

## Thermal Roof Inspections

## **Actual examples**

A state agency in the northeast operated a facility with a 360,000 square foot roof area. The roof was over 22 years old and experiencing several leaks. Cost estimates to replace the roof ranged between \$2.5 and \$3 million. An initial IR inspection identified 1,208 square feet of roof requiring replacement at a total cost of \$20,705. The following year another IR inspection was performed that found 1,399 square feet of roof requiring replacement at a cost of \$18,217. A roof IR inspection program was started and the roof surveyed each year. The survey resulted in less than 200 square feet of roof identified needing replacement in any one of the following 4 years (one year results were as low as 30 square feet). The total cost for roof repair and upkeep for the 6 years was less than \$60,000. If the facility would have been privately owned, interest on the initial \$3 million at 10% would have amounted to \$300,000 for the first year alone. Discounting interest on \$3 million over the 5-year period, simple savings resulting from survey and repair versus initial replacement cost (\$3 million to\$60,000) amount to \$2,940,000. This figure does not take into account interest on the \$3 million, which would result in savings in excess of another \$500,000 to \$800,000, depending on loan interest paid.

A building owner had been told that the roof to his facility needed to be stripped down to the deck with a new roof and new insulation; the cost \$ 1,926,000. However the infrared inspection showed with documented proof that the majority of the roof was not damaged nor needed to be replaced. With detailed information in hand the building owner choose to only remove the water damaged areas a and to re-roof only the existing sound roofing, at a cost of \$784,000.

A intense persistent leak in a 28,000 square foot built up roof in a commercial building lead the owner to seek out the cause. A thermal scan of the facility showed a small 1,200 square foot wet area. With analysis from the thermal report just a small section had to be replaced rather than a complete tear off and new roof installation, that would have cost between \$90-120,000 while the cost for the actual repair was \$5,400 resulting in a \$100,000 savings!

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