



**Aerial Intelligence Solutions**  
**635 Sixth Avenue**  
**Dayton, KY 41074**

Dear Dayton High School Students and Faculty,

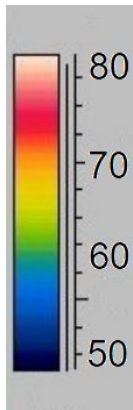
We at AIS, would like to thank you for the opportunity to perform the Thermal Imaging of the Dayton HS building roof on December 17, 2018. A brief analysis is given below.

Roof Analysis:

Normal protocol for thermal imaging inspections is to perform an initial flight scan in sweep mode or for smaller flat roofs, a simple perimeter flight scan. The Dayton HS building roof was done using simple perimeter flight scan. The initial scan is done with the radiometer turned off. The initial scan will show problem or suspect areas of a roof. A second subsequent flight is performed with the radiometer turned on to read actual temperature in real-time. The real-time data is used to diagnose problems such as breeches in insulating material or wet insulation, electrical overheating or wiring, conduit or roof-installed equipment, plus areas of heat loss through brick, masonry or defective exhaust vents. Expert diagnostics made of roof problems are used to make suggestions to the owner for repair or corrections to the affected units or area.

The flight scan performed by AIS of the Dayton HS roof on 12/17/2018 was unremarkable. The single flight was performed with radiometer turned on, but this is non-standard and was for demo only as described in the paragraph above.

In conclusion, the westward facing wall had an artificially high temperature reading - not due to heat loss - but due to the fact that it had been absorbing solar energy all day and at 15 minutes after sunset didn't have sufficient time to dissipate the heat energy. The electrical conduit supplying roof-installed equipment was hot but within tolerance. The two roof vents on the east roof were hot but within tolerance. The temperature-color scale on the next page can be used to interpret the video image we supplied to you.



White color indicates a temperature of approximately 80°F or higher. The bottom of the temperature scale is dark blue or 50°F. The other colors fall in between and interpretation is somewhat subjective, although two different observers should agree on most of the readings.

Thank you, If you have any questions or concerns, please feel free to contact:

Aerial Intelligence Services

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