



An RFP with a performance specification—rather than the commonly used three-name spec—can help municipalities get the appropriate streetlight product for their project

BY PAUL MITCHELL

When it comes to issuing an RFP, municipalities face a common challenge: how to get the product(s) they want, while providing for fair and healthy competition that results in getting the best price. One of the more common approaches taken by municipalities is to mandate that three names (or products) be listed on the specification or bid document. Sometimes this is mandated as part of the state or federal monies tied to the project. In other cases, the city is concerned that a one-name spec or

sole-source listing will lead to them paying more than they should.

While this approach seems prudent, quite a few municipal specifiers that I've spoken with share the frustration of not ending up with the product(s) they wanted, even after some comprehensive research prior to issuing their RFP. It's clear that the three-name approach often has the result of nullifying this research, and the city ending up with an inferior product. One reason for this is that it is very difficult to identify three LED luminaires that are truly equal, particularly when it comes to decorative street lighting.

More so than other bid items, outdoor street lighting is a complex landscape of variables that is very difficult to navigate. While announcing the results of last year's Next Generation Luminaires competition at the Strategies in Light conference, the judges shared that next year's competition might not include outdoor street lighting products, due to the inherent difficulty in judging that particular family of luminaires.

This difficulty is what leads to the problem of constructing a proper RFP. What often happens is that the specifier (municipal employee or contract engineer) will gather education on various LED products and technologies. This may come from lighting agents, other lighting specifiers or municipal contacts, or straight from the websites of lighting authorities such as the Department of Energy and/or IES. Armed with an understanding of LED technology, a specification begins to take shape around a product that the specifier feels meets their particular needs (both performance and budgetary) and is built and engineered appropriately.

Then, usually just before the RFP is issued, the city will require that two more names be

added to the RFP in order to satisfy its (often unwritten) rule of a three-name spec. While the intent is to create “equal ground” or “fair market competition,” what the city is actually doing in far too many cases is watering down or negating the requirements that its specifier spent months deciding were important. This approach to selecting an LED fixture flies in the face of the LED education that the DOE and IES strive to put forth. This can be particularly frustrating to the specifier, who is aware that the other products are not what their research led them to, but they’re unable or unwilling to “fight city hall.”

Once a product is listed on the RFP, the low-bid contractor can supply it as pre-approved, even though in many cases it is inferior to the primary product being specified. Pointing out any inequities or issues with the fixtures is a moot point. Even if the city becomes aware of these issues, it would face a legal challenge from the low-bid contractor and/or distributor because the product was already listed on the legal document, i.e., the RFP.

A BETTER MOUSE TRAP

A better approach to issuing a specification for LED street lighting is to generate a performance specification, listing no manufacturer names or catalog numbers. By taking this approach, you keep the focus where it belongs, on the performance required from the fixture. You also avoid the aforementioned pitfalls.

Obviously the criteria should come primarily from the DOE and IES, rather than from any one manufacturer’s literature. When the project is being privately funded, the specifier generally has the freedom to lock in on any product he selects (within the project’s budgetary guide-

lines). However, when dealing with public monies, the specifier takes a significant risk by inserting verbiage into the RFP taken directly from one product’s specs, or building a specification that is clearly designed to disguise a sole source intention. Few specifiers are willing to take this risk, knowing the long-term battles that are likely to ensue and the potential to jeopardize their credibility on future projects. If they take the more prudent route suggested here, then it doesn’t matter how many manufacturers or contractors bid the job. All will truly be on equal

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ground, and the city will be in a much stronger position to get a product that will do everything that’s expected.

Here is an example of boilerplate performance criteria around which an RFP can be built, incorporated with the specific requirements of an individual project.

- Lumen data should be generated per diode testing that meets IES LM-80-08.
- IES files should be generated per absolute photometry, as described in IES LM-79-08. Note that the current iteration of the LM-79-08 standard does not call out the CCT, nor the drive current of the sample tested. These should be identified. In addition, the RFP should stipulate that the LM-79 testing was conducted with the light engine inside the desired style of fixture.

- Lumen depreciation should be defined in terms of IES TM-21-11. Likewise, a minimum L_{70} rating should be specified, using a drive current consistent with the drive current used for the LM-79 photometry testing.
- The desired range of acceptable CCT should be identified.
- Any LED photometric layouts or iso-lines that are provided, must call out the LLF that was used so that they can be equally compared and trusted to be realistic.
- If the municipality is converting from

high-pressure sodium, low-pressure sodium or mercury vapor to a broad spectrum white light source (LED, metal halide or induction), the RFP should specify whether or not any photopic/scotopic multiplier may be applied, so that everyone is competing on an equal basis of comparison.

- Minimum luminaire efficacy should be specified, which translates to energy savings. This must be generated by diodes using the acceptable range of CCT, and should only apply to the downward delivered lumens actually being utilized. Typically, upright is considered wasted energy that contributes to sky glow, and should not be counted. Note also that in many cases, efficacy will vary depending on the IES distribution type.



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- When relevant, as in the case of a decorative fixture, acceptable and/or unacceptable lens styles should be specified. You want to avoid achieving higher delivered lumens at the cost of higher glare and may prefer an opaque or diffuse lens.
- Any/all required uniformity ratios should be clearly stated, and the municipality should be prepared to provide prospective bidders with an AutoCAD file of the streetscape so that proper layouts can be provided for review and comparison.
- Minimum warranty terms should be specified that include both the LED array and the driver. In addition, the RFP should require any bidders to clarify what triggers their warranty.
- The driver should be UL or ETL recognized, and minimum driver efficiency should be specified.
- The RFP should specify a minimum lu-

minaire surge protection level, such as IEEE/ANSI C62.41.2.

If the RFP is structured around performance criteria in this way, then there is no need to require three names, or even to list any specific luminaire. The document can include a simple line drawing or photograph in order to identify the desired style or design. In addition, the RFP can descriptively identify the preferred design style (suspended, four-sided lantern; post-top, six-sided lantern; cobra-head luminaire; shoe-box style, etc).

Another measure that can be taken in order to confirm the quality of the low-bid fixture is to require three or four samples for mockup, so that less tangible variables can be reviewed for any red flags. These might include ease of access to the LED array and/or driver in the case of maintenance or an upgrade; reviewing the sturdiness of hinges or other hardware;

reviewing the quality of castings, specific aluminum alloys, and/or the paint finish.

Understandably, some federal and state grants may mandate the three-name approach. But as LED technology and new adaptive controls permeate the lighting market, hopefully that approach will shift and allow all of us to approach the bid process in a more effective way. As a secondary benefit, the adoption of performance specifications like this will entice manufacturers to design and engineer their luminaires to a higher standard, making more efficient and cost-effective options available in the marketplace. ■

THE AUTHOR



Paul Mitchell, Member IES (2004), is regional manager—sales and education with Sternberg Lighting.