



AASHTO Transportation Glossary

4th Edition—2009



American Association of State Highway
and Transportation Officials

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Preface

The 2009 *AASHTO Transportation Glossary* is an update and revision of the 1983 *Transportation Glossary* and the 1998 *Transportation Glossary*, which was unpublished. The greatest number of additions in terminology are related to bridge and drainage subjects. The new glossary also includes lists of organizational acronyms, abbreviations, and other glossary references.

Terms and definitions in this glossary were taken from an unpublished 1998 *AASHTO Glossary* and supplemented with definitions listed in AASHTO publications issued after 1998. Several additional sources were also referenced, including the *Highway Capacity Manual*, *Manual on Uniform Traffic Control Devices*, *Code of Federal Regulations—Title 23*, a Federal Highway Administration (FHWA) list of roundabout terminology, and the *Transportation Research Thesaurus*.

Glossary terms are listed in alphabetical order regardless of transportation mode. The glossary also includes two indexes—subject area and keyword—that provide cross references for the user.

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Transportation Glossary



Abandonment The relinquishment of the public interest in right-of-way or activity thereon with no intention to reclaim or use again for highway purposes.

Abrasion 1) Loss of section or coating of a culvert by the mechanical action of water conveying suspended bed load of sand, gravel, and cobble-size particles at high velocities with appreciable turbulence. 2) Removal of stream bank material due to entrained sediment, ice, or debris rubbing against the bank.

Absolute Block A block governed by the principle that no train shall enter the block while it is occupied by another train.

Absolute Permissive On a track that is signaled in both directions, the section between sidings that, for opposing movements, extends from siding to siding and may be occupied by only one train and that, for following movements, is divided into two or more blocks that are signaled as absolute blocks.

Absorption 1) The assimilation or taking up of water or other solutions by soil or other material, i.e., the entrance of water into the soil or rocks by all natural processes. It includes the infiltration of precipitation or snowmelt, gravity flow of streams into the valley alluvium, sinks, or other large openings, and the movement of atmospheric moisture. The process by which substances in gaseous, liquid, or solid

form dissolve or mix with other substances. 2) The increase in mass of concrete resulting from the penetration of water into the concrete.

Absorption Test A test made to determine the absorption of concrete.

Abstraction That portion of rainfall that does not become runoff. It includes interception, infiltration, and storage in depressions. It is affected by land use, land treatment and condition, and antecedent soil moisture.

Abstract of Title A document showing the condensed history of the title to property, containing portions of all conveyances or other pertinent instruments relating to the estate or interest in the property, and all liens, charges, encumbrances, and releases.

Abutment The earth-retaining structure that supports the superstructure at either end of a bridge. Considered part of the bridge substructure.

“A” Car A motive-powered unit so designed that it may be used as the controlling unit of a multiple-unit train and that has adequate visibility in a forward direction, as well as a cab and equipment, to permit full control and observation of the propulsion power and brake applications for the train.

Accelerate Stop Distance The distance required to accelerate an airplane to a specified speed and, assuming failure of the critical engine at the instant that speed (V) is attained, to bring the airplane to a stop.

Acceptance Sampling and testing, or inspection, to determine the degree of compliance with contract requirements.

Acceptance Constant (k) The minimum allowable quality index.

Acceptance Limit In variable acceptance plans, the limiting upper or lower value placed on a quality measure that will permit acceptance of a lot. (Unlike specification limits placed on a quality characteristic, an acceptance limit is placed on a quality measure. For example, in Percent Within Limits (PWL) acceptance plans, PWL refers to specification limits placed on the quality characteristic, and the minimum allowable PWL identifies the acceptance limit for the PWL quality measure).

Acceptance Number In attribute acceptance plans, the maximum number of defective or nonconforming units in the sample that will permit acceptance of the inspected lot or batch.

Acceptance Plan An acceptable method of taking samples and making measurements or observations on these samples for the purpose of evaluating the acceptability of a lot of material or construction.

Acceptance Sampling and Testing Sampling, testing, and the assessment of test results done to determine whether or not the quality of produced material or construction is acceptable in terms of the specifications.

Access Permission, liberty, or ability to enter, approach, or to make use of.

Accessibility 1) A measure of mobility. 2) Total travel time between areas weighted by the relative attractiveness of the destination. 3) A measure of the ability of public transportation users to access transit modes.

Accessible A site, building, facility, or portion thereof that can be approached, entered, and used by the physically impaired.

Accessible Pedestrian Signal (APS) A device that communicates information about pedestrian signal timing in a nonvisual format including audible tones, verbal messages, and/or vibrotactile information.

Access Point An intersection, driveway, or opening providing access to a roadway.

Access Time The time elapsed on a trip from the moment of leaving the point of origin to the moment of boarding a vehicle.

Accrual Method The accounting procedure that recognizes revenues and expenses when they occur regardless of when cash is received or paid.

Accuracy 1) The closeness or degree of agreement (within a stated tolerance and probability of conformity) between a quantity measured or estimated and an accepted reference value. 2) The degree to which a measurement, or the mean of a distribution of measurements, tends to coincide with the true population mean.

Acquisition or Taking The process of obtaining right-of-way.

Active Earth Pressure Lateral pressure resulting from the retention of the earth by a structure or component that is tending to move away from the soil mass.

Act of God In law, a direct, sudden, or irresistible action of natural forces that could not reasonably have been foreseen and prevented. Earthquake, tidal wave, tornado, hurricane, or any other cataclysmic phenomenon of nature beyond the contractor's control that causes loss, damage, or injury to the work.

