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PavementPrinciples

Pavement Engineering Inc.

Roundtable at CASH Conference offers one-on-one help with pavement issues

It's almost time for the annual CASH Conference on School Facilities in Sacramento. There's a lot to see, a lot to do and a lot to choose from. But if you want answers to pavement management questions and a chance to discuss your own specific problems, we invite you to attend Pavement Engineering's Roundtable Discussion on Tuesday, February 26th at 2:30 p.m.

Designed for maintenance and operations personnel, "Pavement 101" will address the causes of pavement deterioration, preservation strategies, assessments, and pavement management plans for maintaining parking lots, playgrounds and roads efficiently, safely and economically.

You will learn about processes that cause deterioration and how to design a maintenance program that will protect and extend the lifespan of pavement surfaces, potentially savings thousands of dollars over the typical service life of these surfaces. Plus, you'll have the opportunity to talk with experts about pretty much anything and everything to do with pavement.

For more information on this roundtable, log onto cashnet.org and register to attend or contact us at 805-781-2265.

The PCI: an objective basis for prioritizing pavement maintenance

One of the most cost-effective tools for managing a school district's pavement assets is a pavement assessment, a visual evaluation that prioritizes preventative maintenance according to condition and treatment. But a quality assessment requires more than identifying pavement defects and making recommendations. It requires a way to rate or quantify the level and severity of conditions.

While there may be several ways to achieve that, the most reliable and verifiable pavement condition rating system is the Pavement Condition Index (PCI), which was developed by the United States Army Corps of Engineers during World War II and later standardized by the American Society for Testing and Materials as ASTM Standard D6433.

The PCI is a composite numerical rating between 0 and 100 that describes pavement condition based on the type, extent and severity of distresses.

A PCI of 100 represents pavement in excellent condition, and a PCI below 10 is pavement that has failed or reached the end of its service life.

Most pavement falls somewhere in between (Figure 1 page 2).

A PCI provides an objective and rational basis for determining

maintenance and repair needs and priorities.

Determining the PCI for a school district's pavement is a little different than for cities with residential streets or major highways, but the process is the same.



Typically, a school site is divided into several areas based on use, such as a playground, parking lot or road. Each area is walked, measured and evaluated for the type, severity and amount of distresses.

The distresses most common to school pavements are alligator cracking, block cracking, longitudinal and transverse cracking and weathering, as discussed in the July 2012 issue of *PavementPrinciples*.

After the initial visual inspections are complete, the assessment information is entered in a database and the PCI value is calculated based on

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The PCI: an objective basis

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a set formula. When combined with other weighted assessment infor-

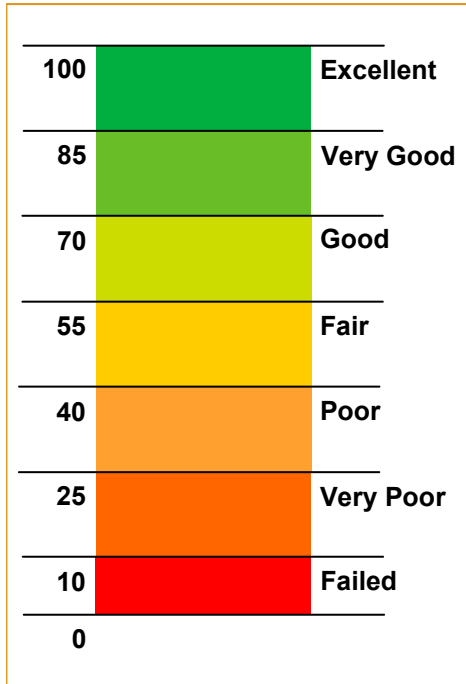


Figure 1: the Pavement Condition Index rates pavement on a scale of 0 to 100 based on the type, extent and severity of pavement defects.

mation, the value is then subtracted from 100, which is the value assigned to new pavement. The resulting number is the PCI value for a given area. The lower the number, the poorer a pavement's overall condition. A PCI can vary significantly from area to area.

The benefits of having a single, verifiable rating system like the PCI are many:

A PCI helps prioritize treatments according to need and the year the treatment should be applied to maximize effectiveness. The lower the PCI, the more critical the need for immediate pavement maintenance or rehabilitation treatments.

A PCI provides the basis for developing a multi-year maintenance plan and budget for current and future maintenance needs by individual areas.

A PCI sets a benchmark for monitoring the effectiveness of applied

treatments and the rate of pavement deterioration.

A PCI prevents expensive, unnecessary or premature treatments.

A PCI provides feedback on pavement performance.

All these benefits rolled into one mean no more guesswork. With a PCI-based assessment, school districts have the precise data needed to manage pavement assets economically, maximize the effectiveness and timing of treatments, and extend the service life of all its asphalt concrete services.

For a look at what's included in PCI-based pavement assessments for school districts, check out the October issue of *PavementPrinciples*, or request a sample from a school assessment report by e-mailing marketing@pavementengineering.com

Tip of the month - Asphalt concrete is durable, but eventually it will crack. When it does, crack sealing is the single most cost-effective maintenance treatment to extend pavement life. It is an effective way to prevent water from seeping into the subgrade and base where it can cause structural failure over time.

There are two types of crack sealants. The first alternative is an inexpensive treatment that fills cracks with a simple asphalt emulsion, which is ideal for playgrounds but is not effective for traffic areas. It has a service life of from two to four years.

The second alternative is a hot rubberized (sometimes fiber-fortified) asphalt emulsion. Because of its flexibility, this type of crack sealant is preferred for roadways and parking lots that carry heavy loads. It is not appropriate for playgrounds and non-traffic areas. Occasionally, contractors mistakenly use rubberized crack sealants on playgrounds, but eventually the pavement shrinks and the rubberized filler is easily pried loose by kids looking for flexible, whip-like weapons. Though more costly than a simple asphalt emulsion, rubberized crack sealants last up to eight years.



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Pavement Engineering, Inc. is California's premier pavement engineering and rehabilitation company, specializing in evaluating, designing, managing, inspecting, testing, implementing and maintaining asphalt and concrete surfaces for public and private entities.

We provide the technical expertise to maintain roadways and parking lots cost-effectively, the managerial experience to make sure things run smoothly from inception to completion, and the proven track record that builds trust and loyalty.

Our number one goal is client satisfaction. We manage every dollar our clients spend as if it were our own – with common sense.