

Browning High School Wind and Snow Protection Project Proposal

Project Vision

A functional demonstration of wind and snow protection at Browning High School that

- Incorporates “Western” science and place-based knowledge
- Decreases negative impacts and maintenance costs and safety hazards of wind and snow
- Provides opportunities for student research and hands-on experience
- Is visible as a demonstration site for the larger Browning community
- Is visually and ecologically harmonious with the surroundings

Background

In 2023 Browning High School (Abigail Marshall) received a \$5,000 grant from the Society for Science to support student research in STEM. The original grant proposal came from a visioning session with Environmental Science students on how they could use science to benefit their community; Jesse Day Rider (Class of '24) came up with the idea to test out different types of fences to catch trash, and from there the idea developed towards a demonstration of wind mitigation that would decrease not only trash blowing but also the hazards of snow and dust. that was funded based on budget for the purchase of materials to install a wind and trash fencing.

Abigail contacted the Alberta-based company Wind and Sun Protection Inc. and received a quote for project materials (Wind and Sun netting and locally-sourced posts and concrete) and a donation offer of additional netting material. Representative Anthony van de Vendel has provided initial consultation on the process and presented to BHS and maintenance staff about wind fencing and the potential for a project at BHS.

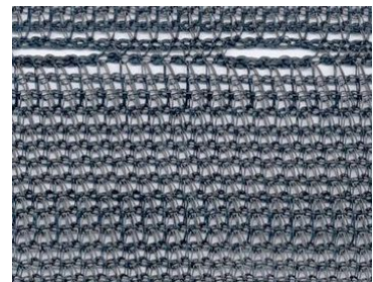
In Spring 2024 Abigail met with maintenance department staff and the Blackfeet Environmental Office and identified priority areas for wind control. Environmental Science students conducted initial surveys of the area and classroom tests of fence models to explore how barrier design affected wind and snow protection. Due to ongoing construction the project was postponed until the 24/25 school year.

Wind and Sun Protection Wind Netting

The Wind and Sun Protection “WSP1070” wind screen netting comes in 10' high rolls and is made out of a knitted polyethylene material with eyelets for aircraft cable support

. The netting is a 63% wind density, designed to eliminate low pressure zones that create backdraft and cyclones. The material is knitted, not woven, to prevent unraveling and allow optimal stretch. It is rated to 20,000 UV Hours and the protected distance is approximately 100 feet (10 times the fence height).

The recommended depth for post installation for a 10 ft wind fence is 6 ft with concrete. Netting attached to posts with staples and additional cables can be installed for maximum stability.



Proposed Fencing Locations (approximate)

SW corner of the Stadium/Track

2 Fencing sections (to keep pedestrian walkway clear), 80 ft & 50 ft = **130 ft total**



New Arbor seating area

"L" Shaped fence to protect seating area, 30 ft & 50 ft = **80 ft total**

