

ICS 13.200  
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**GA**

**INDUSTRY STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GA/T 2176.1-2024**

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**Guidance for setting of risk prevention equipment in accident  
prone segments - Part 1: Basic principles**

事故易发路段风险防控装备设置指南 第1部分：基本原则  
(English Translation)

**Issued on: November 18, 2024**

**Implemented on: March 1, 2025**

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**Issued by: Ministry of Public Security**

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## Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is Part 1 of GA/T 2176 "Guidelines for the Installation of Risk Prevention and Control Equipment on Accident-Prone Road Sections". GA/T 2176 has been published.

The following sections.

--- Part 1: Basic principles.

## Introduction

In order to solve the problem of prominent traffic operation risks in accident-prone sections and multiple but unsystematic monitoring methods, it is necessary to guide the

establishment of risk management system for accident-prone sections.

This document is prepared to establish an integrated risk prevention and control equipment system for risk monitoring, identification, assessment, early warning and response.

Recommendations on the installation of risk control equipment for accident-prone sections such as bridges, long downhill slopes, long tunnels, and sharp bends.

Partial composition.

--- Part 1: Basic Principles. The purpose is to establish the basic principles for the installation of risk prevention and control equipment on accident-prone sections of road.

--- Part 2: Extra-Large Bridge Sections. The purpose is to establish recommendations and methods for the installation of risk prevention and control equipment in extra-large bridge sections.

--- Part 3: Long downhill sections. The purpose is to establish recommendations and methods for the installation of risk prevention and control equipment on long downhill sections.

--- Part 4: Long tunnel sections. The purpose is to establish recommendations and methods for the installation of risk prevention and control equipment in long tunnel sections.

--- Part 5: Sharp bends. The purpose is to establish recommendations and methods for the installation of risk prevention and control equipment on sharp bends.

Guidelines for the Installation of Risk Prevention and Control Equipment on Accident-Prone Road Sections Part 1: Basic Principles

## 1 Scope

This document stipulates the installation principles, installation conditions, installation recommendations, installation procedures and work content of risk prevention and control equipment on accident-prone sections of roads.

This document is applicable to the risk prevention and control equipment installation of large bridges, long downhill slopes, long tunnels, and sharp bends in accident-prone sections, and other accident-prone sections.

This is for reference only when setting up risk prevention and control equipment on the designated road section.

## 2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 31446 LED Active Luminous Road Traffic Signs GA/T 994 Specification for Release of Road Traffic Information GA/T 1548 Guidelines for the Installation of Active Illuminated Traffic Signs on Urban Roads GA/T 1760 General Technical Requirements for Road Traffic Accident-Prone Area Safety Warning Systems JT/T 817 General Technical Requirements and Test Methods for Highway Electromechanical System Equipment JT/T 918 Technical Requirements for Networking of Highway Information and Communication Systems JTG/T 3671 Technical Specifications for Construction of Highway Traffic Safety Facilities

### 3 Terms and Definitions

The following terms and definitions apply to this document.

accident prone section Road sections where accident risks or hidden dangers are more prominent due to the special road environment.

**Note:** Such as extra-large bridges, long downhill slopes, long tunnels, sharp bends, etc.

Grandbridge

Bridge sections with a total span of multiple spans greater than 1000m, or a single span greater than 150m.

long tunnel

Tunnel sections with a length greater than 1000m.

Road sections where the average slope and continuous slope length exceed specific limits.