SLOVENSKI STANDARD
SIST-TS CEN/TS 16157-8:2026

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Nadomešča:
SIST-TS CEN/TS 16157-8:2020

Inteligentni transportni sistemi - Specifikacije za izmenjavo podatkov DATEX II pri vodenju prometa in informiranju - 8. del: Publikacije in razširitve za upravljanje prometa, namenjene mestnemu okolju

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 8: Traffic management publications and extensions dedicated to the urban environment

Intelligente Verkehrssysteme - DATEX-II-Datenaustauschspezifikationen für Verkehrsmanagement und Verkehrsinformationen - Teil 8: Publikationen von Verkehrsmanagementmaßnahmen und kommunale Ergänzungen

Systèmes de transport intelligents - DATEX II Spécification des échanges de données pour la gestion du trafic et l'information routières - Partie 8: Publications et extensions pour la gestion du trafic dédiées à l'environnement urbain

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ICS:

35.240.60	Uporabniške rešitve IT v prometu	IT applications in transport

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English Version

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 8: Traffic management publications and extensions dedicated to the urban environment

Systèmes de transport intelligents - DATEX II Spécification des échanges de données pour la gestion du trafic et l'information routières - Partie 8: Publications et extensions pour la gestion du trafic dédiées à l'environnement urbain

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (CEN/TS 16157-8:2026) has been prepared by Technical Committee CEN/TC 278 “Intelligent transport systems”, the secretariat of which is held by NEN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes CEN/TS 16157-8:2020.

The CEN 16157 series consists of several parts under the general title “Intelligent transport systems — DATEX II data exchange specifications for traffic management and information”.

CEN/TS 16157-8:2026 includes the following significant technical changes with respect to CEN/TS 16157-8:2020:

— The ReroutingManagementEnhanced publication has been upgraded to improve fit with other parts in the CEN 16157 series.

— The TrafficManagementPlan publication has been revised and enhanced to make use of predefined plans.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

This document defines a common set of data exchange specifications to support the vision of a seamless interoperable exchange of road traffic and travel information across boundaries, including national, urban, interurban, road administrations, infrastructure providers and service providers. Standardization in this context is a vital constituent to ensure interoperability, reduction of risk, reduction of the cost base, promotion of open marketplaces and many social, economic and community benefits to be gained from more informed travellers, network managers and transport operators.

Deploying intelligent transport systems in line with the European Sustainable and Smart Mobility Strategy as issued by the European Commission requires co-ordination of traffic management operation and development of seamless pan-European information services. These jointly aim at contributing to the transformation of the European transport system for the objectives of efficient, safe, sustainable, smart and resilient mobility.

In this context, the European Commission has been supporting the development of information exchange between the actors of road traffic management and related services for several years. In the road sector, DATEX II has been long in the making, with the European Commission being fundamental to its development through an initial contract and subsequent co-funding of the further evolution of the standard and user support ecosystem. With this standardization of DATEX II, there is a real basis for common exchange between the actors of the traffic and travel information sector both in the collaboration between traffic management organizations and their systems, as well as in coherent information provision to service providers. DATEX II supports the requirements of the stakeholder organizations involved in the road traffic and travel domain in compliance with the EU policy and legal frameworks aimed at the sector.

1 Scope

This document specifies data model structures that are applicable for traffic management applications in the urban environment. This document addresses data concepts to support the exchange of traffic management plans, rerouting and extensions of the existing DATEX II core model to better support application to the urban environment.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 16157-1:2018, *Intelligent transport systems — DATEX II data exchange specifications for traffic management and information — Part 1: Context and framework*

EN 16157-2:2019, *Intelligent transport systems — DATEX II data exchange specifications for traffic management and information — Part 2: Location referencing*

EN 16157-3:2018, *Intelligent transport systems — DATEX II data exchange specifications for traffic management and information — Part 3: Situation Publication*

EN 16157-7:2018, *Intelligent transport systems — DATEX II data exchange specifications for traffic management and information — Part 7: Common data elements*

CEN/TS 16157-11:2025, *Intelligent transport systems — DATEX II data exchange specifications for traffic management and information — Part 11: Publication of machine interpretable traffic regulations*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 16157-1:2018 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp/

— IEC Electropedia: available at https://www.electropedia.org/

3.1
traffic management plan
coordinated set of actions implemented by a number of actors such as traffic control centres, service providers, police, authorities, or road managers aiming to minimize or prevent traffic disruption and ensure efficient operation of the road network

3.2
scenario
predefined kind of road network situation with potential impact that would lead road operators to initiate traffic management

Note 1 to entry: It identifies a subset of possible traffic situations.

