

# *Hot-Mix Asphalt Pavements and LEED® Certification Guideline* (rev. 04Sept07)

## Leadership in Energy and Environmental Design (LEED®)

Developed by the U.S. Green Building Council, the Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.<sup>1</sup>

## Earning LEED® Certification

To earn certification a building project must meet certain prerequisites and performance benchmarks ("credits") within each category. Projects are awarded Certified, Silver, Gold, or Platinum certification depending on the number of credits they achieve.<sup>1</sup>

## How Asphalt Pavements Contribute to Attaining LEED® Credits

Asphalt pavements contribute to LEED credits in a variety of ways. Asphalt pavements are 100% recyclable. They are used and reused with each cycle of road paving. As such, credits associated with recycling and waste management are attainable. Pervious asphalt mixtures have been used in cold regions for many years. Research in the 1970s by the Franklin Institute launched porous (pervious) asphalt pavements, a strategy that both reduces quantity and improves quality of stormwater runoff. Credits can be attained for porous pavement use under categories for stormwater management (both quantity and quality), and heat island reduction. In recent times, coating materials have been introduced to the industry. These allow designers to express their creativity and ingenuity while at the same time improving pavement reflectance and capturing credit for heat island reduction. From conventional, to porous, to pattern-stamped, asphalt pavements provide flexibility and options to architects and engineers designing sustainable pavements.

Tables have been developed to show for the different LEED programs the potential credits attainable by using asphalt pavements. Each table provides the rating category, credit description, available points, and a discussion of the applicability/contribution that asphalt pavements have in attaining credits. This information has been provided for the following LEED programs:

- LEED®-NC, Green Building Rating System For New Construction & Major Renovations, Version 2.2 (pages 2-3)
- LEED®-EB, Green Building Rating System For Existing Buildings Upgrades, Operations and Maintenance, Version 2 (page 4)
- LEED® for Schools, For New Construction and Major Renovations, Version 2.0, April 2007 (pages 5-6)
- LEED® For Neighborhood Development, PILOT VERSION, Updated June 2007 (page 7)
- LEED® For Homes Program, Version 1.11a, January 2007 (page 8)
- LEED® For Retail - New Construction and Major Renovations, Pilot Version 2, April 2007 (pages 9-10)

**Reference:** 1. U.S. Green Buildings Council, [www.usgbc.org](http://www.usgbc.org)  
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**LEED<sup>®</sup> -NC Green Building Rating System For New Construction & Major Renovations Version 2.2**

Rating Category	Credit Description	Points	Discussion of Asphalt Pavement Applicability/Contribution to Rating Category
<b>Sustainable Sites</b>			
SS Credit 6.1	Stormwater Design: Quantity Control	1	Dense-graded asphalt pavement or porous asphalt pavement (pervious paving approx. 6,000 ft/day) constructed on a recharge bed promote quantity control utilizing a pervious structure. Potentially, site discharge and flow can be reduced below predevelopment conditions through conveyance of roof drainage, and other stormwater flows, to the pavement recharge bed. Design Guide: <a href="http://store.hotmix.org/index.php?productID=179">http://store.hotmix.org/index.php?productID=179</a> Guidance Specification: contact MAPA at <a href="http://www.asphaltisbest.com">www.asphaltisbest.com</a>
SS Credit 6.2	Stormwater Design: Quality Control	1	Dense-graded asphalt pavement or porous asphalt pavement (pervious paving approx. 6,000 ft/day) constructed on a recharge bed promote quantity control utilizing a pervious structure. 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. View Presentation - Porous Asphalt Pavement at: <a href="http://www.flexiblepavements.org/documents/PorousPavementfporevisions.pdf">http://www.flexiblepavements.org/documents/PorousPavementfporevisions.pdf</a>
SS Credit 7.1	Heat Island Effect: Non-Roof	1	There are two ways in which asphalt pavement may be used to attain this credit. (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 or synthetic binders 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. Coating Colors for LEED Credit: <a href="http://www.integratedpaving.com/leed/">http://www.integratedpaving.com/leed/</a> or <a href="http://www.asphaltisbest.com">www.asphaltisbest.com</a>
<b>Materials &amp; Resources</b>			
MR Credit 2.1	Construction Waste Management: Divert 50% From Disposal	1	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. Also, recycled material in the structure's base layers are permitted in accordance with Mn/DOT Spec 3138.
MR Credit 2.2	Construction Waste Management: Divert 75% From Disposal	1 Point in addition to MR Credit 2.1	See discussion for MR Credit 2.1

