

## 102 Glossary of Terms

### 102.1 General

The following definitions used in the FDOT Design Manual (FDM) are assigned for consistency of understanding and interpretation of the processes and criteria contained within. These definitions may not be consistent with AASHTO, *MUTCD*, NCHRP, or other documents referenced in this manual. When definitions of terms conflict with other FDOT manuals, use the definitions provided in this chapter.

### 102.2 FDM Definitions

#### ***Access Classification***

A classification of a roadway that determines the standards to apply to the design of medians, median openings, connections, and signal spacing. See ***FDM 201*** for additional information.

#### ***AADT***

Annual Average Daily Traffic (AADT) is the total volume of vehicle traffic of a roadway for a year divided by 365 days.

#### ***Area Designation (Rural, Urban, Urbanized)***

***Rural:*** Places outside the boundaries of concentrated populations that accommodate higher speeds, longer trip lengths and freedom of movement, and are relatively free of street and highway networks.

***Urban:*** A geographic region comprising as a minimum the area inside the United States Bureau of the Census boundary of an urban place with a population of 5,000 or more persons, expanded to include adjacent developed areas as provided for by Federal Highway Administration (FHWA) regulations. The FHWA Urban Boundary maps are available online at:

<https://www.fdot.gov/roadway/BufferMaps/Default.shtm>

***Urbanized:*** A geographic region comprising as a minimum the area inside an urban place of 50,000 or more persons, as designated by the United States Bureau of the Census, expanded to include adjacent developed areas as provided for by Federal Highway Administration regulations. Urban areas with a population of fewer than 50,000 persons which are located within the expanded boundary of an urbanized area are not separately recognized.

### ***As-Built Plans***

The Contract Plans after construction is completed, all revisions including those occurring during construction have been included and with the title on the key sheet changed to Final Plans.

### ***Blended Transitions***

Blended transitions are areas where the elevation of a roadway and a sidewalk or shared use path are the same along the width of a pedestrian crossing. Blended transitions can vary in geometrics. For flush shoulder roadways, blended transitions are the portion of the sidewalk or shared use path that meets the traveled way, bicycle lane, or paved shoulder. For curbed roadways, blended transitions are elevation transitions of the roadway such as a raised crosswalk, raised intersection, or depressed corner. Detectable warnings must be placed in the same locations as that of a curb ramp.

### ***Bicycle Way***

Any road, path, or way which by law is open to bicycle travel, regardless of whether such facilities are signed and marked for the preferential use by bicyclists or are to be shared with other transportation modes. Examples include bicycle lanes, paved shoulders, shared use paths, and traffic lanes.

### ***C-D Road***

Collector-Distributor Roads are limited access roadways provided within a single interchange or continuously through two or more interchanges on a freeway segment. They provide access to and from the freeway and reduce and control the number of ingress and egress points on the through freeway. They are similar to continuous frontage roads except that access to abutting property is not permitted.

### ***Context Classification***

Description of the land use and transportation context where a roadway is located. Roadways are designed to match the characteristics and demands defined by the appropriate Context Classification criteria. See ***FDM 200*** for additional information.

### ***Control Vehicle***

An infrequent vehicle allowed to encroach into adjacent lanes, curbs, and sidewalks of intersections or driveways when making turning movements. Geometric designs of intersections and driveways are based on the design vehicle.

### ***Conventional Project***

Projects for which the preparation of the contract documents is a 'stand-alone' effort resulting in the Plans, Specifications and Estimates (PS&E) package that is advertised

for a Construction Contract. These projects are often referred to as “design-bid-build” projects.

### **Crash Analyses**

Summaries, crash rates, or other formatted reports that are developed using crash data.

### **Crash Data**

Crash data at FDOT is the Florida Traffic Crash Report (FTCR) data received from the Florida Department of Highway Safety and Motor Vehicles (FLHSMV) with additional information from FDOT, such as location coordinates and coding for first point of impact position on the roadway.

