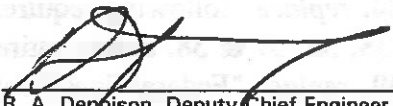


T n-30-1-87728- Design Quality Assurance Bureau EITS Administrator Bldg. 5, Rm. 408 MC 0750,		New York State Department of Transportation ENGINEERING INSTRUCTION	EI 98-040
Title: MOUNTING HEIGHT OF LUMINAIRES, CONDUCTOR OPTIONS and CONDUIT			
SUPERSEDED BY EB 15-031 EFFECTIVE 9/28/15	Approved:  R. A. Dennison, Deputy Chief Engineer, Design Division Date <u>10/21/98</u>		

ADMINISTRATIVE INFORMATION. This Engineering Instruction becomes effective with the letting of 5/6/99, and does not supersede any other official issuance. The specification change transmitted by this EI will eventually be incorporated into the next update of the Standard Specifications.

BACKGROUND

Poles. The section of the Standard Specifications of 1995 that deals with HIGHWAY LIGHTING SYSTEMS, defines "mounting height" in §670-3.06, and requires that "the luminaire will be at the proper mounting height as shown on the plans." However, the pay item for aluminum light standards, item 670.11XXM, describes XX as the "height of pole" in whole meters. Because of the slope of the bracket arm, and the height of the possible transformer base, the actual mounting height of the luminaire may end up being one or two meters higher than the indicated "height of pole". The resulting height may not be what the lighting design requires.

Conduit. Sections 723-19 through 723-24 of the Standard Specifications of 1995 specifies the various types of conduit for highway lighting and traffic signals. However, it was recently discovered that the federal specifications referenced in these sections have become obsolete, and replaced by UL, ANSI and NEMA specifications. Shown below are the revised specifications.

Conductor. Section 723-70 of the Standard Specifications of 1995 specifies Type THHN conductor as the only allowable option for Single Conductor Cable. Subsequently, it was discovered that THHN is not appropriate for wet conditions, so by shelf note, THHN was replaced by "THWN or XHHW." However, there has been some negative experience with THWN conductor, so after investigating what other states are using, we are revising the allowable conductor options to "THW, RHW-2, or XHHW-2 (XLP)."

TRANSMITTED MATERIAL

Because the phrase "height of pole" has resulted in some confusion, at least in one region, it will be replaced by "mounting height" in the description of the pay item on page 6-176. Consequently, it is important that sufficient site information (elevation data) be provided to the pole fabricators so the pole length can be adjusted accordingly to provide the correct mounting height for the luminaire. This site information should be determined by the contractor in conjunction with the Engineer.

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These revisions to the specifications will appear in the **ERRATA** note as follows:

Page 6-169, line 8, add "The contractor, in conjunction with the Engineer, shall determine the necessary elevation data for fabricating the light standard with the correct mounting height."

Page 6-176, line 6, change "Height of Pole" to "Mounting Height."

Page 7-220, Line 34, replace "following requirements:" with "requirements of UL 651A."

Page 7-220, Lines 35, 36, 37 & 38, delete entirely

Page 7-220, Line 39, replace "Federal Specification W-C-1094A and UL514." with "UL 514A."

Page 7-221, Lines 18 and 19, delete entirely and **replace** with "of UL 6, Class 1 - Rigid Metal Conduit; or UL 1242, Class 2 - Intermediate Metal Conduit."

Page 7-221, Line 32, replace "Federal Specification WW-C-581-D, " with "N.E.M.A. Standards Publication No. RN 1, and "

Page 7-221, Lines 33 through 41, delete entirely

Page 7-228, Line 12, change "Type THHN" to "Type THW, RHW-2, or XHHW-2 (XLP)"

Contact Person. Any questions on this EI may be directed to Richard Stempel, of the Design Quality Assurance Bureau, at (518) 457-5440.

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