*(continued)* →

**LEED<sup>®</sup> -NC (continued)**

Rating Category	Credit Description	Points	Discussion of Asphalt Pavement Applicability/Contribution to Rating Category
<b>Materials &amp; Resources (continued)</b>			
MR Credit 4.1	Recycled Content: 10% (post-consumer + ½ pre-consumer)	1	Reduction in virgin materials is accomplished by incorporating recycled asphalt pavement. Project features utilizing asphalt paving materials and referencing the Minnesota Department of Transportation (Mn/DOT) Combined 2350/2360 Specification are permitted to contain recycled asphalt pavement and asphalt shingle manufacturing waste, visit the following web site for more information: <a href="http://www.mrr.dot.state.mn.us/pavement/bituminous/bituminous.asp">http://www.mrr.dot.state.mn.us/pavement/bituminous/bituminous.asp</a> Also, recycled material in the structure's base layers are permitted in accordance with Mn/DOT Spec 3138.
MR Credit 4.2	Recycled Content: 20% (post-consumer + ½ pre-consumer)	1 Point in addition to MR Credit 4.1	See discussion for MR Credit 4.1
MR Credit 5.1	Regional Materials: 10% Extracted, Processed & Manufactured Regionally	1	Asphalt pavements utilize indigenous resources and reduce environmental impacts resulting from transportation. Asphalt pavements must be placed hot; therefore these mixtures must be produced locally, typically with local aggregate. Vehicles hauling asphalt mix are equipped to reduce heat loss in transport. Also, recycled material in the structure's base layers are permitted in accordance with Mn/DOT Spec 3138.
MR Credit 5.2	Regional Materials: 20% Extracted, Processed & Manufactured Regionally	1 Point in addition to MR Credit 5.1	See discussion for MR Credit 5.1



**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
<b>Sustainable Sites</b>			
SS Credit 5.1 & 5.2	Stormwater Management: Rate and Quantity Reduction	1-2	Dense-graded asphalt pavement or porous asphalt pavement (pervious paving approx. 6,000 ft/day) constructed on a recharge bed promote quantity control utilizing a pervious structure. Potentially, site discharge and flow can be reduced below predevelopment conditions through conveyance of roof drainage, and other stormwater flows, to the pavement recharge bed. Design Guide: <a href="http://store.hotmix.org/index.php?productID=179">http://store.hotmix.org/index.php?productID=179</a> Guidance Specification: contact MAPA at <a href="http://www.asphaltisbest.com">www.asphaltisbest.com</a> 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. View presentation - Porous Asphalt Pavement at: <a href="http://www.flexiblepavements.org/documents/PorousPavementfporevisions.pdf">http://www.flexiblepavements.org/documents/PorousPavementfporevisions.pdf</a>
SS Credit 6.1	Heat Island Effect: Non-Roof	1	There are two ways in which asphalt pavement may be used to attain this credit. (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 or synthetic binders 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. Coating Colors for LEED Credit: <a href="http://www.integratedpaving.com/leed/">http://www.integratedpaving.com/leed/</a> or <a href="http://www.asphaltisbest.com">www.asphaltisbest.com</a>
<b>Materials &amp; Resources</b>			
MR Credit 1.1 & 1.2	Construction, Demolition and Renovation Waste Management	1 - 2	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.
MR Credit 2.1 - 2.5	Optimize Use of Alternative Materials	1 - 5	There are three ways in which asphalt pavement may be used to attain this credit. (1) LEED permits credit for building materials used on site where the material contains at least 10% post-consumer or 20% post-industrial material. Project features utilizing asphalt paving materials and referencing the Minnesota Department of Transportation (Mn/DOT) Combined 2350/2360 Specification are permitted to contain recycled asphalt pavement and asphalt shingle manufacturing waste, visit the following web site for more information: <a href="http://www.mrr.dot.state.mn.us/pavement/bituminous/bituminous.asp">http://www.mrr.dot.state.mn.us/pavement/bituminous/bituminous.asp</a> (2) Recycled material in the structure's base layers are permitted in accordance with Mn/DOT Spec 3138. (3) 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.

