

## Roadside Design Guide

The Global Street Design Guide is a timely resource that sets a global baseline for designing streets and public spaces and redefines the role of streets in a rapidly urbanizing world. The guide will broaden how to measure the success of urban streets to include: access, safety, mobility for all users, environmental quality, economic benefit, public health, and overall quality of life. The first-ever worldwide standards for designing city streets and prioritizing safety, pedestrians, transit, and sustainable mobility are presented in the guide. Participating experts from global cities have helped to develop the principles that organize the guide. The Global Street Design Guide builds off the successful tools and tactics defined in NACTO's Urban Street Design Guide and Urban Bikeway Design Guide while addressing a variety of street typologies and design elements found in various contexts around the world.

This synthesis will be of interest to highway administrators, safety officials, design engineers, traffic engineers, and analysts who are concerned with improving highway safety. Severity indices, which serve as indicators of the expected injury consequences of a crash, are an integral part of the analysis of proposed roadside safety improvements. Severity indices that have been developed by many states and research agencies are described, as are the issues associated with developing the values, and applying and evaluating the indices. The history of severity indices, the issues associated with estimating accident severity and associated costs, and the range of indices that have been developed are described. This publication of the Transportation Research Board also discusses the relationship of accident severity indices with the American Association of State Highway and Transportation Officials (AASHTO) Roadside Design Guide and the Federal Highway Administration (FHWA) ROADSIDE computer program. While research since the 1960s has sought to quantify severity indices for a range of object types and impact conditions, there remains a wide variation in the values from which analysts may choose when performing cost effectiveness evaluations.

Federal-aid Policy Guide

Earth Day

The 2002 AASHTO Roadside Design Guide

Guide for the Planning, Design, and Operation of Pedestrian Facilities

Roundabouts

The purpose of this manual is to provide clear and helpful information for maintaining gravel roads. Very little technical help is available to small agencies that are responsible for managing these roads. Gravel road maintenance has traditionally been "more of an art than a science" and very few formal standards exist. This manual contains guidelines to help answer the questions that arise concerning gravel road maintenance such as: What is enough surface crown? What is too much? What causes corrugation?

The information is as nontechnical as possible without sacrificing clear guidelines and instructions on how to do the job right.

This guide is about designing highways that incorporate community values and are safe, efficient, effective mechanisms for the movement of people and goods. It is written for highway engineers and project managers who want to learn more about the flexibility available to them when designing roads and illustrates successful approaches use in other highway projects.

Traffic controls for street and highway construction and maintenance operations

Design of Construction Work Zones on High-speed Highways

Highway Safety Design and Operations Guide, 1997

A Guide for Achieving Flexibility in Highway Design

A Policy on Geometric Design of Highways and Streets, 2011

*This document presents a synthesis of current information and operating practices related to roadside safety and is developed in metric units. The roadside is defined as that area beyond the traveled way (driving lanes) and the shoulder (if any) of the roadway itself. The focus of this guide is on safety treatments that minimize the likelihood of serious injuries when a driver runs off the road. This guide replaces the 1989 AASHTO "Roadside Design Guide."*

*NACTO's Urban Bikeway Design Guide quickly emerged as the preeminent resource for designing safe, protected bikeways in cities across the United States. It has been completely re-designed with an even more accessible layout. The Guide offers updated graphic profiles for all of its bicycle facilities, a subsection on bicycle boulevard planning and design, and a survey of materials used for green color in bikeways. The Guide continues to build upon the fast-changing state of the practice at the local level. It responds to and accelerates innovative street design and practice around the nation.*

*Research and Policy that Led to Its Recommendations*

*An Integrated Approach to Establishing Native Plants*

*Guide to Road Design*

*Highway Functional Classification*

*Roadside Design Guide*

This design guide has been developed for the purpose of helping to achieve the following transportation systems management (TSM) goals: To maximize the person-moving capacity of roadway facilities by providing improved operating level of service for high occupancy vehicles (HOVs), both public and private; To conserve fuel and to minimize consumption of other resources needed for transportation; To improve air quality; and To increase overall accessibility while reducing vehicular congestion. Part I deals with HOV options in terms of planning and operations; Part II deals with design criteria for HOV options on freeways; and Part III deals with design criteria for HOV options on surface arterial streets.

