

# ASTECCool Roofing & LEED Credits



**Re-Ply™ Roofing Systems**  
*Perfecting Elastomeric Membranes Since 1986*





## Cool Roofs can qualify for a total of 3-4 LEED points possible.

LEED-EB: about 10% of all required LEED points can be attributed to cool roofs.

Silver Level: about 9% from cool roofs.

Gold Level: about 6% from cool roofs

Platinum Level: over 4% from cool roofs

# Leadership in Energy & Environmental Design



LEED uses existing green metrics and rating systems such as ASHRAE, ENERGY STAR<sup>®</sup>, U.S. Department of Energy (DOE), U. S. Environmental Protection Agency (EPA).

# 4 levels of LEED-EB Certification

- ✓ LEED-EB: 34-42 points
- ✓ Silver Level: 43-50 points
- ✓ Gold Level: 51-67 points
- ✓ Platinum Level: 68-92 points



Cool Roof Systems can qualify for  
3 LEED Conditions.

Sustainable sites

Energy Management

Indoor Environmental Quality

# LEED Condition: Sustainable Sites



Have in place over the performance period an ENERGY STAR<sup>®</sup> compliant high-reflectant roof.

Initial reflectance of at least 0.65 reflectance & at least 0.5 when tested in 3 years minimum emissivity of 0.90 for a minimum of 75% of the roof surface.

1 LEED point

# LEED Condition: Energy Efficiency



- ✓ requires product or action exceed ASHRAE 90.1 -2004 by 14%

# What is the ASHRAE 90.1-2004 standard?



Roofs with a minimum total solar reflectance of 0.70 and a minimum thermal emittance of 0.75 comply.

14% over the standard = solar reflectance of 0.798 and thermal emittance of 0.855





# LEED Condition: Energy Efficiency



Cool Roofs can :

Lower the amount of solar energy being absorbed into the building through the roof.

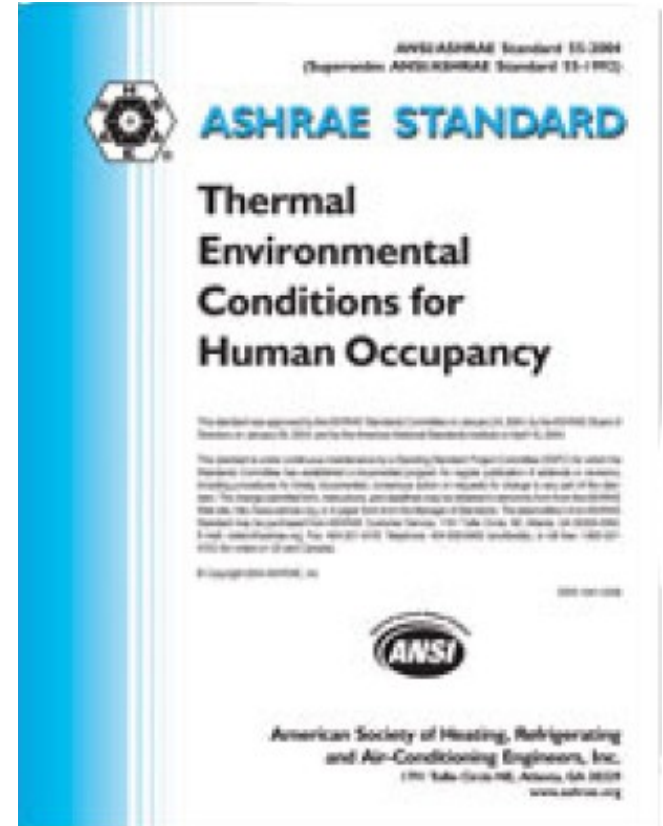
Lower the amount of energy required to maintain current interior temperatures.

