

Crossroads

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TRANSPORTATION Information Center — LTAP

University of Wisconsin—Madison

Good bid documents help road projects

It's a challenge to ensure high quality work on road projects at a reasonable cost. Getting competitive bids, as is frequently required, can add to the challenge, especially if bidders have different understandings of what the project entails.

The bid documents you prepare are your primary way of communicating with contractors. These written materials describe the nature of the project so that all bidders have the same understanding and can offer fair and competitive prices.

To help local officials, the T.I.C. offers sample specifications for small projects and a decision checklist. Updated and expanded for the 2002 construction season, the packet has new sample specifications for crack routing, crack sealing, and slurry seal, asphalt concrete materials, and crushed aggregate base course. There are also sample forms for bid advertisement, bid schedule, proposal, agreement, notice of award, and change order.

Initial decisions The T.I.C.'s checklist reviews critical decisions you must make. In general, it's a good approach if you specify the type and quality of the work, while the contractor decides how to do it. Talk with contractors and other experts for help in making these decisions.

Timing Summer is the best time to do asphalt paving and sealcoating. Be sure to seek bids in late winter or early spring, early enough so the contractor has time to finish the project in favorable weather.

Qualifications You must assure that the contractor can do quality work on your project. It may be easiest to require that all bidders be pre-qualified by the Wisconsin Department of Transportation. Smaller contractors, minority-owned businesses, and local businesses may be qualified to do your work, especially if it's a smaller job, but may not be on the state



Paving operations require expensive equipment and trained operators. That's why it's important to have good bidders and check qualifications.

list. If so, you must determine for yourself if they are qualified. What do their references say? Do they have the equipment needed for the job? How much experience does the work force have?

A good approach is to consider contractors on the DOT list as pre-qualified locally and then require others to submit references, experience and equipment lists, and financial information to seek qualification. Often the information is submitted with the bid.

If you are qualifying locally, think ahead and set standards for qualification. The process shouldn't be arbitrary. You may not favor local bidders without valid reasons.

It is helpful to schedule the bid opening a few weeks before the final award. This provides time to check qualifications and resolve any questions that may arise.

If competition is limited in your area, you may want to make an effort at advertising your project more widely. Include

your bid notice in statewide publications such as *The Western Builder* magazine. You can also mail the notice to other possible bidders. Contact the roadbuilder associations for ideas and names. Also, check with the WisDOT District construction office and with roadway agencies in neighboring cities or counties to learn which contractors may already have large projects in your area. "Piggybacking" your job along with another may save you considerable money.

Preparation work Who will do the pavement repairs and exactly what will be done before an overlay or sealcoat is applied? Be careful to clearly define the extent of the work and to assign specific responsibility to help ensure that bids are fair, equivalent, and competitive.

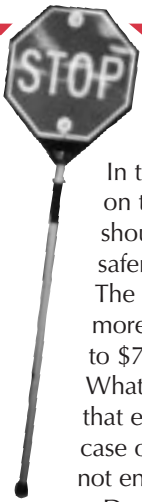
Specifications All bid documents should require that work be done in

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Idea Exchange



Halogen Stop/Slow paddle outshines the rest

In theory, flashing lights on the Stop/Slow paddle should make work zones safer for flaggers and crews. The extra safety also costs more: \$175-\$325 compared to \$70 for a passive paddle. What are you getting for that extra investment? In the case of most lighted paddles, not enough.

Dave Morena, Safety & Traffic Operations Engineer, Michigan FHWA Division office field tested five different flashing Stop/Slow paddles for a group of federal, state, and local highway safety people. "The results were dramatic," Morena says. In bright sunlight at 285 feet from the observers, only the paddle with halogen lights was visible.

"The group consensus was that the halogen paddle was the only one that would be able to draw a motorist's attention not just at 285 feet, but at the even greater distances required in the field," says Morena. Subsequent tests with two halogen paddles confirmed these findings.

Michigan DOT has supplied halogen Stop/Slow paddles to its road crews for the last six years. After a near miss, John Dault, a Transportation Maintenance Worker in the Superior Region, is very glad. He was working on a winding road section when suddenly a semi came barreling in from the west where traffic was supposed to be stopped.

"I immediately activated the Electronic Sign Paddle," Dault says. "Only skidding tires could be heard. The monster was halted...only 25 feet from the patch crew that occupied the lane. When I approached the driver...he stuttered: 'I never seen anything till the lights started to flash!'"

Despite their effectiveness, the halogen lighted paddles aren't widely used, even though both Michigan DOT and Minnesota DOT have them in service. Cost may be a factor. They are priced at \$325 each by Minncor Industries, a Minnesota vendor, and at \$530 by DeTronics, an Ontario company.

In Wisconsin, Mashuda Contractors in Princeton started using a set of them in July. "They're really good. I think they should use them in all areas where there is high traffic or low visibility," says Safety Director Deb Hilscher. "They're highly visible and help protect the flagger. Flaggers need all the protection they can get because they're right out in the traffic."

Hilscher says the paddles are also much more reliable than a previous model of lighted paddle they tried. The batteries last a full work day and then are recharged overnight.

"It comes down to spending extra money to get extra safety for the workers," says Morena of the Michigan FHWA. "What's worse, though, is to spend extra money and get nothing. You can spend \$250-\$325 for the LED paddles and you can't see them at all."

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conformance with the Wisconsin Department of Transportation Standard Specifications for Road and Bridge Construction. Local officials will need to make some additional specification decisions because the standard has many options, some of which are not appropriate for local roads. For example, the specs say asphalt materials may conform to mix type specifications: E-0.3, E-1, E-3, or E-10. Most local roads would benefit by conforming to low volume specifications, E-0.3. Materials designed for very high volume roads are generally not appropriate.



It is important to be clear in bid documents who will do patching and repairs before the sealcoat or overlay is applied.

Doing your specification writing homework up front can save you headaches at construction season. Good specs make for good roads.

Sample specifications and bidding documents for small projects are available through the T.I.C. See Resources on page 6 for details.

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