



Radiant Barrier, Micro-E® , & ESP Low-E™ Applications

for Residential and Light Commercial Buildings

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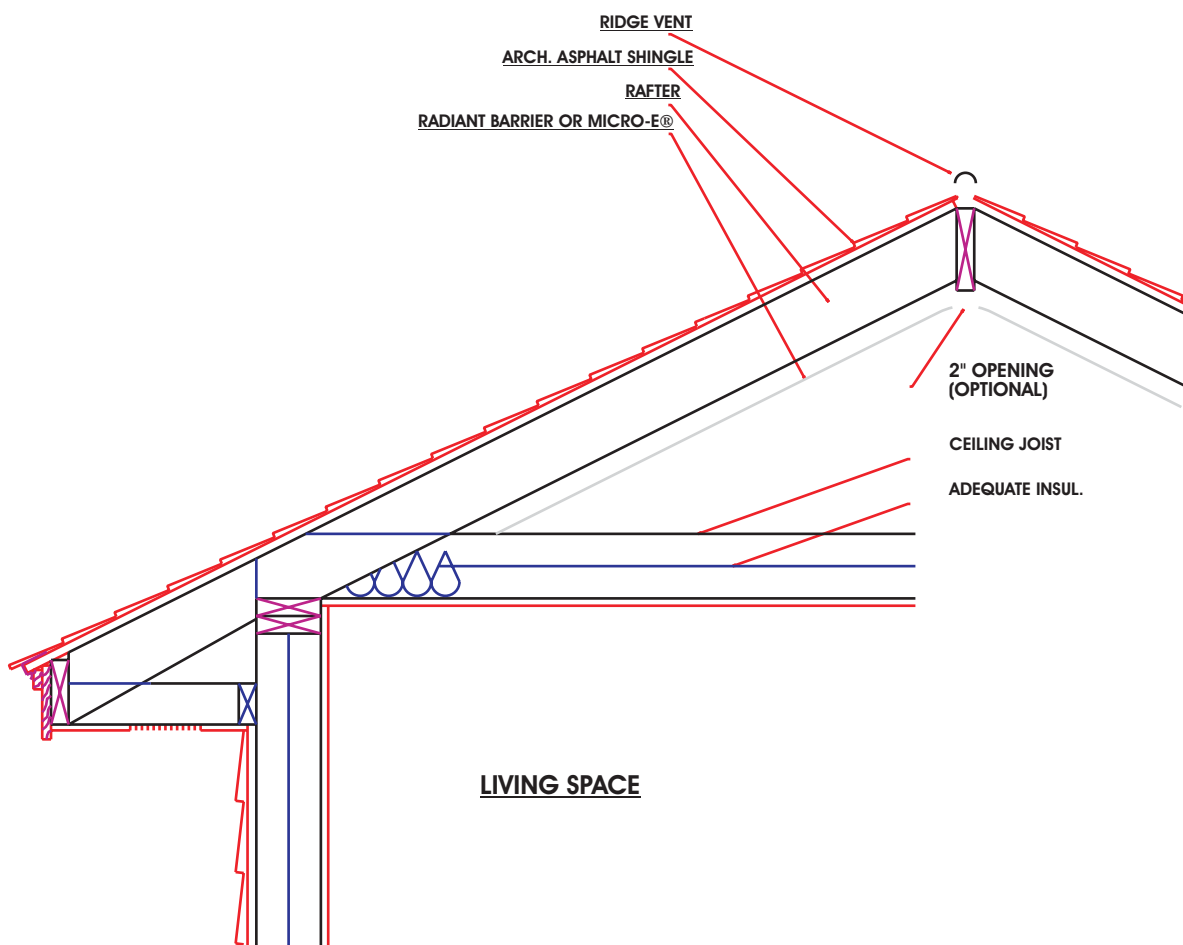
<u>RADIANT BARRIER, MICRO-E®, and ESP LOW-E™ APPLICATIONS</u>		
<u>for Residential and Light Commercial Buildings</u>		
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RADIANT BARRIER, MICRO E, and LOW E APPLICATIONS Pfor Residential and Light Commercial Buildings

Introduction

Heat can be transferred in three ways: conduction, convection, and radiation. While conventional insulation, utilized in buildings to control heat transfer, only affects heat through conduction and convection, it does not control radiant heat transfer. As a result, insulation absorbs infrared radiation which is often slowly released into the building, putting a greater energy load on the mechanical system. Radiant barriers were developed to the reduce the impact of radiant heat transfer. The surface's low emissivity prevents it from absorbing or emitting long wave radiation by means of reflection. The technology has proven to significantly reduce the cost of energy consumption in buildings as radiant heat transfer accounts for almost seventy-five percent of the total heat load. The application of radiant barrier technology has been a great breakthrough for building design. Its use in conjunction with passive solar design techniques is the most economical solution.^P The illustrations in this booklet are typical details of the applications of Low E insulation products for various situations in building design. It should be noted that the details are only examples and recommendations for a typical condition. The use of Radiant Barrier, Low E, and Micro E materials from Environmentally Safe Products, Inc. will vary as the design varies from building to building. Consult the building designer for final application and installation.