*Commentary: The State Safety Office (SSO) completes fatal and serious injury (KA) crash location review within days of receipt of the information, and the data is immediately available for use. All available data in the Signal Four Analytics (S4A) data-base within the recommended review period should be incorporated into a project’s analysis.*

*The FDOT SSO adds information during the crash location processing and the crash data is updated continuously as data is received. This includes verified data and completed data sets.*

*Verified data refers to crash data that has been processed and reviewed by the FDOT staff in the SSO. Data that has been verified is tied to location coordinates on the public roadways and can be reported from the S4A database, the SSOGis Query Tool, or other FDOT crash data portals. Preliminary data for all crashes is available in the S4A data-base. This S4A data should be used to supplement crash analyses and is available in coordination with the District Safety Office.*

*A completed data set at FDOT, which may also be called “finalized” data, refers to the completion of the location processing and review for a specific calendar year of crash data. The SSO completes the review of crashes on the State Highway System (SHS) for a given year and follows that completion by running the annual crash rate analyses in the S4A system. These annual steps produce the Average Crash Rates and the High Crash listings.*

### **Crash Reports or Crash Report Documents:**

Original Florida Traffic Crash Report (FTCR) form documents in .TIFF or .PDF format as received from FLHSMV. These are the documents filed by law enforcement when reporting crashes.

### ***Design Speed***

A principal design control that regulates the selection of many of the project standards and criteria used for design. There are three categories of Design Speed:

**High Speed:** Design Speeds of 50 mph and greater.

**Low Speed:** Design Speeds of 45 mph and less.

**Very Low Speed:** Design Speeds of 35 mph and less.

### ***Design Vehicle***

Vehicles with representative weight, dimensions, and operating characteristics used to establish highway design controls for accommodating vehicles of designated classes. The design vehicle is the largest frequent user of a given roadway; see ***FDM 201.6***.

### ***Functional Classification***

The grouping of streets and highways into classes, or systems, according to the character of service they are intended to provide:

**Arterial:** Divided or undivided roadways that provide continuous routes which serve through traffic, high traffic volumes, and long average trip lengths. Arterials include expressways without full control of access, US numbered highways and principal state roads that connect cities and towns. Arterials are further classified by context.

**Collector:** Divided or undivided roadways which serve to link arterials with local roads or major traffic generators. They serve as a transition link between mobility needs and land use needs. Collectors may include minor state roads, major county roads, and major urban and suburban streets. Collectors on the SHS are further classified by context.

**Freeway:** The terms Freeway, Interstate, Toll Road, and Expressway are often used synonymously when establishing criteria within this manual. A freeway is a divided highway that provides full control of access (i.e., Limited Access) and is intended for long distance trips. Interstate is a federally-funded network of freeways that must meet national design criteria and operational standards. Toll Road is a general term for any road that requires the user to pay to use all or a portion of the road. Expressways are freeways situated in major metropolitan areas with primary service for commuters; and may or may not be tolled. Movement of traffic, free of interference and conflicts, is of primary importance for these types of facilities. Essential elements include medians, grade separations, interchanges, and, in some cases, collector-distributor roads

and frontage roads. Freeways may be further classified as rural, urban, or urbanized.

### ***Grade Separation***

A crossing of two roadways, or a roadway with a railroad or pedestrian pathway, at different levels.

### ***Highway***

A highway is a high-speed roadway (divided or undivided) intended for travel between destinations like cities and towns.

### ***Intersection***

Intersections can be categorized by intersection basic type, functional classification, control type, area type, or a combination of these classifiers, depending on the element of design.

### ***Lanes***

**Auxiliary Lane:** The designated widths of roadway pavement marked to separate speed change, turning, passing, and weaving maneuvers from through traffic. They may also provide short capacity segments.

**Bicycle Lane:** A bicycle lane (bike lane) is a portion of a [curbed](#) roadway which has been designated by striping and special pavement markings for use by bicyclists.

**Express Lane:** An express lane is a type of managed travel lane physically separated from general use lanes, or general toll lanes, within a roadway corridor. Express lanes use dynamic pricing through electronic tolling in which toll amounts are set based on traffic conditions.

**General Use Lane:** Any un-tolled traffic lane that is not set aside for a specific purpose such as express lanes.

**HOV Lane:** Special designated travel lanes reserved for high occupancy vehicles (HOV); e.g. buses and carpool vehicles. They may be adjacent to general use lanes or separated.

**Travel Lane:** A travel lane is the designated portion of a roadway intended to carry motorized through traffic. Generally, travel lanes equate to the basic number of lanes for a facility; e.g. a 4-lane divided highway has 4 travel lanes.

**Traffic Lane:** The term traffic lane may be used synonymously with traveled way in this manual. See definition for traveled way.

