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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GA/T 115-2020

Evaluation methods for road traffic congestion levels

道路交通拥堵度评价方法

(English Translation)

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Reference

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GA 115-1995 "Road Traffic Congestion Degree and Evaluation Method". Compared with GA 115-1995, except for editorial changes the main technical changes are as follows.

---Modified the standard name (see the standard name, the name of the 1995 edition);

---Modified the scope of application (see Chapter 1, Chapter 1 of the 1995 edition);

---Added normative reference documents (see Chapter 2);

--- Deleted the term and definition of "blocking" (see 2.1 in the 1995 edition);

--- Deleted the term and definition of "periodical obstruction" (see 2.2 in the 1995 edition);

--- Deleted the term and definition of "blocking degree" (see 2.3 in the 1995 edition);

--- Deleted the term and definition of "vehicle queuing" (see 2.4 in the 1995 edition);

---Added the term and definition of "traffic congestion" (see 3.1);

---Added the terms and definitions of "traffic congestion" (see 3.2);

---Added the terms and definitions of "interval road sections" (see 3.3);

---Added the term and definition of "Intersection delays per vehicle" (see 3.4);

---Added the term and definition of "queuing length" (see 3.5);

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---Added the term and definition of "intersection queuing time" (see 3.6);

---Added the term and definition of "queuing time index" (see 3.7);

---Added the term and definition of "queue overflow" (see 3.8);

---Added general regulations (see Chapter 4);

---Modified the evaluation indicators of traffic congestion at intersections (see 5.1, 3.1.1, 3.1.2 and 3.2.1 of the 1995 edition);

---Modified the determination of traffic congestion at intersections (see 5.2, 3.1.1, 3.1.2 and 3.2.1 of the 1995 edition);

---Modified the method of measuring intersection data (see 5.3, 4.2.1 and 4.2.2 of the 1995 edition);

---Modified the evaluation index of the traffic congestion degree of the interval road section (see 6.1, 3.1.3 and 3.2.2 of the 1995 edition);

---Modified the determination of the traffic congestion degree of the section of the road (see 6.2, 3.1.3 and 3.2.2 of the 1995 edition);

---Modified the method of measuring section road section data (see 6.3, 4.2.3 of the 1995 edition);

--- Deleted the provision that the degree of road traffic congestion is measured by periodic congestion (see 4.1 in the 1995 edition);

---Deleted the measurement time of road traffic congestion (see 4.3 in the 1995 edition);

---Modified the road and road network traffic congestion evaluation (see Chapter 7, 1995 version 3.3 and 4.4);

---Added vehicle average delay determination (see Appendix A).

This standard was proposed and managed by the National Road Traffic Management Standardization Technical Committee (SAC/TC576).

This standard was drafted. Institute of Traffic Management Science of the Ministry of Public Security, Tongji University.

1 Scope

This standard specifies the evaluation indicators and methods for traffic congestion at intersections and sections of roads.

This standard is applicable to the evaluation of traffic congestion on urban roads, highway intersections and sections of the road.

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2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article Pieces. For undated reference documents, the latest version (including all amendments) is applicable to this document.

GB/T 33171-2016 Evaluation Specification for Urban Traffic Operation Status

3 Terms and definitions

The following terms and definitions apply to this document.

Trafficcongestion

Because the traffic demand of vehicles exceeds the capacity of the road or is affected by traffic incidents, the vehicles are forced to slow down or stop, and cause problems.

A traffic phenomenon in which the backlog of vehicles exceeds a certain level.

[GB/T 29108-2012, definition 5.21] 3.2 Trafficcongestionlevel Measure the degree of traffic congestion, which is divided into level I, level II, level III and level IV, which respectively indicate severe congestion, moderate congestion, light congestion and Unblocked.

Section roadsection

The road section with directionality between two end points on the road does not include intersections.

Average delay at intersection average delay at intersection the average time lost when a vehicle passes through an intersection.

Queue length

The length of the vehicle queue from the stop line at the intersection or the start of the queue to the end of the queue.

Queuing time at intersection the time it takes for vehicles to queue at an intersection from the first stop until they pass the stop line of the entrance road.

Queuing time index

The ratio of the queuing time of vehicles at signal-controlled intersections to the signal-controlled period.

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