Roof Application: Radiant Barrier or Micro-E® on the Bottom Side of Rafters



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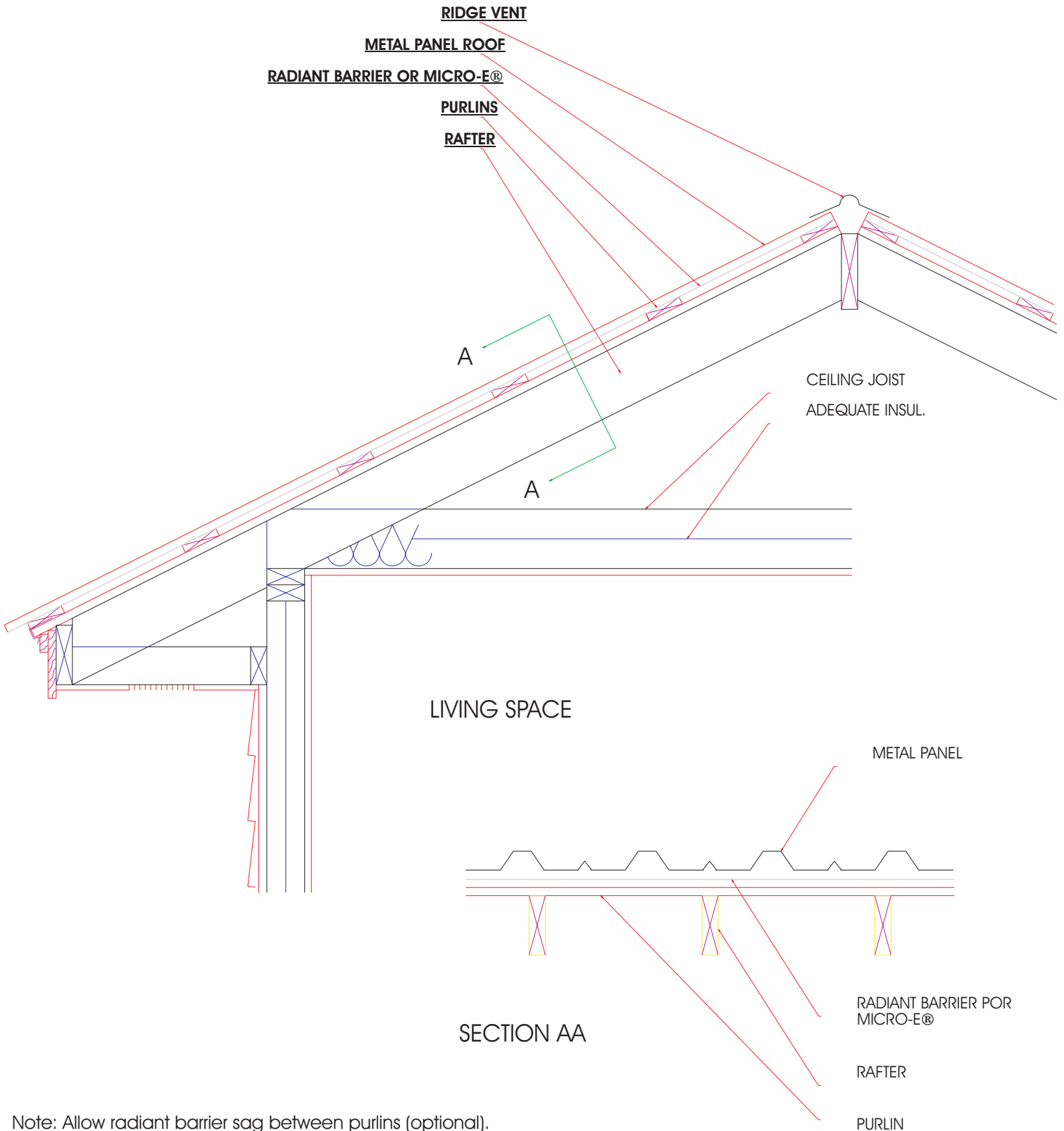
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D001

Roof Application: Micro E under Metal Roof

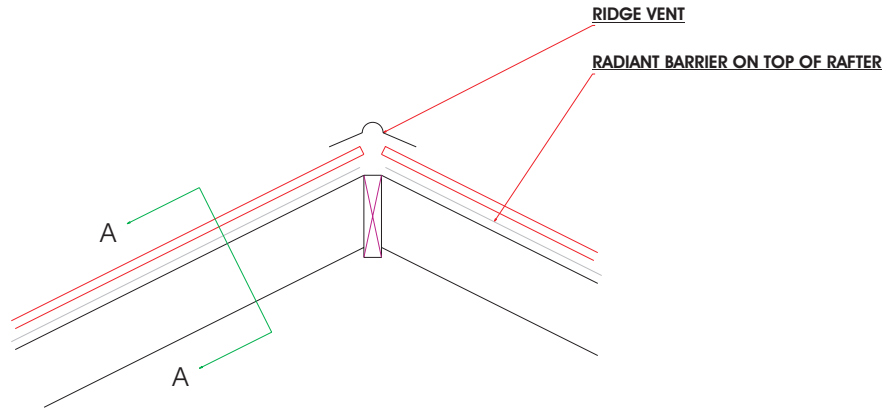


Note: Allow radiant barrier sag between purlins (optional).

