



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

BDE PROCEDURE MEMORANDUM

NUMBER: 21-04

SUBJECT: BDE Manual Revision – Chapter 56

DATE: May 17, 2021

Chapter 56 of the BDE Manual has been revised to reflect revisions to the ANSI/IESNA RP-8, and FAA Advisory Circular regarding obstruction marking and lighting. Additionally, minor revisions regarding voltage drop were added and minor editorial revisions. Please see the BDE Manual on the Department's website to view the revisions.

Background

Specific revisions to Chapter 56 are as follows:

Table of Contents – Revised as necessary to reflect changes to Chapter 56.

Section 56-1 – Changed reference from 'Section 56-7' to 'Section 56-6' of the second paragraph.

Section 56-1.01 – Added 'the project lighting' to the second paragraph. Changed terminology from 'design' to 'design criteria' in the third paragraph. Changed 'submitted' to 'prepared' in the third paragraph. Deleted the first sentence of the fourth paragraph.

Section 56-1.02 – Revised Definition 3. Beacon Lighting to 'One or two luminaires that will identify the presence of an isolated intersection or potential conflict with other traffic and physical features and will serve as a warning or marker'.

Section 56-2.06 – Changed reference IESNA RP-22 to RP-8 as tunnel lighting recommended practices has been moved to RP-8.

Section 56-2.08 – Changed reference IESNA DG-19 to RP-8 as the design guide for roundabouts has been moved to RP-8. Deleted 'directly opposite an entry roadway' from third bullet point item.

Section 56-2.10 - Changed reference IESNA RP-19 to RP-8 as sign lighting recommended practices has been moved to RP-8.

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Section 56-2.11 – Revised the reference in the last sentence of the second paragraph to ‘...FAA Advisory Circular AC 70/74602-IL Obstruction Marking and Lighting.’ to make current with FAA document.

Section 56-2.12 – Deleted ‘American National Standard Practice for Roadway Lighting’.

Section 56-3.02 – Revised ‘anchor bolt’ to ‘anchor rod’ in subparagraph 1 for consistency with other IDOT publications.

Section 56-3.03 – Deleted ‘Weathering steel is a common material choice for light towers.’

Section 56-4 – Deleted ‘(New)’ from the section title.

Section 56-4.02 – Revised ‘lighting design’ to ‘lighting project’ in the first sentence of the first paragraph. Revised ‘trespass lighting’ to ‘light trespass’ in the 11th bullet point item for consistency with IES terminology. Revised ‘navigation warning luminaires’ to ‘obstruction warning luminaires’ in the 14th bullet point item for consistency with U.S. Coast Guard terminology.

Section 56-4.03 – Revised ‘significant other information’ to ‘other pertinent information’ in the first sentence of the first paragraph.

Section 56-4.04 – Revised the title to include ‘Package and’. Revised ‘specifications’ to ‘special provisions’ in the third and fourth sentences of the first paragraph. Deleted ‘but not until the consultant’s lighting design is approved’ from the second paragraph.

Section 56-4.06 – Deleted the last sentence of the first paragraph and the second and third paragraphs as this is covered in the Standard Specifications.

Section 56-4.07 – Deleted this section as it is covered in the Standard Specifications.

Section 56-5 – Revised Figure 56-5.A description for ‘Typical Parameters for Conventional Lighting (Interstate)’ to a maximum mounting height of 50 ft (15.2m). Changed ‘conflict areas’ to ‘activity areas’ in fine print note as this is the new terminology of RP-8.

Section 56-5.01 – Deleted the first sentence of the first paragraph. Revised the second and third sentences of the first paragraph. The reasoning for this is that the IESNA never adopted Small Target Visibility as an acceptable design methodology.

Section 56-5.01(a) – Deleted ‘HID’ from the last sentence of the first paragraph. This light source is not supported by industry for roadway lighting luminaires.

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Section 56-5.01(b) – Revised the third column heading of Figures 56-5.B to 'Pedestrian Activity Area' to agree with revised terminology in RP-8. Revised the third column heading of Figures 56-5.C to 'Pedestrian Area Classification' to agree with revised terminology in RP-8.

Section 56-5.02 – Revised the last sentence of the second paragraph to 'All lighting calculations shall be performed in Lighting Analysts, AGI32 lighting design software'.

Section 56-5.03 – Changed 'Computer programs' to 'The lighting design software' in Item 2. Changed 'computer' to 'the lighting design' in Item 3.

Section 56-5.04(b) – Revised the terminology in the first paragraph to agree with the latest RP-8.

Section 56-5.04(c) – Changed title to 'Pedestrian Activity Classification' to agree with new terminology in RP-8. Revised Items 1, 2, and 3 to agree with new revised descriptions in new RP-8.

Section 56-5.04(f.1) – Revised 'vertical light distribution' to 'lateral light distribution' throughout Item 1. Revised 'Lateral Light Distribution' to 'Lateral Light Distribution' in Item 2. Completely revised Item 3 to the new method for control of distribution as described in the new RP-8.

Section 56-5.05(g) – Changed 'ballast' to 'driver' in the last sentence of paragraph 1. Changed 'ballast' to 'luminaire in fine print note 2 of the AMPS Table. Added fine print note '5. Total voltage drop at end of a conductor run shall not exceed 20%. See 56-5.06 for voltage drop requirements for HIGH-MAST TOWERS'.

Section 56-5.06 – Added new Item 6 'Voltage Drop. The voltage drop at any high-mast tower shall not exceed 5%'.

Section 56-6 – Revised portion of Item 1 from 'American National Standard Practice for Roadway Lighting' to 'Recommended Practice for Design and Maintenance of Roadway and Parking Facility Lighting'. This was to change to the new name for RP-8. Deleted Item 15 as this has been moved to RP-8. Deleted Item 18 as this has been moved to RP-8.



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