**LEED<sup>®</sup> for Schools For New Construction and Major Renovations April 2007 Version 2.0**

Rating Category	Credit Description	Points	Discussion of Asphalt Pavement Applicability/Contribution to Rating Category
<b>Sustainable Sites</b>			
SS Credit 6.1	Stormwater Design: Quantity Control	1	Dense-graded asphalt pavement or porous asphalt pavement (pervious paving approx. 6,000 ft/day) constructed on a recharge bed promote quantity control utilizing a pervious structure. Potentially, site discharge and flow can be reduced below predevelopment conditions through conveyance of roof drainage, and other stormwater flows, to the pavement recharge bed. Design Guide: <a href="http://store.hotmix.org/index.php?productID=179">http://store.hotmix.org/index.php?productID=179</a> Guidance Specification: contact MAPA at <a href="http://www.asphaltisbest.com">www.asphaltisbest.com</a>
SS Credit 6.2	Stormwater Design: Quality Control	1	Dense-graded asphalt pavement or porous asphalt pavement (pervious paving approx. 6,000 ft/day) constructed on a recharge bed promote quantity control utilizing a pervious structure. 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. View Presentation - Porous Asphalt Pavement at: <a href="http://www.flexiblepavements.org/documents/PorousPavementfporevisions.pdf">http://www.flexiblepavements.org/documents/PorousPavementfporevisions.pdf</a>
SS Credit 7.1	Heat Island Effect: Non-Roof	1	There are two ways in which asphalt pavement may be used to attain this credit. (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 or synthetic binders 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. Coating Colors for LEED Credit: <a href="http://www.integratedpaving.com/leed/">http://www.integratedpaving.com/leed/</a> or <a href="http://www.asphaltisbest.com">www.asphaltisbest.com</a>
<b>Materials &amp; Resources</b>			
MR Credit 2	Construction Waste Management: Divert From Disposal	1 - 2	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. Also, recycled material in the structure's base layers are permitted in accordance with Mn/DOT Spec 3138.
MR Credit 4	Recycled Content: (post-consumer + ½ pre-consumer)	1 - 2	Reduction in virgin materials is accomplished by incorporating recycled asphalt pavement. Project features utilizing asphalt paving materials and referencing the Minnesota Department of Transportation (Mn/DOT) Combined 2350/2360 Specification are permitted to contain recycled asphalt pavement and asphalt shingle manufacturing waste, visit the following web site for more information: <a href="http://www.mrr.dot.state.mn.us/pavement/bituminous/bituminous.asp">http://www.mrr.dot.state.mn.us/pavement/bituminous/bituminous.asp</a> Also, recycled material in the structure's base layers are permitted in accordance with Mn/DOT Spec 3138.
MR Credit 5	Regional Materials: Extracted, Processed & Manufactured Regionally	1 - 2	Asphalt pavements utilize indigenous resources and reduce environmental impacts resulting from transportation. Asphalt pavements must be placed hot; therefore these mixtures must be produced locally, typically with local aggregate. Also, recycled material in the structure's base layers are permitted in accordance with Mn/DOT Spec 3138.