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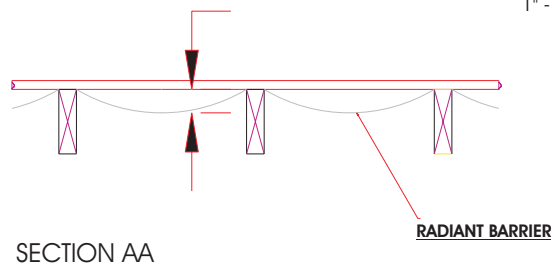
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Roof Application: Radiant Barrier or Micro-E® on Top of Rafters



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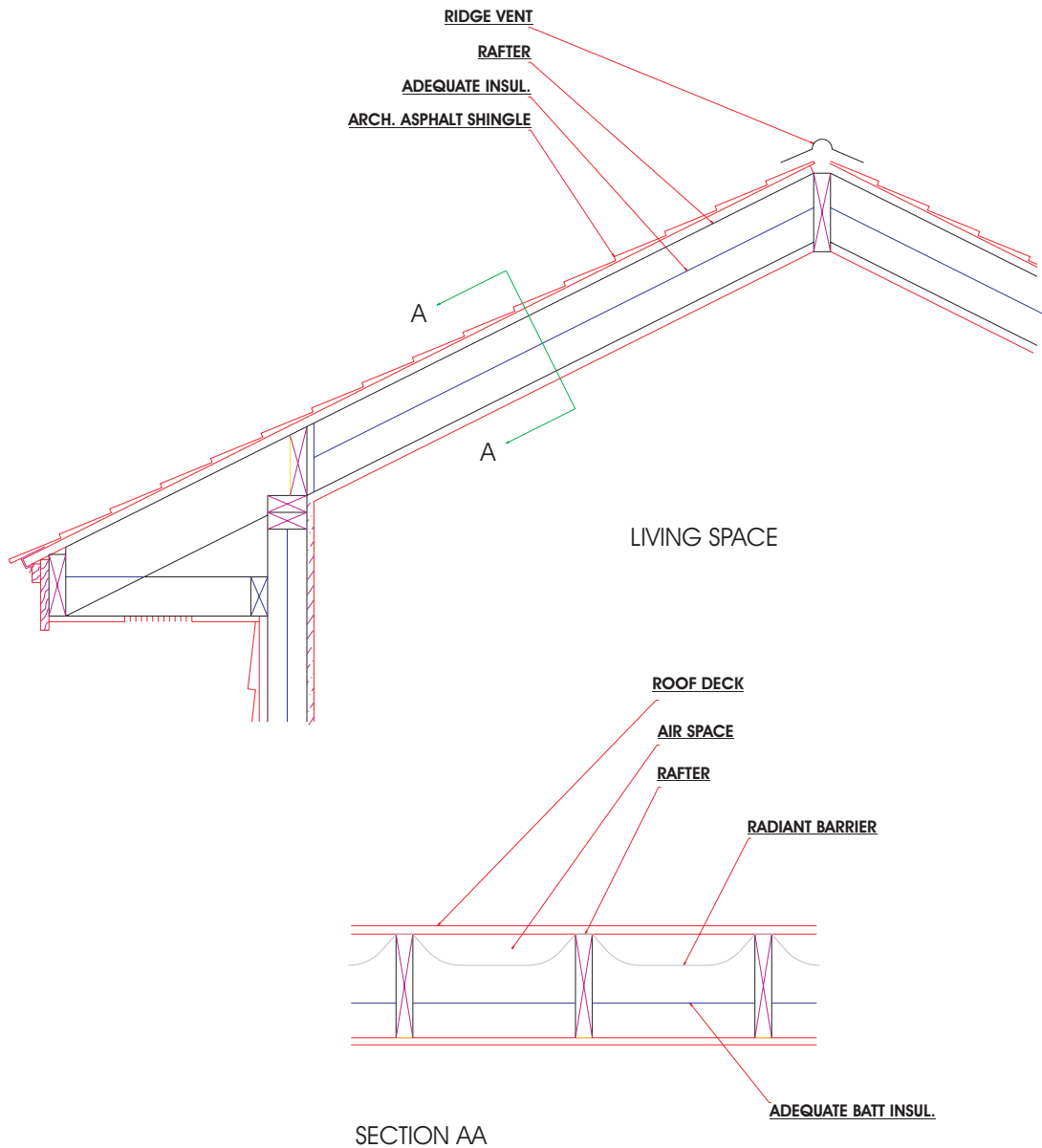
1" - 3" AIR SPACE (RECOMMENDED)



