

Interpretation IC 90.1-1989-20 - March 6, 1998

ASHRAE/IES Standard 90.1-1989, *Energy Efficient Design of New Buildings Except Low-Rise Residential Buildings*

Request from: Robert Davis, Electrical Dept., MH Engineering Group, Inc., 5080 Timberlea Blvd., Suite #215, Mississauga, Ontario L4W 4M2, Canada

References. Mr. Davis' request letter refers to ASHRAE/IESNA Standard 90.1-1989, Table 6-1 Exterior Lighting Power Allowance, Entrance (with canopy), High Traffic (retail, hotel, airport, theatre, etc.); and to Table 6-5.

Background: Mr. Davis' letter notes that Table 6-1 lists Entrance (with canopy), High Traffic (retail, hotel, airport & theatre, etc.) at 10 W/ft² of canopied area, and Light Traffic (hospital, office, school, etc.) at 4 W/ft² of canopied area. Petro-Canada, a Canadian gasoline producer-retailer, has, in design, produced a canopy at 3 W/ft². Conflict has arisen with some municipalities taking the position that the canopy is not an entrance canopy. (Note: The canopy is adjoined to a retail outlet of 1000, 2000 or 3000 ft².) Table 6-5 (ULPA total building for retail) indicates 3.08 W/ft² for buildings 2001 to 10,000 ft². Mr. Davis' letter requests interpretation of whether an Overhead Canopy – Gasoline Retail falls under the Table 6-1 listing for "Entrance (with canopy)", and if so, whether it would be considered High Traffic or Light Traffic.

MH Engineering's Interpretation: Mr. Davis' letter interprets that the ELPA for Overhead Canopy - Gasoline Retail is established by the current listing in Table 6-1 for Entrance (with canopy), Light Traffic. Factors cited by Mr. Davis' letter as having a bearing on this issue include the nature of the product (gasoline), safety (24-hour operation – urban areas), and brand identification.

Question: Is MH Engineering's interpretation correct?

Answer. No.

Comments: The use is retail and therefore meets the "high traffic" description. As such, the Lighting Power Allowance is 10 W/ft².

Table 6-1 does not precisely describe this application. The table describes "Entrance (with canopy)", whereas Mr. Davis' application is a canopy that is only secondarily used as an entrance. Nevertheless, "Entrance (with canopy)" is the best fit on the table.

The use, a gasoline station, is clearly retail and therefore meets the description of "High Traffic".

The December 1997 Public Review Draft Standard 90.1R treats this subject the same as the current standard. It is expected that this shortcoming will be addressed by the SSPC 90.1 in a subsequent independent substantive change public review.