The NACTO Urban Street Design Guide shows how streets of every size can be reimagined and reoriented to prioritize safe driving and transit, biking, walking, and public activity. Unlike older, more conservative engineering manuals, this design guide emphasizes the core principle that urban streets are public places and have a larger role to play in communities than solely being conduits for traffic. The well-illustrated guide offers blueprints of street design from multiple perspectives, from the bird's eye view to granular details. Case studies from around the country clearly show how to implement best practices, as well as provide guidance for customizing design applications to a city's unique needs. Urban Street Design Guide outlines five goals and tenets of world-class street design: • Streets are public spaces. Streets play a much larger role in the public life of cities and communities than just thoroughfares for traffic. • Great streets are great for business. Well-designed streets generate higher revenues for businesses and higher values for homeowners. • Design for safety. Traffic engineers can and should design streets where people walking, parking, shopping, bicycling, working, and driving can cross paths safely. • Streets can be changed. Transportation engineers can work flexibly within the building envelope of a street. Many city streets were created in a different era and need to be reconfigured to meet new needs. • Act now! Implement projects quickly using temporary materials to help inform public decision making. Elaborating on these fundamental principles, the guide offers substantive direction for cities seeking to improve street design to create more inclusive, multi-modal urban environments. It is an exceptional resource for redesigning streets to serve the needs of 21st century cities, whose residents and visitors demand a variety of transportation options, safer streets, and vibrant community life.

Global Street Design Guide

Maintenance and Design Manual

A Policy on Design Standards--interstate System

A Design Guide for Roadside Improvements

Severity Indices for Roadside Features

Roadside Design GuideAASHTORoadside Design GuideRoadside Design GuideAmer Assn of State Hwy

TRB's National Cooperative Highway Research Program (NCHRP) Report 672: Roundabouts: An Informational Guide - Second Edition explores the planning, design, construction, maintenance, and operation of roundabouts. The report also addresses issues that may be useful in helping to explain the trade-offs associated with roundabouts. This report updates the U.S. Federal Highway Administration's Roundabouts: An Informational Guide, based on experience gained in the United States since that guide was published in 2000.

2004

A Policy on Geometric Design of Highways and Streets

Highway capacity manual 2010

NCHRP Report 659

Guide for the Design of High Occupancy Vehicle Facilities

**Highway engineers, as designers, strive to meet the needs of highway users while maintaining the integrity of the environment. Unique combinations of design controls and constraints that are often conflicting call for unique design solutions. A Policy on Geometric Design of Highways and Streets provides guidance based on established practices that are supplemented by recent research. This document is also intended as a comprehensive reference manual to assist in administrative, planning, and educational efforts pertaining to design formulation**

**The HCM 2010 significantly enhances how engineers and planners assess the traffic and environmental effects of highway projects by: Providing an integrated multimodal approach to the analysis and evaluation of urban streets from the points of view of automobile drivers, transit passengers, bicyclists, and pedestrians; Addressing the proper application of microsimulation analysis and the evaluation of the results; Examining active traffic management in relation to demand and capacity; and Exploring specific tools and generalized service volume tables to assist planners in quickly sizing future facilities. The four-volume format provides information at several levels of detail, to help users more easily apply and understand the concepts, methodologies, and potential applications.**

Scenic Byways

Manual on Uniform Traffic Control Devices for Streets and Highways

Concepts, Criteria and Procedures

An Informational Guide

Urban Bikeway Design Guide, Second Edition

This document presents concepts for enhancing safety in the operation and management of highways. It presents good design and operational practices for numerous design elements and situations for all types of roads.

Native plants are a foundation of ecological function, affecting soil conservation, wildlife habitat, plant communities, invasive species, and water quality. Establishing locally-adapted, self-sustaining plant communities can also support transportation goals for safety and efficiency. Past obstacles to establishing native plant communities on roadsides have been technical, informational, and organizational. Effective strategies and practical techniques for revegetating the disturbed conditions with limited resources must be made available to practitioners. Multiple disciplines, ranging from engineering to soil science, ecology, botany, and wildlife science, must be able to work cooperatively, not in isolation. This report offers an integrated approach to facilitate the successful establishment of native plants along roadsides and other areas of disturbance associated with road modifications. It guides readers through a comprehensive process of: 1) initiating, 2) planning, 3) implementing, and 4) monitoring a roadside revegetating project with native plants.

Urban Street Design Guide

Guide for the Geometric Design of Driveways

Roadside design, safety and barriers

A Policy on Geometric Design of Highways and Streets, 2018

A Policy on Geometric Design of Highways and Streets, 2001

**Earth Day celebrates our beautiful planet and calls us to act on its behalf. Some people spend the day planting flowers or trees. Others organize neighborhood clean-ups, go on nature walks, or make recycled crafts. Readers will discover how a shared holiday can have multiple traditions and be celebrated in all sorts of ways.**

**Utilities and Roadside Safety**

**Roadside design guide**

**Roadside Revegetation**

**Gravel Roads**

**Geometric Design Guide for Canadian Roads**