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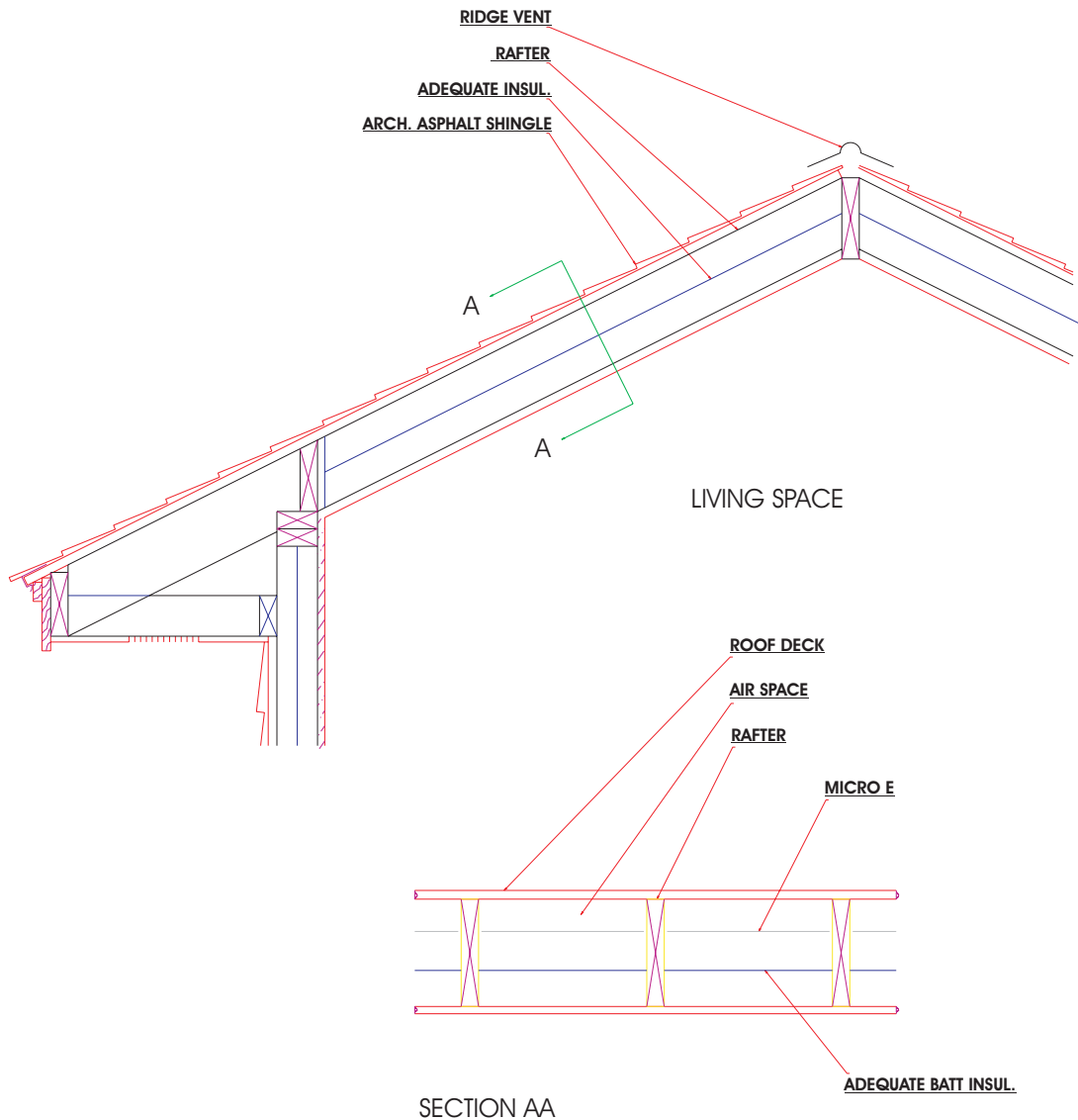
Cathedral Ceiling Application: Radiant Barrier with Mass Insulation Beneath



