

**7150000-HIGHWAY LIGHTING SYSTEMS
RESPONSE TO COMMENTS FROM INDUSTRY REVIEW**

Ray Haverty
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Comments:

In 715-6.1 we delete the word "bases" and replace it with "foundation" however the section is titled "Bases" and in the Description you use the term bases also. Are we changing the term from Bases to Foundation?

Response:

Yes, we are changing the terms. You are correct we also need to change the heading of 715-6.1 to Concrete Foundations.

Richard Bass
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Comments:

We have reoccurring problems with locating electrical lines for lighting systems. I would recommend wording in this specification that would require a better marking of electrical lines.

The specification, 715-13 Markers, does not adequately address this issue. The requirement to "place markers flat on the ground, one inch above finished grade" is not effective. It takes a very short time for the grass to overgrow and completely hide these markers. Without knowing where the lines are you can't find the marker and without the marker you don't know where the lines are.

I would recommend adding wording to require better above ground marking. For example; using a plastic post similar to markers used by communications companies for fiber optic cables. Stickers could be placed on these posts, arrows or numbers, showing the route taken to the next pole. In addition, more complete and specific information should be required on the as-built drawings; Offsets, distances, references, pictures, etc. allowing better field locating.

In addition, the specification should read, and place them over the ends of underground "cables", rather than "ducts." This way all lines will be required to be marked, not just ducts, since often direct burial cable is used, I would also recommend adding wording to specification 715-5.2 Trenches for Cable, to require trenches to be run straight from the point of origin to the point of destination (box to pole or pole to pole as the case may be.)

Generally, this is more of a problem with high mast lights than with street lighting. These poles are more random in placement and are not in a straight line, making it more difficult to determine exactly how and where the lines were run.

Thank you for your consideration.

Response:

We intend to totally rewrite Section 715 and Section 992 this year to better address the different types of lighting requirements. We will consider this comment in the rewriting of the specification.

Alan Lafferty
Gulf Industries, Inc.
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Comments:

Thank you for the opportunity of allowing Gulf Industries, Incorporated and Transpo Industries, Incorporated the opportunity of commenting on the subject proposed specification revision.

Omni-directional breakaway performance for highway lighting is critical in that a motorist is more likely to approach a luminaire on impact from all directions and in most cases there is substantial damage to the base. Coupling stub projection after impact should be below 4” from ground level.

Omni-directional luminaire supports are accepted by the Federal Highway Administration and appear on their list of accepted devices. Please consider omni-directional breakaway supports as a specification alternate for your department.

715-6.2 Setting Anchor Bolts: Set anchor bolts according to manufacturer’s templates and adjust to a plumb line, check for elevation and location, and hold rigidly in position to prevent displacement. The Department list Omni-directional couplers on the Qualified Products List (QPL) meeting the requirements of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals. Attach the pole to the foundation using hardware meeting the manufacturer’s requirements specified on the QPL drawings.

Response:

Our Standards require that conventional lights be installed on a frangible base rather than using other types of breakaway devices.

Phillip W. Stevens, PhD, PE, AICP
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Comments:

I am a member of the FICE Transportation committee and have reviewed your recommended changes to the above reference specification. Overall, the changes make sense. I would like to question the change of wording from “shall” to “must”. I happen to manage construction contracts in addition to design contracts and any word softening is often exploited by the contracting industry. Other than that, it looks good.

Thnx,
Phil

Response:
The Specification Office prefers the word “must” over the word “shall”.

Rick Martin
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Comments:

I have reviewed the document for FL DOT specification change: 7150000-Highway Lighting Systems. Several suggestions come to mind:

1. The Spec should call out a more detailed description of the material specification. For example, helix base plate will be ASTM A-36 and AASHTO M-183, helix body ASTM A53GRB and ASTM A252GR2, helix plate ASTM A36 and AASHTO M-183, Helix pilot point ASTM 36 AASHTO M-183.
2. Should read: Material is Hot Dipped Galvanized (HDG) per ASTM A-123 and AASHTO M-111.
3. Should read: Hardware finish (nuts and bolts) should be per HDG ASTM-153 and AASHTO M-232.
4. The base plate thickness listed as a minimum thickness of 1 3/8” thickness. I would like to suggest a table of thicknesses, for example for poles:
Less than 40 FT Depth of Auger 7 FT Plate Thickness 1.375 in
41-50 FT Depth 9 FT Thickness 1.50 in
51-60 FT Depth 10 FT Thickness 1.75
FL DOT can define there own chart, or I would be happy to produce a chart for FL DOT. Of course, CPI can be contracted to do the calculations and produce the chart.
5. The base plate dimensions are not listed at a minimum. I would like to suggest that at a minimum base plate size be specified. One state spec’s a minimum of 15 1/4” square while another states specifies a minimum of 17 1/4” square. Again, FL DOT can define there own chart, or I would be happy to produce a chart for FL DOT. Of course, CPI can be contracted to do the calculations and produce the chart.
6. With the variability of soil conditions in Florida, a minimum depth of helix table can be developed using Brom’s cohesionless soils equation (Eq. C 13-7) from the 2003 AASHTO Manual for Standard Specifications for Structural Support for Highway Signs, Luminaires and Traffic Signals. In suspect soil conditions, boring logs will need to be

submitted to accurately calculate the necessary depth of the helix. Again, FL DOT can define their own chart, or I would be happy to produce a chart for FL DOT. Of course, CPI can be contracted to do the calculations and produce the chart.

7. In the area where it mentions about drilling in "undisturbed soil." This is not always possible because in some areas beneath the Florida, there are soil conditions that warrant drilling a pilot hole to penetrate the hard conditions several feet below. So I would suggest wording that the specification allows for pilot hole (if necessary) and if the original hole is compromised, it can be back filled with FL DOT approved concrete (defined in another area of the specification). These are suggestions to better define the FL DOT spec. It would ease any confusion in the future. Most of the suggestions are issues we have had to address in past jobs. Laying out the specification clearer would alleviate some future problems.

Thanks for asking for our input.

Regards,
Richard R. Martin

Response:
We intend to totally rewrite Section 715 and Section 992 this year to better address the different types of lighting requirements. We will consider this comment in the rewriting of the specification.

Greg Vickery
(850) 415-9529

Pursuant to request, we have reviewed the document, entitled "Highway Lighting Systems," and offer the following comments for your consideration.

It appears the proposed revision allows too much discretion on the part of the contractor with regard to the foundation type. The specification needs to be very clear that the contractor has discretion as to which methodology to utilize, unless otherwise specified in the plans.

Thank you for the opportunity to provide input. If you have any questions or need additional information, please do not hesitate to contact me, at (850) 415-9200.

Response:
The comment is confusing. You indicate the revision allows too much discretion on the part of the contractor, then you say the specification needs to be very clear the contractor has discretion.