### ***Local Agency Funding Agreement (LFA)***

An agreement used when Local Agencies provide funds to the Department for a specific project, often that are not on the State Highway System. The conveyance of funds and work to be accomplished are documented with a signed Local Agency Funding Agreement. The Agreement typically includes provisions for additional funding for contingency. These Agreements must be coordinated through the Comptroller's office and is covered by procedure locally funded agreements (non-PTO) – financial provisions and processing (**Topic Number: 350-020-300-n**).

### ***Local Road***

Roadways which provide high access to abutting property, low average traffic volumes, and short average trip lengths. Local roads may include minor county roads, minor urban and suburban subdivision streets, and graded or unimproved roads.

### ***Low Volume and High Volume***

Certain operating characteristics and driver expectancy on highways. Standards for these controls are based on area type and are given in **Table 102.1.1**.

**Table 102.1.1 AADT Thresholds for Low and High-Volume Roadways**

Facility	Urban		Rural	
	Low Volume AADT	High Volume AADT	Low Volume AADT	High Volume AADT
<b>Freeway</b>				
4-Lane Facility	57,000	69,000	46,000	56,000
6-Lane Facility	86,000	103,000	69,000	83,000
8-Lane Facility	114,000	138,000	92,000	111,000
<b>Arterial</b>				
2-Lane Facility	16,000	20,000	9,000	14,000
4-Lane Facility	37,000	43,000	38,000	47,000
6-Lane Facility	55,000	64,000	58,000	71,000
8-Lane Facility	69,000	80,000	--	--
<b>Collector</b>				
2-Lane Facility	11,000	16,000	8,000	13,000
4-Lane Facility	37,000	45,000	30,000	38,000
<p><b>LOW VOLUME ROADWAYS:</b> Design Year AADT is <math>\leq</math> low volume AADTs shown.  <b>HIGH VOLUME ROADWAYS:</b> Design Year AADT is <math>\geq</math> high volume AADTs shown.</p>				

***Maintenance Agreement***

An agreement with a Local Agency for the maintenance responsibilities of a federally funded project. This agreement is required for construction projects let by FDOT for work not on the State Highway System and must be obtained prior to the authorization for construction of the project.

### ***Match Existing***

This term is used when the construction of a proposed element (e.g., roadway, sidewalk, striping) may need to be adjusted at the termini to harmonize with the existing element to which it is connected. For resurfacing projects, this term is used when the existing pavement cross slopes are not intentionally modified or changed (i.e., applicable to constant depth milling and resurfacing).

### ***Micromobility Device***

A range of small, lightweight vehicles (typically less than 36 inches wide and less than 50 pounds) operated by users personally at speeds between 15 mph and 28 mph. Micromobility devices include, but are not limited to, electric scooters, electric skateboards, and electric pedal assisted (pedelec) bicycles.

### ***Paratransit***

Comparable transportation service required by the American with Disabilities Act (ADA) for individuals with disabilities who are unable to use fixed route transportation systems. The specific requirements and parameters for this service, including eligibility and service requirements, are contained in 49 CFR Part 37, Subpart F.

### ***Pedestrian Access Route***

A continuous and unobstructed path of travel provided for individuals with disabilities within or coinciding with a pedestrian way.

### ***Pedestrian Way***

A space for pedestrian travel separated from traffic lanes. Sidewalks, shared use paths, footpaths and shoulders are pedestrian ways; however, footpaths and shoulders are not pedestrian access routes, since they lack specific improvements or provisions to accommodate persons using mobility aids.

### ***Projects of Division Interest (PoDI)***

PoDIs are projects that have an elevated risk, contain elements of higher risk, or present a meaningful opportunity for FHWA involvement to enhance meeting program or project objectives. Project selection is risk-based. Stewardship and oversight activities will be directed toward addressing identified risks. This may include retaining certain project approvals, where permissible, or directing stewardship or oversight activities to a specific phase or element of the project. Additional information is included in ***FDM 128***.

### ***Production Date***

The committed completion date for final plans (as described in ***FDM 901.3.5***) and certifications (e.g., utilities, permits, R/W, environmental). Marks the date that the project is ready for the Plans, Specifications, and Estimates (PS&E) Submittal(s).

## **Ramp**

A turning roadway that connects a freeway to a crossing roadway within an interchange. The components of a ramp are a terminal at each leg and a connecting road. The geometry of the connecting road ramp usually involves some curvature and grade.

## **Roadway**

Roadways consist of prepared surfaces (asphalt or concrete pavement) for use by vehicles, including shoulders and adjacent bicycle lanes. A divided roadway provides a separation between opposing traffic lanes.