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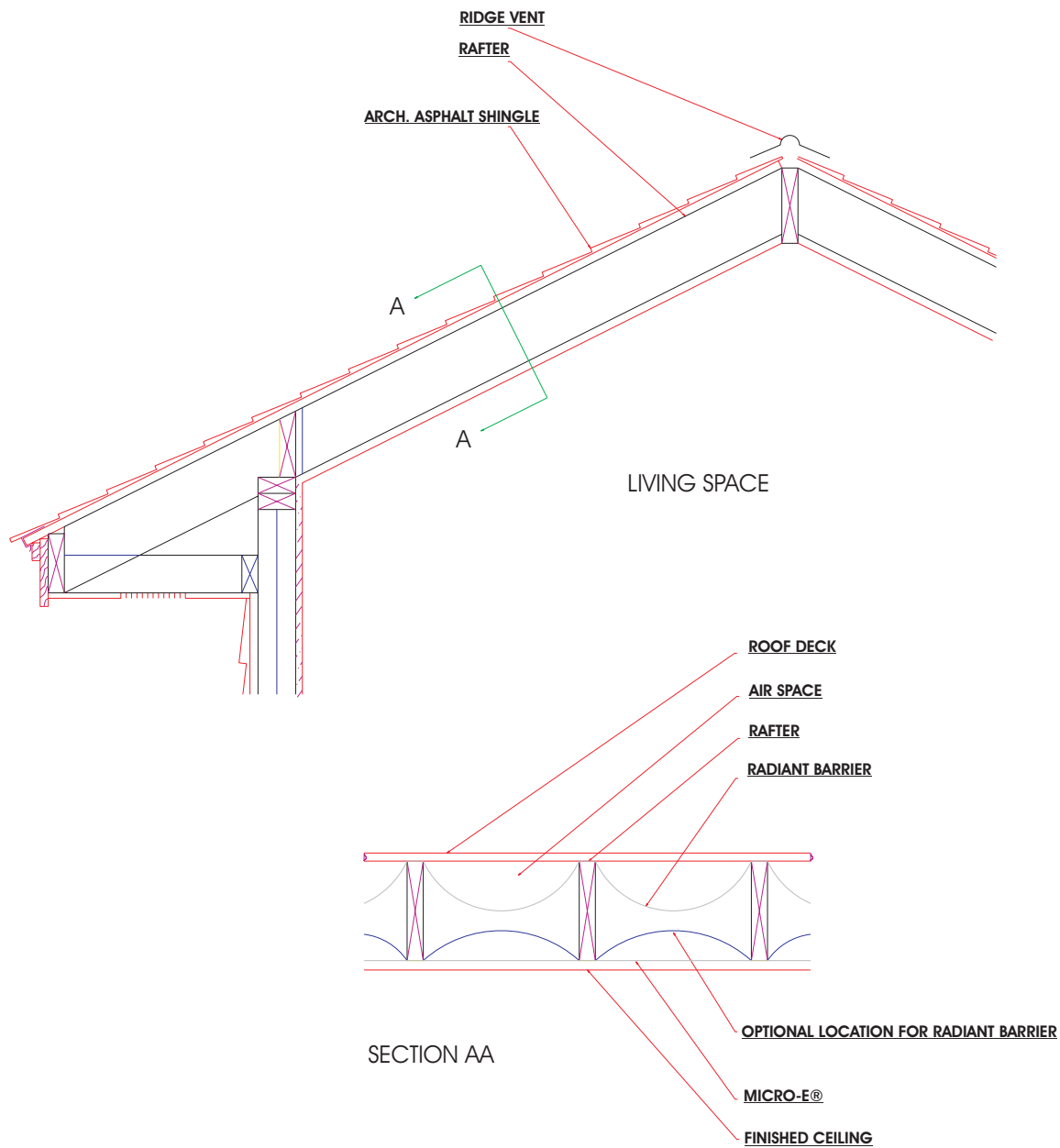
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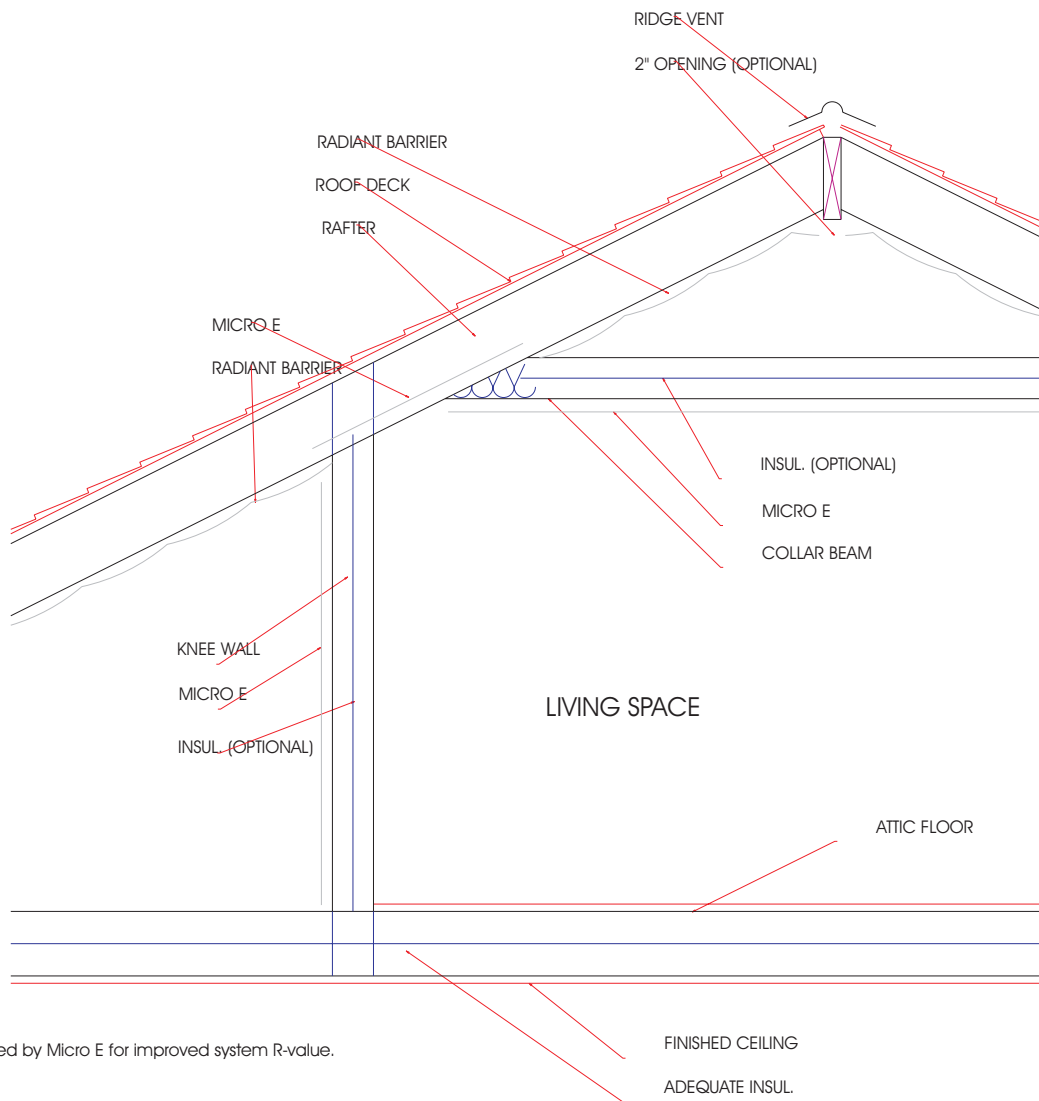
Cathedral Ceiling Application: Radiant Barrier and Micro E Combination