Actual Cost Contractor's actual cost to provide labor, material, equipment owned or invoiced rental, and administrative overhead necessary for the work.

Addendum A contract revision developed between advertising and opening proposals.

Additive A substance or agent added in small amounts to a basic ingredient of a mixture prior to mixing.

Adjustment Factors Multiplicative factors that adjust a parameter for a base condition to represent a prevailing condition.

Admixture 1) A material other than water, aggregates, and cement used as an ingredient of concrete and added to the batch immediately before or during its mixture. 2) A substance or agent added in small amounts to the basic ingredients of a mixture during the mixing process.

Adsorption The adhesion in an extremely thin layer of molecules (such as gases, solutions, or liquids) to the surface of solid bodies or liquids with which they are in contact.

Advanced Public Transportation Systems (APTS) Application of intelligent transportation systems technologies to the needs of public transit, including fixed-route systems as well as route deviation and demand-responsive modes.

Advanced Rural Transportation Systems (ARTS) A collection of intelligent transportation systems technologies applied to the rural environment.

Advanced Traffic Management System (ATMS) Remotely operated traffic management system for monitoring and managing operations of a freeway system, including High-Occupancy Vehicles (HOV) lanes and arterial streets. Major elements of the system include surveillance, communications, and controls.

Advanced Traveler Information Systems (ATIS) The dissemination of real-time traffic information to the traveling public over a variety of distribution channels.

Advanced Vehicle Control and Safety Systems (AVCSS) Systems that focus on crash avoidance by enhancing driver performance. AVCSS include collision

avoidance systems and automated highway systems.

Advertisement A public announcement inviting bids for work to be performed or materials to be furnished.

Advisory Arbitration without a final and binding award.

Aeroelastic Vibration Periodic, elastic response of a structure to wind.

Aeronautical Information Publication A pilot's operational manual containing information needed for the planning and conduct of flight in the National Airspace System (conterminous U.S. only).

Aesthetics The science or philosophy concerned with quality of visual experience, pertaining primarily to desirable visual values and with judgments concerning appealing design.

Aesthetic Value The worth of an item of construction in terms of pleasing appearance or gratifying performance.

Afflux The backwater or height by which water levels are raised at a stated point, owing to the presence of a constriction or obstruction, such as a bridge.

Agency 1) The State Highway or Transportation Department, Commission, or other organization, constituted under state or commonwealth laws, that administers highway or transportation work. 2) A responsible business or service authorized to act on behalf of others, i.e., a governmental department, consulting engineering firm, or owner of the facility or feature.

Aggradation The general and progressive upbuilding of the longitudinal profile of a channel or within a drainage facility by the deposition of sediment.

Agonic Line A line along which no magnetic variation occurs.

Aircraft Classification Number (ACN) A number expressing the relative effect of a large aircraft on a pavement for a standard subgrade category.

Air Navigation Facility (NAVAID) Any facility used in, available for use in, or designed for use in aid of air navigation, including landing areas; lights; any apparatus or equipment for disseminating weather information, for signaling, for radio direction finding, or for radio or other electronic communication; any other structure or mechanism having a similar purpose for guiding or controlling flight in the air or the landing or takeoff of aircraft.

Airplane A power-driven fixed-wing aircraft, heavier than air, that is supported by the dynamic reaction of the air against its wings.

Airport A defined area on land or water, including any buildings and installations, normally used for the takeoff and landing of aircraft.

Airport Advisory Area The area within 10 statute miles (16 km) of an airport where a control tower is not operating but where a flight service station (FSS) is located. At such locations, the FSS provides advisory service to arriving and departing aircraft.

Airport Advisory Service A service provided by flight service stations at airports not served by a control tower. This service consists of providing information to landing and departing aircraft concerning wind direction and velocity, favored runway, altimeter setting, pertinent known traffic, pertinent known field conditions, airport taxi routes and traffic patterns, and authorized instrument approach procedures.

Airport Capacity The number of takeoffs and landings per hour that can be handled safely during good weather and during bad weather when radar is required to help air traffic controllers maintain safe separation

between aircraft. Also referred to as Runway Capacity.

Airport Layout Plan (ALP) Current and planned airport development portrayal, which may be part of an airport master plan.

Airport Surveillance Radar (ASR) A relatively short-range radar used by control tower personnel for arrival and departure control within a 30-mile (50-km) area or for radar instrument approaches. Only range and azimuth information are available.

Air Rights The property rights for the control or specific use of a designated airspace involving a highway.

Air Route Surveillance Radar (ARSR) A long-range radar, approximately 150 miles (240 km), used by Air Route Traffic Control Center personnel to control air traffic along the airways between terminals.

Air Route Traffic Control Center (ARTCC) A facility established to provide air traffic control service to Instrument Flight Rules (IFR) flights operating within controlled airspace and principally during the en route phase of flight.

Airship A mechanically propelled aircraft whose support is derived from lighter-than-air gas.

Airspeed The speed of an aircraft relative to the air.

Air Traffic Control (ATC) A service operated by an appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.

Air Traffic Control Radar Beacon System (ATCRBS) Radar transponders, installed in the aircraft, used with secondary radar beacon ground equipment to provide a reinforced target pip for use by air traffic control at higher altitudes and in areas of high traffic density.

Airway An air corridor established for the control of traffic.