

SECTION A-2-CLEAR ZONE/LATERAL OFFSET GUIDELINES

INTRODUCTION

The term “clear zone” is used to describe the unobstructed, traversable area provided beyond the edge of the through traveled way for the recovery of an errant vehicle. The clear zone includes shoulders, bike lanes, parking lanes and auxiliary lanes (except those auxiliary lanes that function like through lanes). Clear zone distances are based upon traffic volume, speed, and embankment slopes.

A recoverable area is to be provided that is clear of all unyielding obstacles such as trees, sign supports, utility poles, light poles, or any other fixed objects that might severely damage an out-of-control vehicle (See 2011 AASHTO *A Policy on Geometric Design of Highways and Streets*, Chapter 5). Determining a practical clear zone often involves a series of compromises between absolute safety, engineering judgment, environmental and economic constraints. Additional information is available in AASHTO’s *Roadside Design Guide*.

ROADWAYS WITH SHOULDERS

In rural environments, where speeds are higher and constraints are fewer, a clear zone appropriate for the traffic volume, design speed, and facility type should be provided in accordance with the AASHTO *Roadside Design Guide*, Chapter 3. These values also are applicable for freeways and other controlled-access facilities in urban areas. For an example, see Figure A-2-1, Case 1.

Whenever adequate right of way is available, urban projects should be designed with shoulders in lieu of curbs (unless city ordinances require otherwise) and clear zone widths should be consistent with the requirements for roadways with shoulders. (See 2011* AASHTO *“A Policy on Geometric Design of Highways and Streets”*, Chapter 7). The justification for providing a curb is to be documented in the project file (e.g. Preliminary Field Inspection Report, recommendation from Right of Way and Utilities Division, etc.).

Roadways* with paved shoulders should provide as much clear zone as practical in accordance with Table A-2-1, which is from the AASHTO *Roadside Design Guide*. (See 2011 AASHTO *A Policy on Geometric Design of Highways and Streets*, Chapters 4, 5 and 6). For an example, see Figure A-2-1, Case 1.

On projects such as RRR, intersection improvements, etc. recoverable areas are not always practical due to the intent of the project to provide minimal improvements and extend the service life of the existing roadway for a fraction of the costs of reconstruction. However, as much clear zone as practical should be provided.

Sources: *TRB Special Report 214, Designing Safer Roads* / 2011 AASHTO *A Policy on Geometric Design of Highways and Streets*, Chapters 4-7 / 2011 AASHTO *Roadside Design Guide*.

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