

## INTRODUCTION

The 2018 Colorado Department of Transportation (CDOT) Roadway Design Guide is an update to the 2005 CDOT Roadway Design Guide -based on the 2011 edition of the American Association of State Highway and Transportation Officials' A Policy on Geometric Design of Highways and Streets (PGDHS), commonly known as the AASHTO Green Book, and upon established-current Colorado Department of Transportation (CDOT) policies and practices. Although this guide is based on the PGDHS, not every section of the PGDHS is represented in the guide. When a more detailed discussion of theory or background is needed, the designer should refer to the appropriate section of the PGDHS.

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A blended team comprised of roadway design consultants and the design program manager from the Project Development Branch prepared the 2018 updates to the 2005 CDOT Roadway Design Guide. The 2018 updates were reviewed and commented upon by a team of CDOT engineers from project delivery representatives from the all CDOT regions and the Project Development Branch of Staff Services, TSM&O and the Division of Transportation Development (DTD).

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Consult Chapter 3, Elements of Design, and Chapter 4, Cross Section Elements, for details on the basic design elements applicable to all classifications of roadways.

Use these guidelines and good engineering judgment, along with the PGDHS named above. Users should keep abreast of the latest practices and developments in design. These guidelines are not intended to be a detailed design manual that supersedes the need for the application of sound principles by the knowledgeable design professional. Designers are permitted the flexibility and encouraged to develop designs tailored to particular situations when appropriate. Minimum values are either provided or implied by the lower value in a given range of values. Exceptions-Variations from these guidelines minimum design criteria should be thoroughly evaluated and documented in accordance with CDOT's design exception policies.

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The standards presented in this guide represent required values. These values imply the lowest acceptable limit in design. Design policies and standards are not inflexible. Higher standards may be used within reasonable economic limits. To ensure uniform practice on a statewide basis, lower design standards will not be used without a Design Exception Variance Request or a design decision, as outlined in the CDOT Project Development Manual.

The project manager Engineer of Record is responsible for incorporating current design standards and safety guidelines as developed by AASHTO and CDOT into highway design.

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The 2018 CDOT Design Guide:

- Refers to The American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets 2011* as the "PGDHS."
- Clarifies and, as needed, expands on material in the *PGDHS*.
- Points out processes and applications unique to CDOT.
- Refers to other resources where appropriate, e.g. the *Highway Capacity Manual*.

2018

Comments on this Guide may be sent to:

Colorado Department of Transportation  
Standards and Specifications Unit  
2829 W. Howard Place  
Denver, Colorado 80204

Or ~~you may call 303-757-9474~~ the design program manager.

These guidelines use standard US Customary (inch-feet-mile) units.

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