Note 2 to entry: It may be arbitrarily specific yet not fixed to a specific instance in time.

3.3
strategy
coherent set of one or more traffic management measures that aims to achieve some overall effect in response to a traffic management scenario

EXAMPLE Limit through traffic in an area; to favour a transport mode or a preferred route.

3.4
measure
compound ITS service or set of one or more actions that can be performed by a road operator or other ITS service provider, and which work together to achieve an overall effect on traffic

EXAMPLE Closures with alternative itinerary, restriction for HGV, access control, etc.

Note 1 to entry: It can be an isolated action, a set of actions on the same site (road section) or a set of spatially spread actions that are executed jointly. This also includes general IT actions such as information delivery on specific delivery channels. When the solution (= measure) is not predefined one can define a procedure to elaborate this solution.

3.5
action
single atomic traffic management action or ITS service that can be performed by a road operator or other ITS service provider

Note 1 to entry: It may be preventive, curative or planned, e.g.: to deliver information to road users; to spread salt on a road in case of danger of black ice; to clear a road section of obstacles.

3.6
service request

information which is exchanged among actors for workflow coordination in activating and implementing traffic management plans, such as an agreement on proposed strategies or measures, agreed measures / strategies implementation, termination and cancellation request of agreed measures and strategies

4 Symbols and abbreviations

UUID	Universally Unique Identifier
IT	Information technology
ITS	Intelligent Transport Systems
PT	Public transport
TMP	Traffic Management Plan
TRO	Traffic Regulation Order
UML	Unified Modelling Language
VMS	Variable Message Sign

5 UML notation

This document includes diagrams using the UML notation as defined in ISO/IEC 19505-1 [1].

NOTE Some introductory guides to UML 2 are provided in the Bibliography of EN 16157-1:2018.

6 «D2Namespace» UrbanExtensions

6.1 Overview

This clause specifies an additional namespace “UrbanExtensions” which provides several extensions to different elements of the DATEX II data model defined in EN 16157 parts 2, 3 and 7 focussed on the urban aspects of the data model. These extensions shall follow the Level-B modelling rules defined in EN 16157-1:2018.

The «D2Namespace» UrbanExtensions shall have the namespace-prefix “ubx”.

Figure 1 illustrates the “UrbanExtensions” namespace and its classes. This namespace shall be located inside the “Extension” namespace defined in EN 16157-7:2018.

