



Transportation Engineering and Research

Malcolm H. Ray, P.E., Ph.D.  
RoadSafe LLC  
P.O. Box 312  
Canton, Maine 04221  
207-514-5474  
mac@roadsafellc.com

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Mr. Greg Fredrick  
The Wyoming Department of Transportation  
5300 Bishop Blvd.  
Cheyenne, WY 82009

RE: Quarterly Progress Report #13  
Update to "A Guide to Standardized Highway Lighting Pole Hardware"

Dear Mr. Frederick:

This letter is the thirteenth quarterly progress report for the project Update to A Guide to Standardized Highway Lighting Pole Hardware sponsored by the Wyoming Department of Transportation and covering the period between October 1, 2010 and December 31, 2010. The following paragraphs summarize the progress in the project during this time period.

***Task 1: Determination of Standardized Lighting Poles and Hardware***

This task is complete.

***Task 2: Prototype Guide Development***

This task is largely complete. The prototype Luminaire Support Guide is on-line at: <http://guides.roadsafellc.com/luminaireGuide/index.php> and is fully functional. No further work was performed on Task 2 this quarter.

***Task 3: Final Guide Development***

The project team has begun the process of assembling new materials into the database. Some of the material is being solicited from manufacturers, some may be solicited from State DOTs and some will likely be produced by the research team itself. In general, the research team attempts to obtain as much material as possible from a variety of sources and only create new materials when they are not otherwise available. This allows the research team to stretch the resources of the project as far as possible to include as much new material as possible.

In the third quarter of 2010, the research team sent letters (via e-mail) to several luminaire manufacturers to solicit data for inclusion to the Guide. Along with the letter, an Excel worksheet was also provided to the manufacturers to use as a template for assembling the data. Most of the manufacturers have responded with interest in getting their products included; however, almost all have mentioned concern regarding required effort and low availability of staff.

Valmont, for example, responded to our request by submitting samples of data to the research team. Because of the reasons mentioned previously, the data was not in the required format and was largely incomplete. The research team adjusted the data's format and has been in discussion with Valmont on gathering additional data. The issue of most concern to them is that, unlike Hapco, they do not have a comprehensive catalog of luminaire configurations with all the system information readily available; particularly, the calculations of *maximum fixture EPA* for each possible luminaire configuration. We expect other manufactures to have similar concern.

Valmont has requested that someone from the project team visit their aluminum products facility in Minneapolis to meet with their senior design engineer to discuss how best to generate the necessary data. This meeting is tentatively planned for February 7<sup>th</sup> 2011. An important outcome of this meeting will be for the project team to identify the types of information that will be *readily available* from manufactures. This information will be used to access the need for developing a more automated procedure to aid manufactures in generating and formatting the data sets. (Note: Manufactures are more likely to participate in the development of the Guide if the data submittal process is straight-forward and doesn't require excessive manpower.)

As part of an automated procedure, we would also like to include automatic calculations of the maximum fixture EPA's. The project team believes that search results using EPA criteria will be much more meaningful if all EPA values are computed using the same calculation procedures and the same fixture weight(s).

As was suggested in the previous quarterly report, it may be useful to conduct a live tutorial on how to use the On-Line Guide via a webinar. The target audience would be State DOTs and designers as well as luminaire manufacturers. The intent is to get DOT personnel and other users to "test drive" the On-Line Guide and provide feedback while the project is still active so that any problems can be readily fixed. The most appropriate timing for the webinar may be in the early part of the 2<sup>nd</sup> quarter of 2011 or possibly during the upcoming Task Force 13 meeting in Cleveland, Ohio (if such arrangements can be made).

#### ***Task 4: Final Report***

This task has not been initiated as yet.

#### ***Planned Activities for January-March 2011***

A member of the project team will travel to the Valmont aluminum products facility in Minneapolis to meet with one of their senior design engineers to discuss the data collection process and to access the need for a more automated procedure for generating the data for inclusion in the Guide.

The research team will continue to communicate with other luminaire pole manufacturer and State DOTs to gather data for the on-line guide and to identify areas for improvement in the Guide.

The research team will continue development of a draft User's Guide. The User's Guide will include information on:

- How to use the On-Line Guide
- How to submit data for inclusion into the Guide, and
- How to report errors and comments to the research team.

The tutorial may be developed in one or more formats including html, pdf , Microsoft Word, or Microsoft PowerPoint.

### ***Contractual***

The total expenditure for the work performed during this reporting period was \$9,657.77. The total expenditure to-date for the project is \$170,372.56.

Sincerely,



Malcolm H. Ray, P.E., Ph.D.