

LEED®-EB Green Building Rating System For Existing Buildings Upgrades, Operations and Maintenance Version 2

Rating Category	Credit Description	Points	Discussion of Asphalt Pavement Applicability/Contribution to Rating Category
Sustainable Sites			
SS Credit 5.1 & 5.2	Stormwater Management: Rate and Quantity Reduction	1-2	<p>Porous asphalt pavement (i.e. pervious paving) constructed on a recharge bed reduces stormwater flow rate and quantity leaving the site. Potentially, site discharge and flow and can be reduced below predevelopment conditions through conveyance of roof drainage, and other stormwater flows, to the pavement recharge bed. Pollutant reduction of natural water flows is attained through infiltration. Data indicates infiltration BMPs have the highest pollutant removal efficiency for total phosphorus, soluble phosphorous, nitrate, zinc, and TSS, when compared to wetlands, wet ponds, filtering, swales, and dry ponds.</p> <p>Presentation - Porous Asphalt Pavement: http://www.flexiblepavements.org/documents/PorousPavementfporevisions.pdf Design Guide: http://store.hotmix.org/index.php?productID=179 Specification (porous base mix): http://www.flexiblepavements.org/documents/PorousPavementBaseCrse_rev15apr11_.pdf Specification (porous surface mix): http://www.flexiblepavements.org/documents/PorousPvmtSurfCrse_rev15apr11_.pdf</p>
SS Credit 6.1	Heat Island Effect: Non-Roof	1	<p>There are two ways in which asphalt pavement may be used to attain this credit.</p> <p>(1) Porous asphalt pavement (i.e. pervious paving) applied to at least 50% of the parking lot area. (2) Reducing heat island effect using asphalt pavements is achievable by coating the pavement surface to raise the Solar Reflectance Index (SRI). This approach allows the designer to capture the economy of using asphalt pavement while also expressing creativity and ingenuity. Coatings of virtually any color are available to treat asphalt pavement. This allows the designer to raise the SRI and integrate features such as color designated pavement areas. Multiple colors can be used to identify walkways, bikeways, emergency parking, handicap areas, or other. Another treatment that raises albedo is “sealing and chipping” using limestone or other light colored aggregate. Sealing and chipping is low cost and provides an agrarian look. Lastly, a simple slurry application of portland cement following paving, while the asphalt surface is still hot, fills and coats the surface to raise SRI.</p> <p>Coating Colors for LEED Credit http://www.integratedpaving.com/our-products/streetbondsr/index.cfm?PageContentID=41&do=content ODOT Specification - Sealing & Chipping: http://www.dot.state.oh.us/Divisions/ConstructionMgt/OnlineDocs/Specifications/2010CMS/400/422.htm</p>
Materials & Resources			
MR Credit 1.1 & 1.2	Construction, Demolition and Renovation Waste Management	1 - 2	<p>Asphalt pavements are 100% recyclable. Where construction/major renovation of the site requires removal of asphalt pavement the entire quantity of asphalt pavement can be redirected to the manufacturing process for recycling into new asphalt pavement.</p>

LEED®-EB (continued)

Rating Category	Credit Description	Points	Discussion of Asphalt Pavement Applicability/Contribution to Rating Category
Materials & Resources (continued)			
MR Credit 2.1 - 2.5	Optimize Use of Alternative Materials	1 - 5	<p>There are two ways in which asphalt pavement may be used to attain this credit.</p> <p>(1) LEED permits credit for building materials used on site where the material contains at least 10% post-consumer or 20% post-industrial material. Recycled asphalt pavement is such a material and project features utilizing asphalt paving materials, and referencing the Ohio Department of Transportation Construction & Material Specifications, are permitted to contain the following percentages: Surface course mixes - 20%, Intermediate course mixes - 35%, Base course mixes - 50%. Asphalt shingle manufacturing waste may be used in base course mixes up to 10% of the total mix composition.</p> <p>ODOT Specification: http://www.dot.state.oh.us/Divisions/ConstructionMgt/OnlineDocs/Specifications/2010CMS/400/401.htm#a_401_04</p> <p>(2) LEED permits credit if 50% of the material used are extracted and processed within 500 miles of the project. Asphalt pavements must be placed hot; therefore these mixtures must be produced locally, typically with local aggregate. As well, Ohio Department of Transportation Construction & Materials Specifications restrict haul distance to 50 miles.</p>