## **Safe System**

The Safe System approach aims to eliminate fatalities and serious injuries of all users of the transportation system through a holistic model of multiple elements working together to safeguard against tragic crash outcomes.

*Commentary: There are five elements of the Safe System: Safe Road Users, Safe Vehicles, Safe Speeds, Safe Roads, and Post-Crash Care. Each element is interrelated and weaknesses in one element may be compensated for with strengths in another.*

*The criteria within the **FDM** have been developed with the Safe System approach in-mind as related to Safe Speeds and Safe Roads. The term “Safe System” may not be specifically mentioned; however, it is inherent within the criteria and important to keep in mind when making engineering decisions to vary from the criteria.*

*The Safe System approach begins with a foundational acknowledgement that transportation system users, as humans, will inevitably make mistakes. These mistakes may lead to crashes on our transportation facilities. FDOTs Target Zero goal is to eliminate fatal and serious injuries.*

*To achieve zero fatalities and serious injuries, crash forces induced on the human body must be kept below tolerable limits. When designing and operating the transportation system, it is critical to manage crash kinetic energy. Human error is to be expected; therefore, the transportation infrastructure should be designed and operated to eliminate fatalities and serious injuries. This may be achieved by first reducing the risk of error and secondly, when crashes do occur, to maintain collision forces on the human body within tolerable levels by managing speed and crash angles to reduce injury severity.*

*The following are six foundational principles for understanding and applying the Safe System approach:*

- **Fatalities and serious injuries are unacceptable** – *While no crashes are desirable, the Safe System approach emphasizes a focus on crashes resulting in fatal and serious injuries. Regardless of the road users' socio-economic backgrounds, their abilities, and the modes of transportation they use, no one should experience fatal or serious injuries when using the transportation system.*
- **Humans make mistakes** – *Road users will inevitably make mistakes, and those mistakes can lead to crashes. The Safe System approach expects the transportation system to be planned, designed, and operated to be forgiving of inevitable human error, so that fatal and serious injury outcomes are unlikely to occur.*
- **Humans are vulnerable** – *Humans have a limited ability to tolerate the energy involved in crash impacts. Although the exchange of kinetic energy in collisions among vehicles, objects, and road users has multiple determinants, applying the Safe System approach involves managing the kinetic energy of crashes to avoid fatal and serious injury outcomes.*
- **Responsibility is shared** – *All stakeholders (transportation system users and managers, vehicle manufacturers, emergency responders, etc.) must work collaboratively to ensure that crashes do not lead to fatal or serious injuries.*
- **Safety is proactive** – *Proactive and data-driven tools should be used to identify and mitigate latent risks in the system, rather than waiting for crashes to occur and reacting afterwards.*
- **Redundancy is crucial** – *Reducing the risk of severe crash outcomes requires all parts of the system to be strengthened so that if one element fails, the others protect transportation system users.*

### **Shoulder Break**

The point of intersection of the shoulder slope plane and the embankment or ditch slope plane; i.e., where the full-width shoulder slope of 0.05 or 0.06 “breaks” to a front slope of 1:X.

### **Strategic Intermodal System (SIS)**

A transportation system comprised of facilities and services of statewide and interregional significance, including appropriate components of all modes. The highway component includes all designated SIS Highway Corridors, Emerging SIS Highway Corridors, SIS Intermodal Connectors, and Emerging SIS Highway Intermodal Connectors.

### **Streets**

The local system which provides direct access to residential neighborhoods and business districts, connects these areas to the higher order road systems and offers the highest access to abutting property; sometimes deliberately discouraging through-traffic movements and high speeds.

### **Traveled Way**

The traveled way is the portion of the roadway for the movement of vehicles, exclusive of shoulders and bicycle lanes. The traveled way includes travel lanes and auxiliary lanes.

### **Truck Traffic**

Truck traffic is sometimes used as a qualifying control. Truck traffic is expressed as a percent of the AADT or daily count (24 hour).

### **Turnpike Projects**

Projects within the Turnpike system as defined by FS 338.221(6), 2021:

*“Turnpike system’ means those limited access toll highways and associated feeder roads and other structures, appurtenances, or rights previously designated, acquired, or constructed pursuant to the Florida Turnpike Enterprise Law and such other additional Turnpike projects as may be acquired or constructed as approved by the Legislature.”*