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Attic Built-Out Application

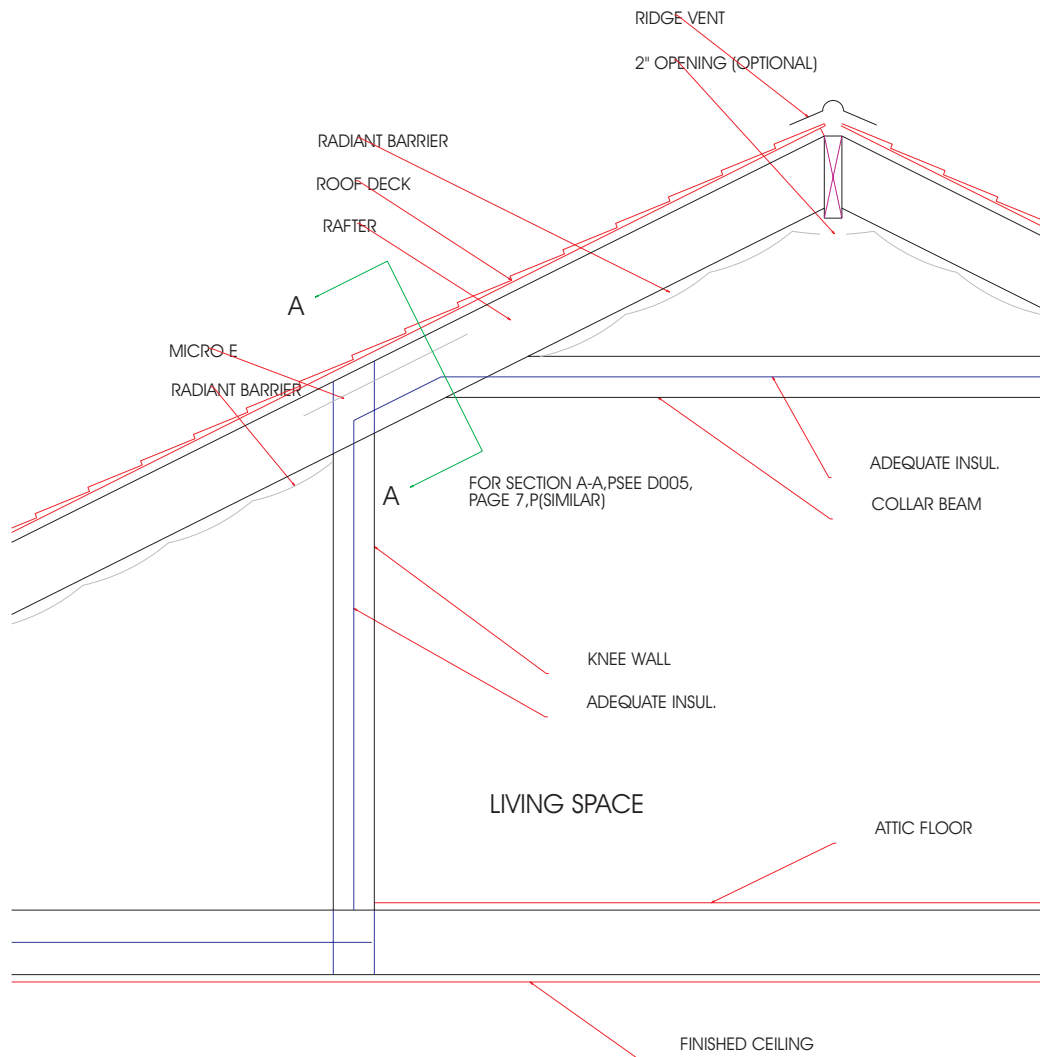


Note: Radiant Barrier may be replaced by Micro E for improved system R-value.

