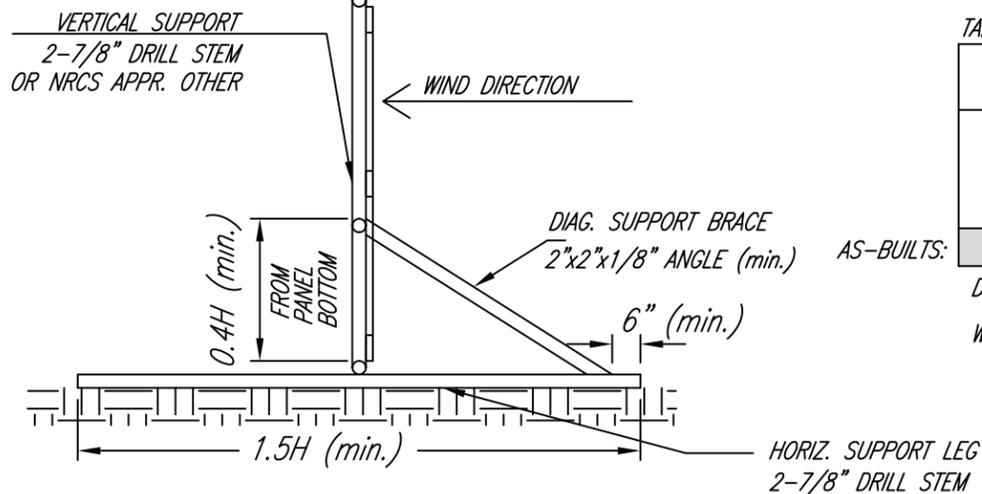


PREVAILING WIND DIRECTION

PROVIDING A SEPARATE RUBBING BAR ON DOWNWIND SIDE OF PANELS MAY HELP PROTECT AGAINST LIVESTOCK DAMAGE.



FABRICATED WINDBREAK
PLAN VIEW
NOT TO SCALE



SECTION A-A: PROFILE AT SUPPORT LEG
NOT TO SCALE

TABLE 1: AREA NEEDED FOR FABRICATED WINDBREAK.

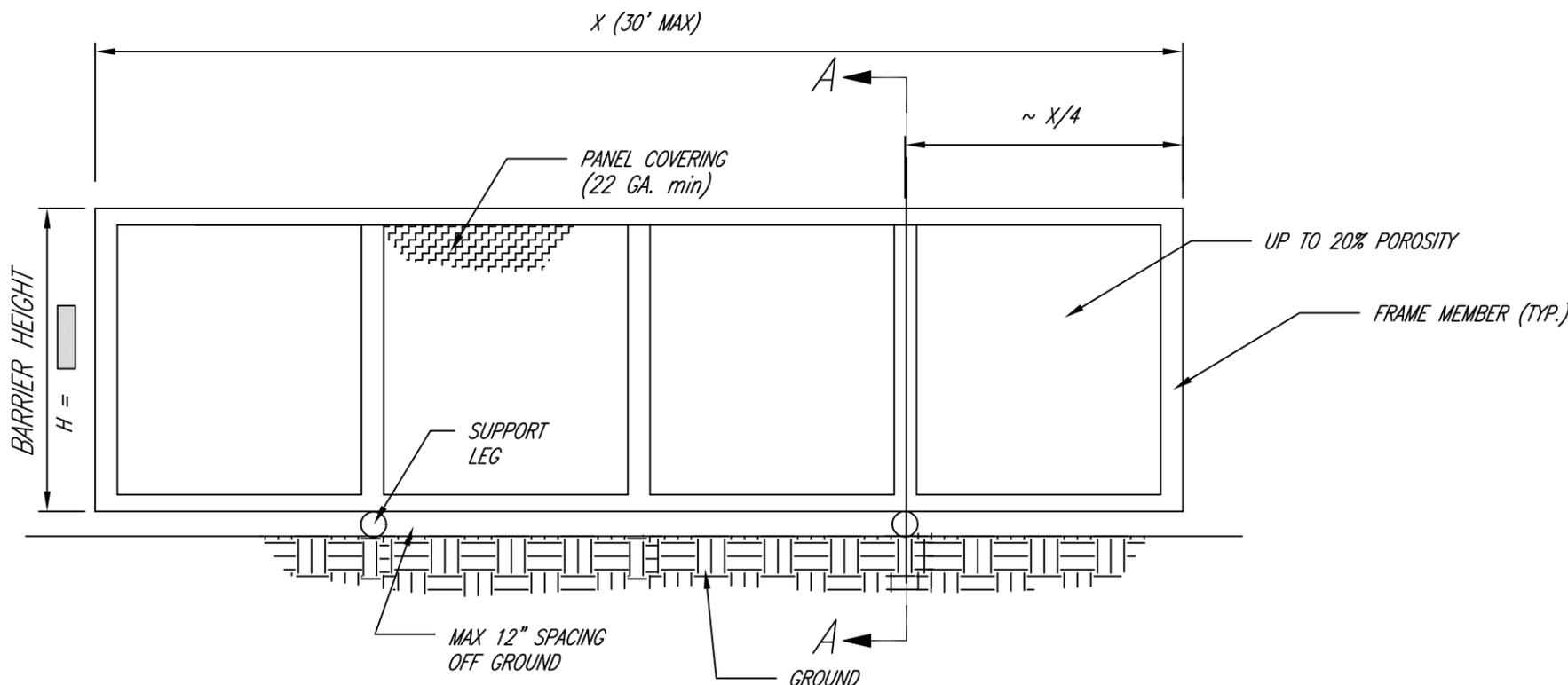
	LIVESTOCK NUMBERS	FT ² / ANIMAL	AREA (FT ²)
YEARLING		35	
BEEF COW		50	
SHEEP		10-15	
TOTAL AREA NEEDED (FT ²)			

