The source for pavement rehabilitation information

PavementPrinciples

Pavement Engineering Inc.

Understanding paving contractor licenses

When choosing a paving contractor, understanding the differences between license classifications and how they overlap may help you select a contractor qualified for all aspects of a paving project. In addition to a General Engineering Contractor (A), the California Code of Regulations includes two other classes that apply to paving work.

C-12 - Earthwork and Paving Contractor. An earthwork and paving contractor digs, moves and places material forming the surface of the earth, other than water, in a manner that a cut, fill, excavation, grade, trench, backfill or tunnel (if incidental to) can be executed, including the use of explosives for these purposes. This classification includes mixing, fabricating and placing paving and any other surfacing materials.

C-32 – Parking and Highway Improvement Contractor. A parking and highway improvement contractor applies and installs protective coatings, vehicle stops, guard rails and mechanical devices, directional lines, buttons, markers, signs and arrows on the horizontal surface of any game court, parking facility, airport, highway or roadway constructed of concrete, asphalt or similar material. This classification includes the surface preparatory work necessary for the applying protective coatings but does not include repaving of these surfaces.

In addition to a contractor with a Class A license, a contractor with a C-12 license may be appropriate for typical summer paving projects. A C-32 license may be too restrictive.

Steps for securing high quality work from your paving contractor

When working with paving contractors, it's not just about getting what you paid for. It's about knowing what you need and then getting what you paid for. After all, most paving contractors will give you what you ask for, but if you don't specify the right treatment, you could be wasting money.

Here's how to get the most from your paving contracting experience.

Step 1: know the needed treatments

Having a thorough pavement assessment and a multi-year plan is the first step in knowing what treatments are needed and when to apply them. The goal of a pavement management plan is to spend enough money to maintain pavement and extend service life without wasting limited funds on unnecessary or premature treatments.

Some contractors or consultants will assess pavement and tell you that it fits into a general category such as excellent, good, fair or poor. But what does that actually mean? How accurate is an investigation without a verifiable basis for categorizing pavement condition?

An assessment based on an ASTM standard, such as the widely accepted Pavement Condition Index (PCI) is reliable, accurate and objective. It rates pavement on a verifiable scale of 0 to 100 based on the type, extent and severity of pavement defects. It can be used to develop a multi-year pavement management plan that documents condition, recommends and prioritizes treatments and estimates treatment costs.

Step 2: develop accurate plans and specifications

If you have a multi-year pavement management plan, you can use that information to prepare your bid documents, but when it comes to drafting specifications, details are the key to adding extra years of life to your pavement.

The plans should define the areas and limits of work with clear details for each item of work. Technical specifications should provide the requirements for performing the work. Providing precise specifications will ensure you get high quality results from your contractor that are both use appropriate and cost-effective.

Another specification that may be overlooked in school district bid documents is the degree of asphalt compaction. If done right, compaction can provide additional years of pavement life.

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Steps for your paving contractor

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Compaction is a function of the asphalt mix composition, mix temperature and compaction effort.

Specifying the right mix is critical, particularly with recent changes in Caltrans asphalt mix specifications, but the temperature of the mix during laydown also is very important. Typically, the compaction process should begin when the temperature of the asphalt is between 280° and 300° F. Once the asphalt mix begins to cool and reaches a temperature of 250° F, the degree of achievable compaction goes down.

Both mix quality and compaction quality are essential to long-lasting pavements. Asphalt that is not properly compacted contains too many air voids that allow water to penetrate more easily, which in turn results in premature aging through oxidation. Even a slight difference in density, voids or moisture content can shave years off the life of a road or parking lot.

Caltrans recognizes the importance of compaction and can deduct up to 25% of contractor pay for out-of-spec compaction.

Your bid documents could (and probably should) contain specifications calling for a minimum compaction requirement. Industry standards recommend 92% of "Maximum Theoretical Specific Gravity."

One way to verify the percentage of compaction you receive is to specify the use of a nuclear gauge during the compaction process. It is the most accurate method for monitoring asphalt concrete mixes to ensure mix designs meet specified tolerances and for measuring in-place hot asphalt density during the laydown phase to ensure sufficient compaction.

Step 3: bid at the right time

To obtain the lowest unit cost, bid your projects in the winter, during contractors' slow periods. Waiting until spring or summer almost always results in higher bids. That means you need to have projects lined up or underway in the fall, which often is the busiest time of the year for school maintenance directors. That's where a multi-year pavement management plan helps. In addition to specifying the type and timing of maintenance treatments, a multi-year plan provides a good basis for comparing the bids you receive at the close of the process. Clear plans and technical specifications take the guesswork out of the bidding process, which results in lower bids.

Conclusion

There are many honest paving contractors who will follow your exact plans and specifications and do a good job, but to get the highest quality work that will extend the life of your pavements at the lowest cost, taking the right steps will ensure you get the most from your contractor and your paving dollar.

Tip of the month - Environmental effects of sun and water oxidize pavement, eventually causing it to become brittle and crack. While crack filling and seal coating are important ways to minimize solar damage, don't forget the damaging effects of dirt and debris, which can be ground into naturally porous pavement by repetitive traffic and act like an abrasive. Consider sweeping school parking lots at least twice a year and especially right before the start of the school year to help protect your pavement investment.

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Pavement Engineering, Inc.
Petaluma / Redding / San Luis Obispo
877-883-4578
marketing@pavementengineering.com
www.pavementengineering.com

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.