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Attic Built-Out Application

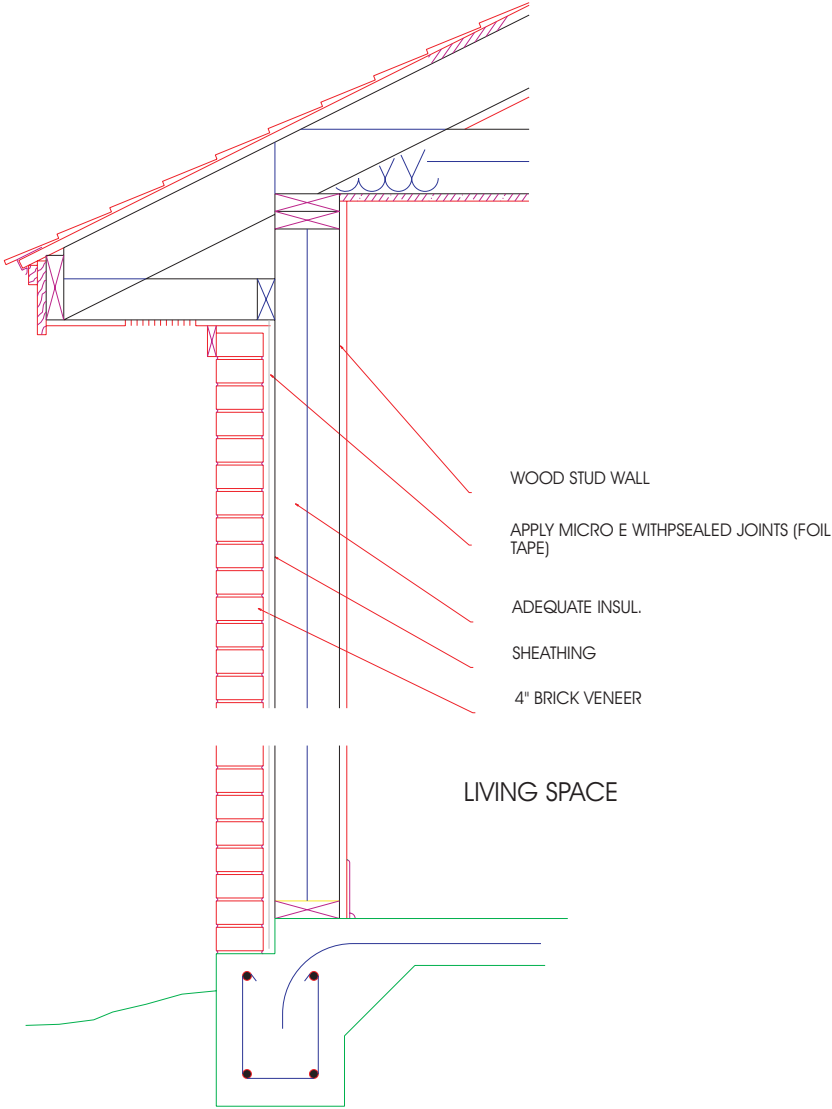


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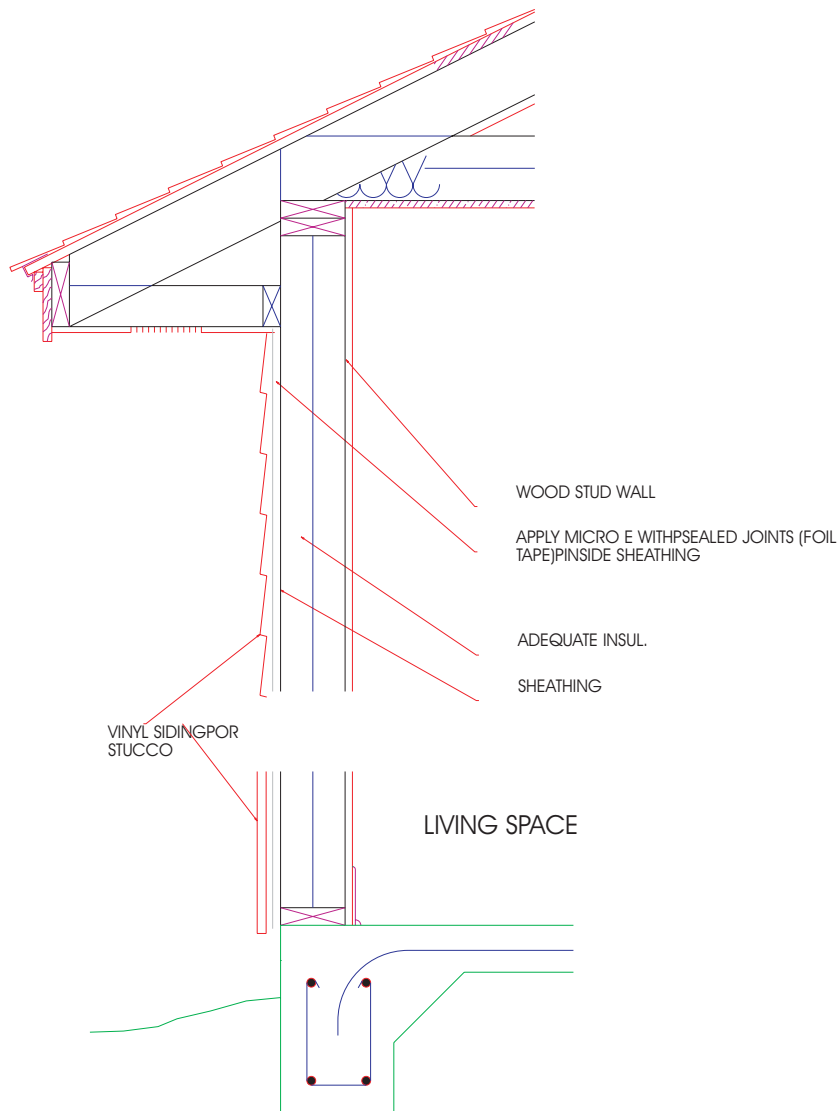
Wall Application: Micro E on Exterior Wall with Brick Veneer



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Wall Application: Micro E on Exterior Walls with Vinyl Siding or Stucco

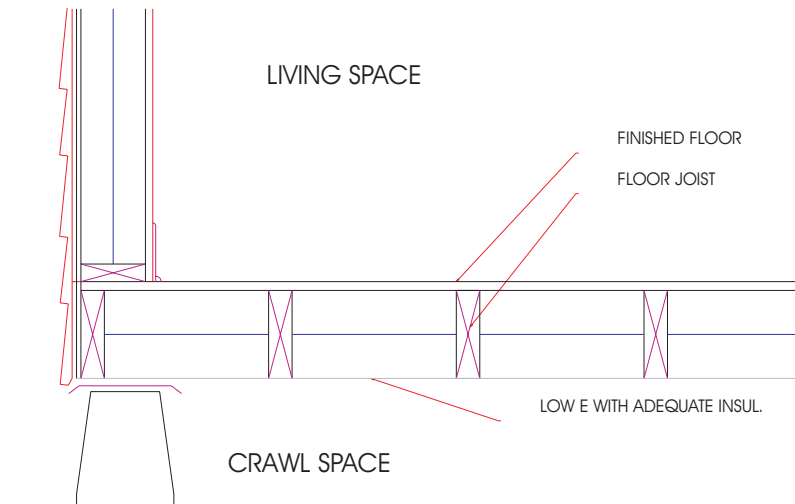


Note: For stucco application, provide adequate backing construction.

