OptiPave[™] System Optimized Slab Geometry

HIGH PERFORMANCE

LOW INVESTMENT COST

MORE SUSTAINABLE

The OptiPave System offered by PNA allows you to cost-effectively replace asphalt with long-lasting, low-maintenance concrete. This advanced concrete pavement engineering system maximizes performance and service life while reducing initial investment and maintenance costs





Less Out-Of-Joint Cracking

The OptiPave System minimizes the stresses that cause mid-panel cracking by shortening the panel length. This reduces the amount of curl, improves joint load transfer without the use of dowels, and prevents both edges of the panel from being loaded simultaneously. As a result, the panel experiences less stress and fewer cracks.



Reduce Construction Costs

By distributing wheel loads over shorter panels, OptiPave allows concrete volume to be minimized while maintaining the same load-bearing capacity. Slab thickness can often be reduced by 2 inches or more, saving up to 30-40 percent in material costs while expediting placement work. In some cases, base and sub-base materials can also be conserved providing additional savings.





Above designs based on 500 trucks/day in freeze-thaw climate. All other inputs are the same across design methodologies.



OptiPave System Replaces Asphalt

Concrete is a cost-effective alternative to asphalt, thanks to the OptiPave System. Optimized slab geometries reduce concrete thickness and construction costs while maintaining equivalent or better performance.

Category	Traditional Concrete Design	Asphalt Design	OptiPave System
First Cost Savings	Baseline	10-15%	20-30%
Maintenance/Repair Costs (Pothole patching, resurfacing, etc.)	\$	\$\$\$	\$
Safety (Skid/slip hazard reduction, reflectivity)	****	**	****

Minimize Your Environmental Footprint

- OptiPave System designs are more sustainable than traditional concrete pavement, thanks to thinner slabs that don't require continuous steel reinforcement or dowels at saw cut joints.
- Petroleum-based asphalt is high in volatile organic compounds (VOCs), which release toxic greenhouse gas emissions.
- Our optimized slab geometries are designed for a long lifespan and low maintenance mean fewer repairs and resources.
- Concrete is highly reflective, while asphalt isn't. As a result, asphalt retains significantly more heat than concrete pavement. The concrete used in an OptiPave System design significantly reduces the urban heat island effect.

PNA'S CASE STUDIES



Prologis – **IL**

- 220,000 sqft
- Traffic: 6M ESALs
- 6" Thick
- 580 PSI Flexural Strength
- Macro-Synthetic Fibers
- 6' Joint Spacing
- 6" Granular Base

Home Center Warehouse - CO

- 510,000 sqft
- Traffic: 8.7M ESALs
- 6" Thick
- 580 PSI Flexural Strength
- Macro-Synthetic Fibers
- 6' Joint Spacing
- 6" Granular Base





Stonelake – TX

- 563,500 sqft
- Traffic: 3.97M ESALs
- 5" Thick
- 4,000 PSI Flexural Strength
- Macro-Synthetic Fibers
- 6' Joint Spacing

Visit pna-inc.com/optipave to contact us about an upcoming project, find an authorized OptiPave System Contractor, and view our list of projects. Other resources that can be found online include information about our engineering services, articles, white papers, and presentations on flatwork design and construction.

Contact PNA today to find out how we can help you with your commercial/industrial flooring and pavement needs.

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