TABLE 2: DIMENSIONS FOR PROTECTED AREA.

BARRIER HEIGHT H (FT)	WING L (FT)	WIDTH W (FT)	DRIFT FREE AREA (FT ²)
6	60	84.8	3,964
8	80	113.1	7,047
10	105	148.5	11,823
12	125	176.8	16,828

AS-BUILTS:
DRIFT FREE AREA = $0.5 L^2 + 4.25 W H$

WIDTH (W) = $\sqrt{2L^2}$



FABRICATED WINDBREAK FRAME DETAIL
NOT TO SCALE

CONSTRUCTION NOTES AND SPECS

- 1) UNINTERRUPTED SHELTER WIDTH "W" SHOULD BE 10 TO 15 TIMES SHELTER HEIGHT "H".
- 2) PANEL COVERING SHALL BE A MINIMUM 22 GAGE COATED CORRUGATED STEEL, OR SIMILAR DURABILITY MATERIAL AS APPROVED BY NRCS ENGINEER. PANELS SHOULD BE ATTACHED TO THE WINDWARD SIDE OF THE SHELTER.
- 3) SUPPORT LEGS SHALL BE MIN. 2-7/8" DRILL STEM. PANEL FRAME MEMBERS SHALL BE DRILL STEM, ALTERNATE GRADE 36 STEEL, OR WOOD TIMBER. ALTERNATE MATERIALS MUST BE PRE-APPROVED BY AREA ENGINEER.
- 4) STEEL SHALL BE MALLEABLE, WELDABLE, CARBON STEEL. BOLTS, RODS, NUTS, WASHERS AND OTHER HARDWARE SHALL BE AN APPROPRIATE GRADE OF STEEL, AND BE GALVANIZED.
- 5) STRUCTURES SHALL BE INSTALLED ACCURATELY TO THE DIMENSIONS SHOWN ON THE DRAWINGS. BOLT HOLES SHALL BE DRILLED FOR A SNUG FIT STEEL WELDS SHALL BE HEAVY DUTY WITH OBVIOUS STRENGTH EQUAL TO, OR GREATER THAN, THE STRENGTH OF THE STRUCTURAL STEEL.
- 6) CONSULT WITH AREA ENGINEER FOR BARRIER HEIGHTS (H) GREATER THAN 8 FEET.
- 7) VARIATIONS THAT DON'T ADVERSELY AFFECT THE INTEGRITY OF THE STRUCTURE WILL BE CONSIDERED BY THE AREA ENGINEER.

OPERATION & MAINTENANCE: 1) INSPECT FABRICATED WINDBREAK AND REPAIR ANY DAMAGE TO STRUCTURE ANNUALLY.

2) LIVESTOCK WINTERING LOCATIONS WILL BE MOVED ANNUALLY AS A MINIMUM.

"STATEMENT OF COMPLIANCE"
Construction (was) (was not) completed in accordance with approved construction plans and specifications.

JAA

Date

ND Conservation Job Sheet 25
PORTABLE FABRICATED WINDBREAK

REVISIONS		
DATE	APPROVED	TITLE
10/11/2010	Dennis H. Reep	State Conservation Engineer
04/24/2012	Dennis H. Reep	State Conservation Engineer
01/02/2013	Dennis H. Reep	State Conservation Engineer

Date _____

Designed _____

Drawn _____

Checked _____

Approved _____

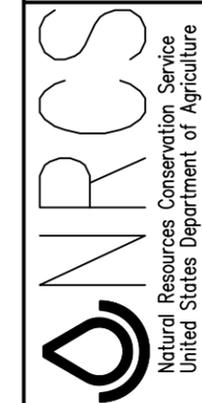
PRODUCER _____

SECTION _____

COUNTY _____

CONSERVATION DISTRICT _____

USDA - NRCS
State Office Engineering Staff
220 East Rosser Ave
Bismarck, North Dakota 58501



File Name: Fab_Windbreak_ND_10_10.pro

Drawing No.