



TECHNICAL BULLETIN

Ministry of Transportation
and Highways

ENGINEERING BRANCH
TRAFFIC & ELECTRICAL ENG. SECTION
BULLETIN NUMBER: **TE-2000-08**

Subject: Clarification of Clear Zone Requirements for Luminaire and Sign Poles in Curb and Gutter &/or Sidewalk Application	
Date: November 30, 2000	Author: Ross Casey, Senior Electrical Standards Technologist
Bulletin Number: TE-2000-08 Bulletin Type: CLARIFICATION OF STANDARD	Action Required: Effective Date: Immediately
Distribution	Standards Affected
All holders of Electrical and Traffic Engineering Manual – Guidelines for the Design of Lighting, Signal and Sign Installations	Electrical and Traffic Engineering Manual

BACKGROUND:

The Ministry *Electrical and Traffic Engineering Manual* provides the general guidelines for clear zone applications related to electrical and signing installations. The Ministry *Highway Engineering Design Manual, Chapter 4*, defines clear zone and states that it is a function of volume and design speed (*Technical Bulletin DS96001 – copy attached* – offers further clarification). There are more instances of barrier curb occurring in urban settings, at posted speeds of greater than 60 km/h. These barrier curb situations frequently have street lights and/or sign poles adjacent to the highway.

POLICY:

All designs and installations for luminaire and sign structures in barrier curb situations, at design or posted speeds (whichever is greater) above 60 km/h, shall follow the guidelines laid out in *Technical Bulletin DS96001 (attached)*. All designs and installations on highways, with barrier curb, with posted speeds of 60 km/h and under, do not require clear zone treatment.

PROCEDURE:

1. Design

All designs for street light and sign structures shall recognise the clear zone requirements as stated in this bulletin and referenced material. Designers shall make every effort to locate equipment outside of the clear zone. Where this is not practical, breakaway devices shall be used. Where this is not possible, attenuation devices shall be used.

2. Maintenance

The intent of this bulletin shall be used, where practical, when dealing with knockdowns or damage repairs. Frangible/breakaway base programs may supply partial funding, to achieve the goals set out in this bulletin.

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Subject: Clear Zone Standards

Date: May 17, 1996	Author: D. Ross Coulter
Bulletin Number: DS96001 Bulletin Type: Change to Standard	Action Required: Immediate Effective Date: June 19, 1996
Contacts	Standards Affected
Ross Coulter, Design Standards, 356-7928 Ross Casey, Electrical Standards, 387-7688 Paul de Leur, Safety Standards, 356-7186	Design Manual Clear Zone values and Cross Section Drawings, Clear Zone values for Electrical/Sign Setbacks Barrier Flare Dimensions

Background

It has been determined that Clear Zone values based only on Design Speed and Road Classification do not provide for an optimum design. There are many highways in BC that have been declared an Arterial for Strategic and Functional Classification requirements, yet the volumes are not indicative of that designation. Based on AASHTO's "Roadside Design Guide" and close discussion with Highway Safety Staff, the standard will be revised to reflect Design Speed and Design Volume. Therefore, the following Table will replace Table 420.A in the Design Manual.

Design AADT *	Minimum Clear Zone Width (m)				
	Design Speed (km/h)				
	ó 60	70 to 80	90	100	110 to 120
Under 750	2.0	3.0	4.0	5.0	6.0
750 - 1500	3.0	4.0	5.0	6.0	7.0
1501 - 6000	4.0	5.0	6.0	8.0	9.0
Over 6000	5.0	6.0	7.0	9.0	9.0

As well the last column in Table 430.A should be disregarded; Clear Zone ranges are as per the above Table. The Clear Zone for Curb and Gutter designs is 2.0 m from the face of the curb or 0.5 m behind the sidewalk, whichever is greater.

Affected Standards

 The following standards are affected by this revision:

- Cross Sections - Design Manual, Sections 420 and 430: Table 420.A and 430.A. Typical Sections - Figures 430.B through 430.E - Some or all of the tabulated Clear Zone values are superseded by the above table
- Approach and Opposing Barrier Flares - Safety Drawings in Design Manual, back of Tab 6. These will be discussed and clarified in a separate Technical Bulletin
- Pole Placement for Electrical Standards. Any specific mention of a Clear Zone dimension in the Electrical Standards should be verified against the above table.

Unaffected Standards

- Low volume roads do not have specific treatment for Clear Zone. Existing practice of maximum utility setbacks is the primary safety focus.