

Preface

The 2023 Roadway Design Guide was authored in collaboration with each of the five Colorado Department of Transportation regions. It is a transitional/transformational guide that introduces new concepts to defining and implementing all modes of transportation, with guidance on how planners, engineers, and designers can exercise greater latitude when scoping and delivering projects throughout Colorado.

This Guide integrates practices that have been exercised for many years without a common framework. These are: multimodal design (MM), context sensitive solutions (CSS), and performance based practical design (PBPD). These processes can be applied to combine and optimize all modes of travel, while considering the contextual elements a transportation facility supports.

MM, CSS, and PBPD recognize the American Association of Highway Transportation Officials (AASHTO) roadway classifications. However, contextual analysis applying CSS, MM, and PBPD results in a simpler decision-making process for design. By defining the facility type and using MM, CSS, and PBPD, the designer can balance roadway requirements and contextual elements to better identify and suggest options that address the specific needs of local agencies, communities, and multimodal users.

How to Use This Manual

This manual provides direction to the user from scoping through final design. The overall goal is to help the designer to identify the geographic and contextual area the facility is supporting.

Chapter 1 provides the overarching guidance on how to determine a specific context classification based on traditional classification metrics, such as average daily traffic (ADT), terrain, access spacing, roadside amenities, and drainage type. These contextual considerations were developed in consideration of AASHTO's traditional classifications:

- Freeways
- Arterial Road or Street
- Collector Road or Street
- Local Road or Street

The finer aggregate of context classifications presented in Chapter 1 include:

- Rural Mountainous Environment
- Rural Places
- Suburban Places
- Traditional Neighborhoods
- Downtown Places
- Urban Cores

The AASHTO functional classifications, though broader than the context classifications, are still relevant and required for Federal Highway Administration (FHWA) oversight, documentation, and most importantly federal funding.

Chapter 2 presents the design controls and considerations for all facility types, followed by more specific guidance for Roads (Chapter 3), Streets (Chapter 4), and Freeways, Expressways, and Interstates (Chapter 5).

Any of the three main facility types—Roads; Streets; and Freeways, Expressways, and Interstates—can be found within any of the context classifications. The context classification provides the designer additional guidance in working with local communities to address specific issues and community considerations. The facility type and the contextual classification become the basis for discussion around what travel modes need to be considered or accommodated in the design.

Design elements common to all facility types are presented in Chapter 6. Chapter 7 contains cross section elements that include the contextual considerations related to multimodal implementation. The remaining chapters provide additional guidance and contain specific information about elements to be considered in design.

This Guide contains references to numerous manuals, standards, other documents, and websites that are resources for the designer. The references are current as of the date of publication. It is understood that the users of the Guide will refer to the latest documentation available, regardless of the version of the documents noted in the Guide.