2 LEED Points



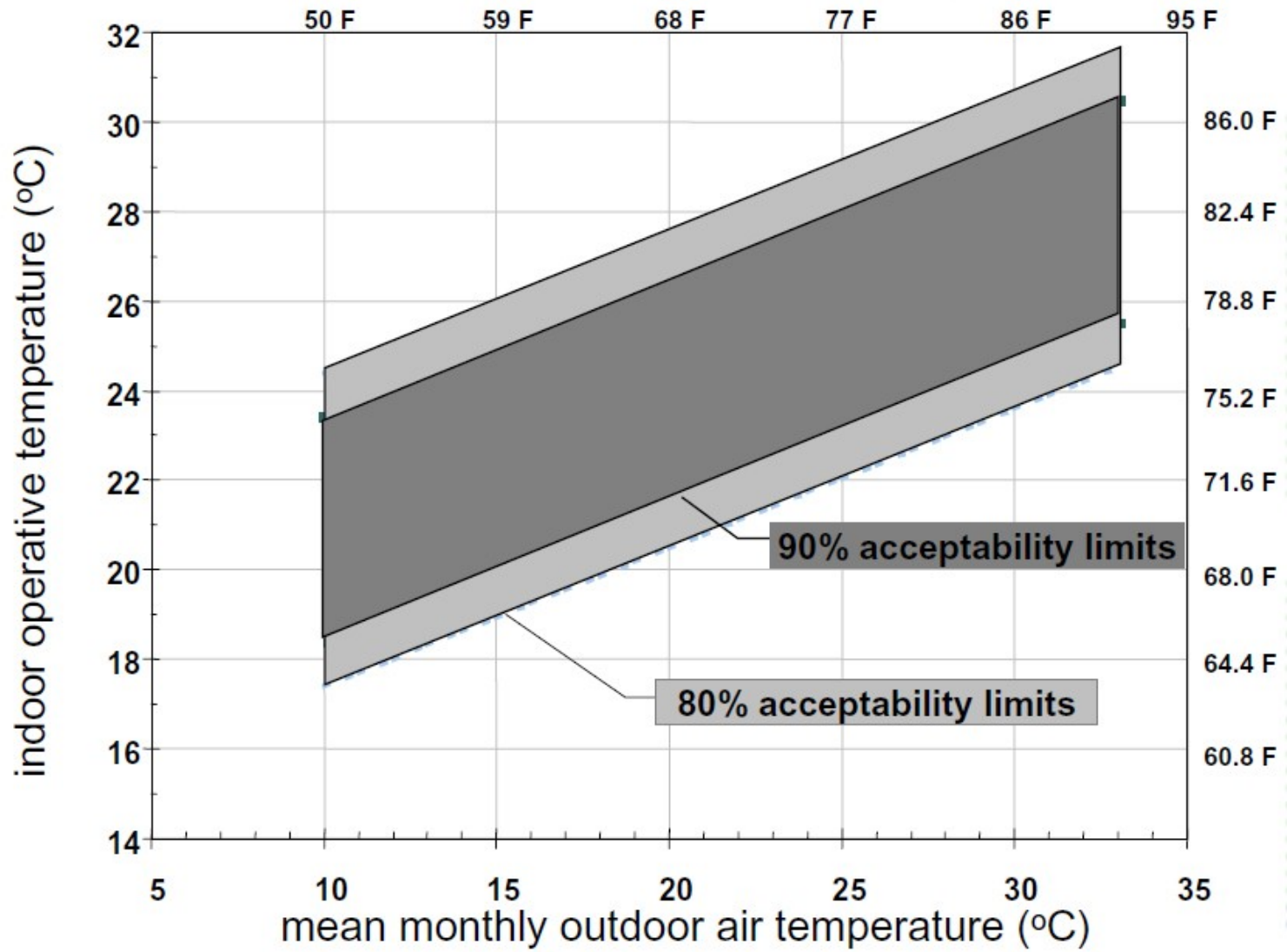
# LEED Condition: Indoor Environmental Quality

Comply ASHRAE STD 55-2004



# What is Standard 55-2004?

- ✓ The standard specifies conditions of indoor thermal environment that occupants will find acceptable.
- ✓ The standard is intended for use in design, commissioning and testing of buildings and other occupied spaces and for the evaluation of existing thermal environments.





# LEED Condition: Indoor Environmental Quality

## ASHRAE STD 55-2004: Addendum F

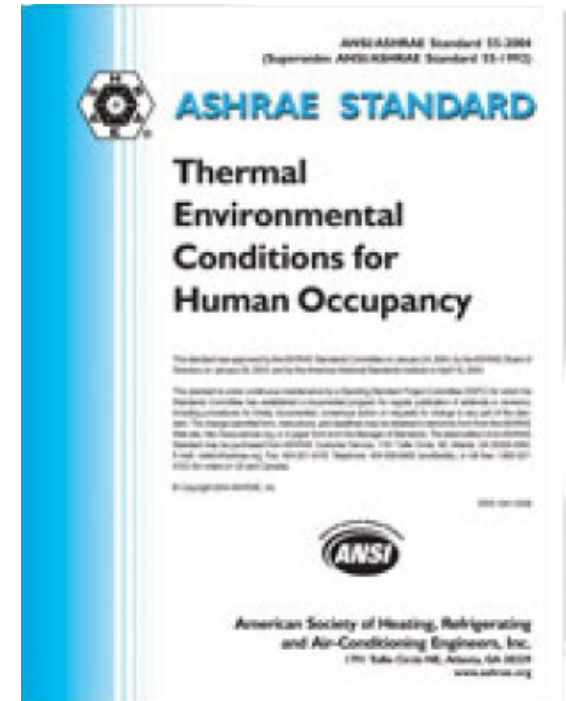
October 2007 - Issued

November 2008 - Completed public review

January 2009 - Board meeting for final approval

Addendum F expands roof requirements to include cool roofs.

If accepted: 1 LEED Point





# Sustainable Facilities

- ✓ ENERGY STAR® qualified roof products reduce the amount of air conditioning needed in buildings, and reduce energy bills by up to 50%. – Department of Energy
- ✓ Cool Roof / Cool Wall systems will eventually pay for themselves and continue to pay a premium.



# Sustainable Facilities

- ✓ Downsizes Cooling Equipment-A reflective roof / wall system can reduce peak cooling demand by 10-15%. As a result the building owner may be able purchase a smaller, more efficient and less expensive cooling system.-EPA
- ✓ Existing cooling systems will not have to work as hard to maintain the same comfort levels and may require less maintenance.

# Advanced Ceramic Coatings

- ✓ Qualify for LEED Credits
- ✓ Lower energy consumption
- ✓ Provide durable / flexible surfaces
- ✓ Protect from Ultra-violet degradation
- ✓ Eliminates/minimizes roof tear-off.
- ✓ Sustainable, Renewable, lower life-cycle cost.



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