

## Ken Field

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## **Thermal Barrier**

In the construction sequence, the thermal barrier is added after the framing is finished. It is some kind of insulation that will prevent a large temperature difference on one side from equalizing to the other. Fiberglass is the most popular but probably the most misunderstood and ineffective when installed any other way then perfectly. Fiberglass needs to be in a 6 sided airtight cavity to perform to its rated value. That puts attic insulation in question because the top is usually exposed. The backs of vertical walls that border unconditioned spaces are often left exposed also. If the insulation says R-15 and the back is exposed the R value is diminished by approximately 50%. All that is needed to make it perform correctly is an air barrier which I talked about last week. Even Tyvek will work as an air barrier. Because fiberglass is made from glass, the material itself has no inherent insulating qualities. It does create millions of dead air pockets and air is a good insulator for what it costs. But install it sloppily or in an open space and you will scratch your head as to why it costs so much to heat your home. Cellulose is a much better insulator and one of the best uses for it is to add some to the top of fiberglass in an attic. The cellulose lays like a blanket and even though it does not provide a true air barrier, it will allow the fiberglass to reach its rated value by blocking air currents that wash away the heat trapped in the porous fiberglass. Cellulose also adds more insulating value to the attic. Today R-50 is the recommended value for our area. That is about 14" of total insulation. Most attics from 10 years ago MAY have 10" and many still have only 8". You can add 6" of cellulose

and be right up to date.

The reason last weeks article was on the air barrier is because that should always be addressed BE-FORE the thermal barrier. It lies behind and beneath the thermal barrier. Airseal THEN insulate for the most effective way to improve comfort and maximize energy savings.

Certain types of home design are prone to problems.

Cape cods are the worst and I can't think of one I have ever seen that was insulated properly when I got there. Another is the bi-level. Any home with a cantilever (one floor projecting out past a lower floor) usually has insulation problems in that area. All of these problems can be fixed if you make a commitment to energy conservation. The benefits are lower energy cost and a healthier home.

Ken Field is the owner of Slate Belt Energy and Field's Service, Inc. As a certified energy rater and contractor, he is qualified to assess every aspect of energy usage and prescribe solutions to save energy. He can be reached at 610-759-6306 or email Ken@FieldsService.com

## **PennDOT Names Winners of Paint the Plow Contest**

By PEN DOT

ALLENTOWN, PA – The Pennsylvania Department of Transportation (PennDOT) is pleased to announce the District 5 regional winners of the Paint the Plow safety outreach contest.

East Stroudsburg North High School of Monroe County won the "Fan Favorite" award, which was determined by online voting through www.penndot.pa.gov. The plow depicts a timber wolf in snow and holding a phone to convey this year's theme "Put Down the Device in Snow and Ice."

Members of the public were invited to vote for their favorite plow from five area high schools that entered in this year's regional contest. Votes were accepted from October 31 to November 6, 2022. East Stroudsburg North High School received 660 of votes to win the 2022 "Fan Favorite" honor.

During the winter weather season, the blades, as well as those painted by East Stroudsburg South High School, J.T Lambert Intermediate School, Pleasant Valley High School, and Pleasant Valley Intermediate School students, will be used to maintain state-owned roadways in Monroe County. Photos of all the District 5 plows can be viewed on the PennDOT website. https://www.penndot.pa.gov/TravelInPA/Winter/PaintThePlow/Pages/District5.aspx.

Paint the Plow is a collaborative effort between PennDOT and area high schools aimed at promoting winter driving safety and fostering appreciation for student art programs and creativity. Students are invited to paint a plow blade with an original design based on a provided theme. The 2022 statewide theme is "Put Down the Device in Snow and Ice," which was chosen to draw attention to the need for motorists to give driving their full attention and eliminate distractions, like cell phones, especially during winter weather events.

For more information on PennDOT's winter preparations and additional winter-driving resources for motorists, visit the department's winter website.