**LEED<sup>®</sup> For Neighborhood Development PILOT VERSION Updated June 2007**

Rating Category	Credit Description	Points	Discussion of Asphalt Pavement Applicability/Contribution to Rating Category
<b>Green Construction &amp; Technology</b>			
GCT Credit 9	Stormwater Management	1 - 5	Dense-graded asphalt pavement or porous asphalt pavement (pervious paving approx. 6,000 ft/day) constructed on a recharge bed promote quantity control utilizing a pervious structure. Potentially, site discharge and flow can be reduced below predevelopment conditions through conveyance of roof drainage, and other stormwater flows, to the pavement recharge bed. Design Guide: <a href="http://store.hotmix.org/index.php?productID=179">http://store.hotmix.org/index.php?productID=179</a> Guidance Specification: contact MAPA at <a href="http://www.asphaltisbest.com">www.asphaltisbest.com</a> 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. View presentation - Porous Asphalt Pavement at: <a href="http://www.flexiblepavements.org/documents/PorousPavementfporevisions.pdf">http://www.flexiblepavements.org/documents/PorousPavementfporevisions.pdf</a>
GCT Credit 10	Heat Island Reduction: Option 1 - Non-Roof	1	There are two ways in which asphalt pavement may be used to attain this credit. (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 or synthetic binders 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. Coating Colors for LEED Credit: <a href="http://www.integratedpaving.com/leed/">http://www.integratedpaving.com/leed/</a> or <a href="http://www.asphaltisbest.com">www.asphaltisbest.com</a>
GCT Credit 17	Recycled Content in Infrastructure	1	Reduction in virgin materials is accomplished by incorporating recycled asphalt pavement. Project features utilizing asphalt paving materials and referencing the Minnesota Department of Transportation (Mn/DOT) Combined 2350/2360 Specification are permitted to contain recycled asphalt pavement and asphalt shingle manufacturing waste, visit the following web site for more information: <a href="http://www.mrr.dot.state.mn.us/pavement/bituminous/bituminous.asp">http://www.mrr.dot.state.mn.us/pavement/bituminous/bituminous.asp</a> Also, recycled material in the structure's base layers are permitted in accordance with Mn/DOT Spec 3138.
GCT Credit 18	Construction Waste Management	1	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. Also, recycled material in the structure's base layers are permitted in accordance with Mn/DOT Spec 3138.

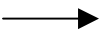
**LEED<sup>®</sup> For Homes Program Version 1.11a January 2007**

Rating Category	Credit Description	Points	Discussion of Asphalt Pavement Applicability/Contribution to Rating Category
<b>Sustainable Sites</b>			
SS 3.	Shading of Hardscapes	1	Requirements for this credit allow the use of pavement surfaces having reflectance of at least 0.3 over 50% of the site's non-roof impervious surface. Attaining this credit with 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. Coating Colors for LEED Credit: <a href="http://www.integratedpaving.com/leed/">http://www.integratedpaving.com/leed/</a>
SS 4.	Surface Water Management	6 max.	Dense-graded asphalt pavement or porous asphalt pavement (pervious paving approx. 6,000 ft/day) constructed on a recharge bed promote quantity control utilizing a pervious structure. Potentially, site discharge and flow can be reduced below predevelopment conditions through conveyance of roof drainage, and other stormwater flows, to the pavement recharge bed. Design Guide: <a href="http://store.hotmix.org/index.php?productID=179">http://store.hotmix.org/index.php?productID=179</a> Guidance Specification: contact MAPA at <a href="http://www.asphaltisbest.com">www.asphaltisbest.com</a>
<b>Materials &amp; Resources</b>			
MR 2.	Environmentally Preferable Products	8 max.	Credit can be obtained for using products that are extracted, processed and manufactured within 500 miles of the home. Asphalt pavements utilize indigenous resources and reduce environmental impacts resulting from transportation. Asphalt pavements must be placed hot; therefore these mixtures must be produced locally, typically with local aggregate. Also, recycled material in the structure's base layers are permitted in accordance with Mn/DOT Spec 3138.

