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

GB/T 44489-2024

**Requirements for examination of advanced assistant driving
map**

高级辅助驾驶地图审查要求

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1 Scope

GB/T 44489-2024 sets the requirements for the official examination of advanced driver assistance maps. In China a map is surveying data before it is a product: precise geographic coordinates are controlled, and any map released to the public must pass a review by the natural resources authorities. ADAS maps sit awkwardly in that system, because the whole point of them is a level of geometric precision that the confidentiality rules were written to prevent leaving the country. The standard sets the basic requirements - the qualification of the submitting entity, the permitted range of map data, the confidentiality processing of spatial positions and the materials to be submitted - then the content of the review, covering boundaries, ground feature entities, place names and points of interest, and feature attributes, and the form of the review opinion. It applies to maps for Level 2 and Level 3 driving automation and took effect on 1 January 2025.

This document specifies the basic requirements, review content, and review opinions for the review of advanced assistant driving maps for public use in Level-2 and Level- 3 driving automation systems of smart cars. This document applies to the review activities of advanced assistant driving maps for public use in in Level-2 and Level-3 driving automation systems of smart cars. NOTE: For the classification of Level-2 and Level-3 driving

automation for smart cars, see

3.3 in GB/T 40429-2021.

2 Normative references

The provisions of the following documents constitute the essential clauses of this document through normative references in this text. Among them, for referenced documents with dates, only the versions corresponding to the dates are applicable to this document; for referenced documents without dates, the latest versions (including all amendments) are applicable to this document.

GB/T 14911-2008 Basic terms of surveying and mapping

GB 20263 Navigable electronic map - Basic requirements of security processing technology

GB/T 35764 Requirements for representation of public maps

GB/T 40429-2021 Taxonomy of driving automation for vehicles

3 Terms and definitions

The terms and definitions defined in GB/T 14911-2008, GB/T 40429-2021 and the following apply to this document.

3.1 advanced assistant driving map A data set containing geographic coordinates of spatial location, which can be combined

g) Internal roads and special roads within units and residential areas are not included.

NOTE: For the description of rural roads and farm machinery roads, see

4.4 of GB/T 20257.1-2017.

4.3 Requirements for confidentiality processing of spatial location

4.3.1 Processing methods The spatial location confidentiality processing of the advanced assistant driving map shall be completed in accordance with the methods specified in GB 20263.

4.3.2 Processing accuracy The plan-positional accuracy of the advanced assistant driving map after spatial position confidentiality processing shall not be better than 10 m (not included). NOTE: Precision is measured by standard deviation.

4.3.3 Supporting documents The spatial location confidentiality processing method used by the advanced assistant driving map shall obtain a supporting document that has been approved by the national competent authority.

4.4 Materials submitted for review Materials submitted for review of the advanced assistant

driving map shall include but not be limited to the following materials.

- a) Application form for map review.
- b) Data of map submitted for review.
- c) Map description, including: 1) Description of map data, including data source, data coverage, user objects, data volume, data storage method, principles for handling confidential content, and examples of handling confidential content; 2) Map data application description, including product functions, usage, etc.; 3) Description of map data application management measures, including safety emergency response mechanism, emergency response time, etc.
- d) Documents proving that the spatial location has been kept confidential, and
- g) Other content that is prohibited from being disclosed by the state.

5.2.2 Road entities The road entities involved in the advanced assistant driving map shall meet the following requirements:

- a) Facilities on the roadside and above the road are expressed as point symbols (single points) to indicate the existence of ground features;
- b) Do not use point clouds, real-life images or other measured results to express roads and their related attribute information. NOTE: Facilities on the roadside and above the road mainly include traffic lights, traffic signs, poles, obstacles (such as safety islands), etc.

5.3 Place names or names of points of interest The place names or names of points of interest in the advanced assistant driving map shall meet the following requirements:

- a) Do not contain the names of the ground feature entities in 5.2.1;

5.4 Ground feature attributes

5.4.1 Ground feature attributes that shall not be included The advanced assistant driving map shall not contain the following ground feature attributes:

- a) The height limit, width limit, clearance, load capacity and slope of the bridge;
- b) the height and width of the tunnel;
- c) Road paving materials;
- d) The relative heights of facilities on the roadside and above the road;

5.4.2 Road slope and curvature

5.4.2.1 Road slope The road slope field in the advanced assistant driving map shall meet the following requirements.

a) Do not express the true slope value.

b) The slope value can be expressed using graded values after grading processing and in accordance with the following rules: 1) The slope angle value is graded, and the grading interval is not better than 0.1° ; 2) If expressed in other ways, the grading interval after conversion into the slope angle value shall not be better than 0.1° . NOTE: The slope includes the transverse slope value and the longitudinal slope value.

5.4.2.2 Road curvature The road curvature field in the advanced assistant driving map shall meet the following requirements.

a) Do not express the true curvature value.

b) The curvature value can be expressed using the graded value after grading processing and in accordance with the following rules: 1) The curvature value is graded, and the grade interval is not better than 10- 5m-1; 2) If expressed in other ways, the grading interval after conversion into the curvature value shall not be better than 10-5m-1. NOTE: The curvature value is the reciprocal of the curvature radius.

6 Review comments

The review comments are divided into the following categories:

a) Those that do not comply with the provisions of

4.4 will not be reviewed;

b) If there is any non-compliance with 4.2,

4.3 and Chapter 5, the advanced assistant driving map is deemed to have failed the review;