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Crawl Space Application: Low E Under Floor Joist



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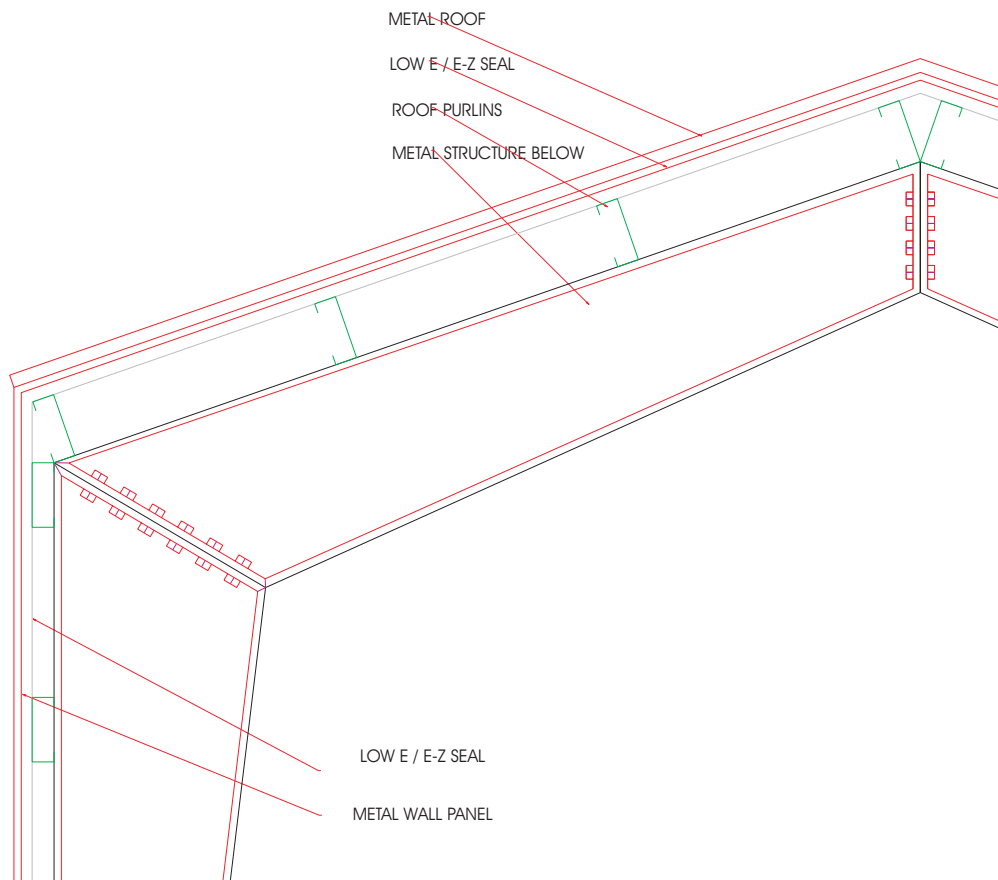
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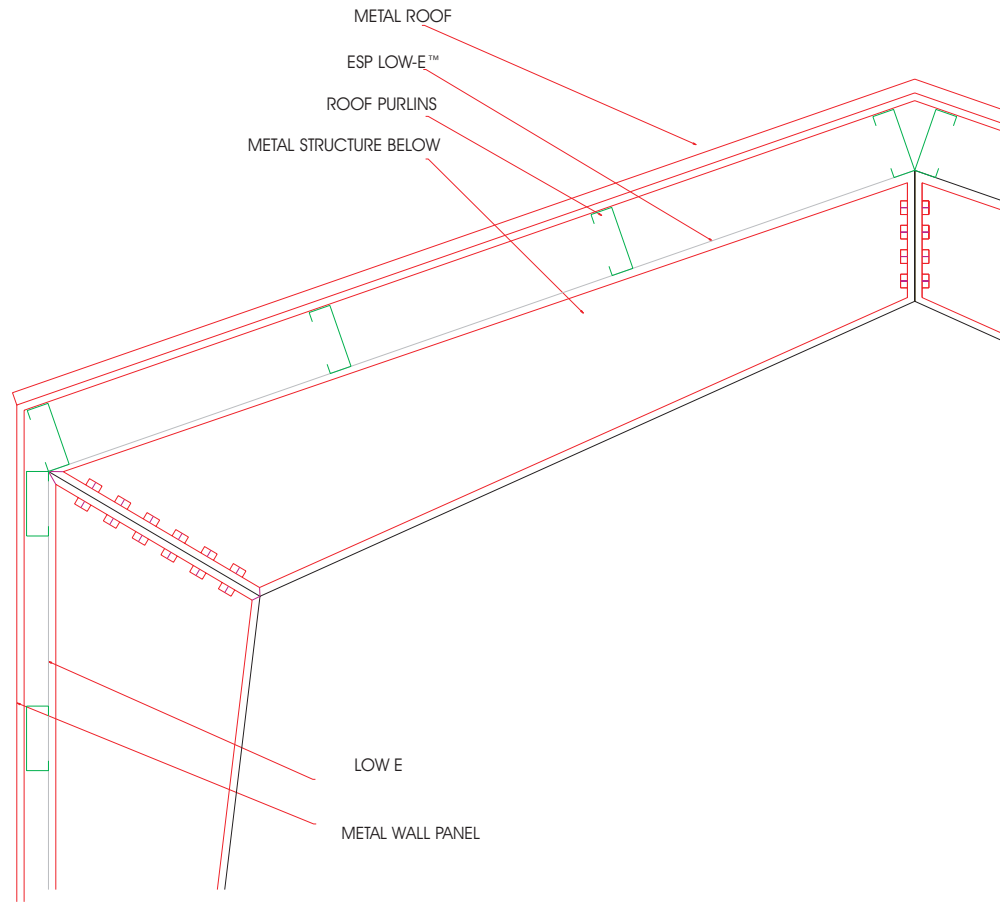
New Metal Building Application: Low E / E-Z Seal Under Metal Roof



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Retrofit Metal Building Application: Low E Under Purlins



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