**LEED® For Retail - New Construction and Major Renovations Pilot Version 2 April 2007**

Rating Category	Credit Description	Points	Discussion of Asphalt Pavement Applicability/Contribution to Rating Category
<b>Sustainable Sites</b>			
SS Credit 6.1	Stormwater Design: Quantity Control	1	Dense-graded asphalt pavement or porous asphalt pavement (pervious paving approx. 6,000 ft/day) constructed on a recharge bed promote quantity control utilizing a pervious structure. Potentially, site discharge and flow can be reduced below predevelopment conditions through conveyance of roof drainage, and other stormwater flows, to the pavement recharge bed. Design Guide: <a href="http://store.hotmix.org/index.php?productID=179">http://store.hotmix.org/index.php?productID=179</a> Guidance Specification: contact MAPA at <a href="http://www.asphaltisbest.com">www.asphaltisbest.com</a>
SS Credit 6.2	Stormwater Design: Quality Control	1	Dense-graded asphalt pavement or porous asphalt pavement (pervious paving approx. 6,000 ft/day) constructed on a recharge bed promote quantity control utilizing a pervious structure. 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. View Presentation - Porous Asphalt Pavement at: <a href="http://www.flexiblepavements.org/documents/PorousPavementfporevisions.pdf">http://www.flexiblepavements.org/documents/PorousPavementfporevisions.pdf</a>
SS Credit 7.1	Heat Island Effect: Non-Roof (25% of site hardscape)	1	There are two ways in which asphalt pavement may be used to attain this credit. (1) Porous asphalt pavement (i.e. pervious paving) applied to at least 25% 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 or synthetic binder 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. Coating Colors for LEED Credit: <a href="http://www.integratedpaving.com/leed/">http://www.integratedpaving.com/leed/</a> or <a href="http://www.asphaltisbest.com">www.asphaltisbest.com</a>
SS Credit 7.2	Heat Island Effect: Non-Roof (50% of site hardscape)	1	There are two ways in which asphalt pavement may be used to attain this credit. (1) Porous asphalt pavement (i.e. pervious paving) applied to at least 50% of the site hardscape. (2) See discussion for MR Credit 7.1
SS Credit 7.3	Heat Island Effect: Non-Roof (75% of site hardscape)	1	There are two ways in which asphalt pavement may be used to attain this credit. (1) Porous asphalt pavement (i.e. pervious paving) applied to at least 75% of the site hardscape. (2) See discussion for MR Credit 7.1

(continued)



**LEED® For Retail (continued)**

Rating Category	Credit Description	Points	Discussion of Asphalt Pavement Applicability/Contribution to Rating Category
<b>Materials &amp; Resources</b>			
MR Credit 2.1	Construction Waste Management: Divert 50% From Disposal	1	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. Also, recycled material in the structure's base layers are permitted in accordance with Mn/DOT Spec 3138.
MR Credit 2.2	Construction Waste Management: Divert 75% From Disposal	1 Point in addition to MR Credit 2.1	See discussion for MR Credit 2.1
MR Credit 4.1	Recycled Content: 10% (post-consumer + ½ pre-consumer)	1	Reduction in virgin materials is accomplished by incorporating recycled asphalt pavement. Project features utilizing asphalt paving materials and referencing the Minnesota Department of Transportation (Mn/DOT) Combined 2350/2360 Specification are permitted to contain recycled asphalt pavement and asphalt shingle manufacturing waste, visit the following web site for more information: <a href="http://www.mrr.dot.state.mn.us/pavement/bituminous/bituminous.asp">http://www.mrr.dot.state.mn.us/pavement/bituminous/bituminous.asp</a> Also, recycled material in the structure's base layers are permitted in accordance with Mn/DOT Spec 3138.
MR Credit 4.2	Recycled Content: 20% (post-consumer + ½ pre-consumer)	1 Point in addition to MR Credit 4.1	See discussion for MR Credit 4.1
MR Credit 5.1	Regional Materials: 10% Extracted, Processed & Manufactured Regionally	1	Asphalt pavements utilize indigenous resources and reduce environmental impacts resulting from transportation. Asphalt pavements must be placed hot; therefore these mixtures must be produced locally, typically with local aggregate. Vehicles hauling asphalt mix are equipped to reduce heat loss in transport. Also, recycled material in the structure's base layers are permitted in accordance with Mn/DOT Spec 3138.
MR Credit 5.2	Regional Materials: 20% Extracted, Processed & Manufactured Regionally	1 Point in addition to MR Credit 5.1	See discussion for MR Credit 5.1