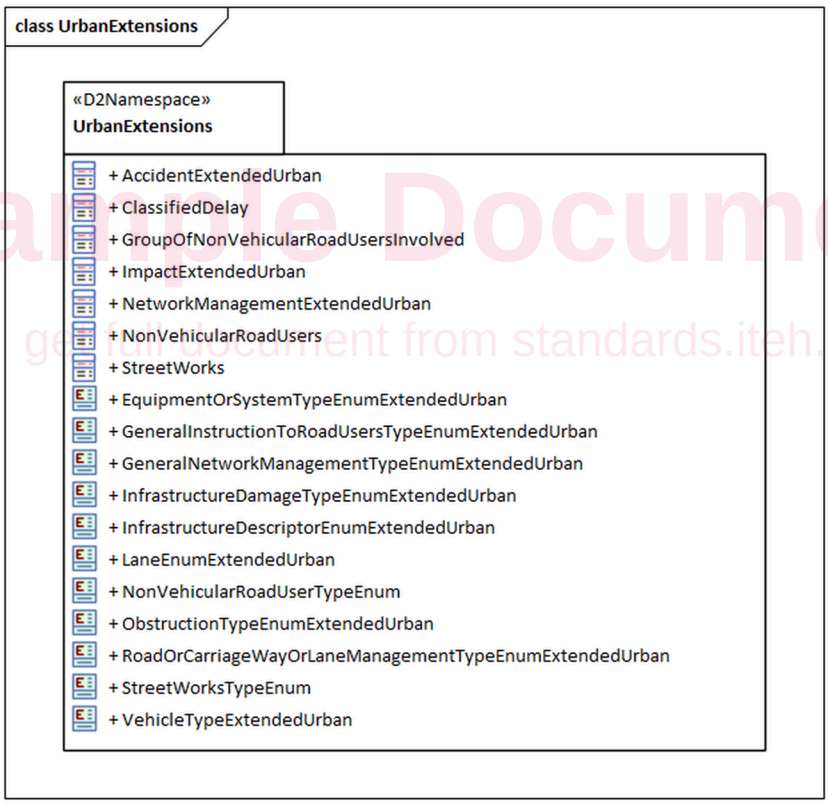

Figure 1 — The "UrbanExtensions" namespace

The details of model elements in this namespace are further defined in normative Annex A, and corresponding XML Schemas are defined in normative Annex B.

6.2 ClassifiedDelay Class

The “ClassifiedDelay” class (see Figure 2) may provide an alternative to the “Delay” class specified in EN 16157-3:2018. In contrast to this class, the “ClassifiedDelay” class shall have unbounded multiplicity and an aggregation to the “VehicleCharacteristics” class to specify delays classified for specific types of vehicles.

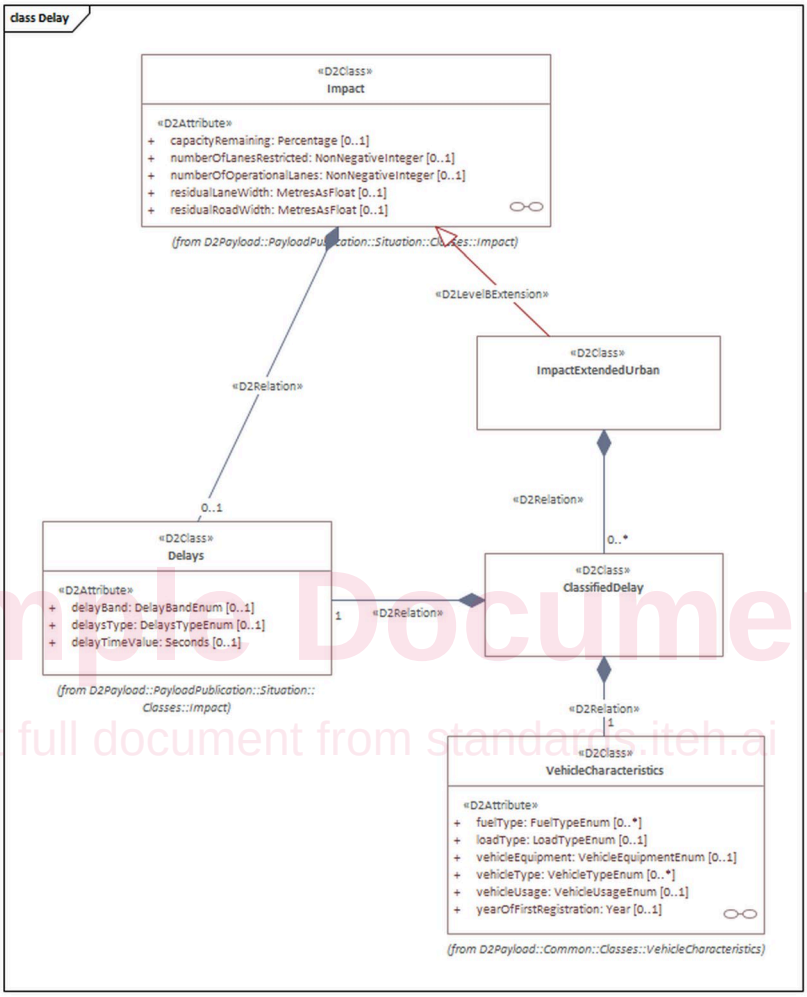

Figure 2 — Extension to Delay

6.3 EquipmentOrSystemType Class

The “EquipmentOrSystemTypeEnum” enumeration defined in EN 16157-3:2018 shall be extended by the enumeration on access control systems, parking sensors and traffic sensors (see Figure 3).

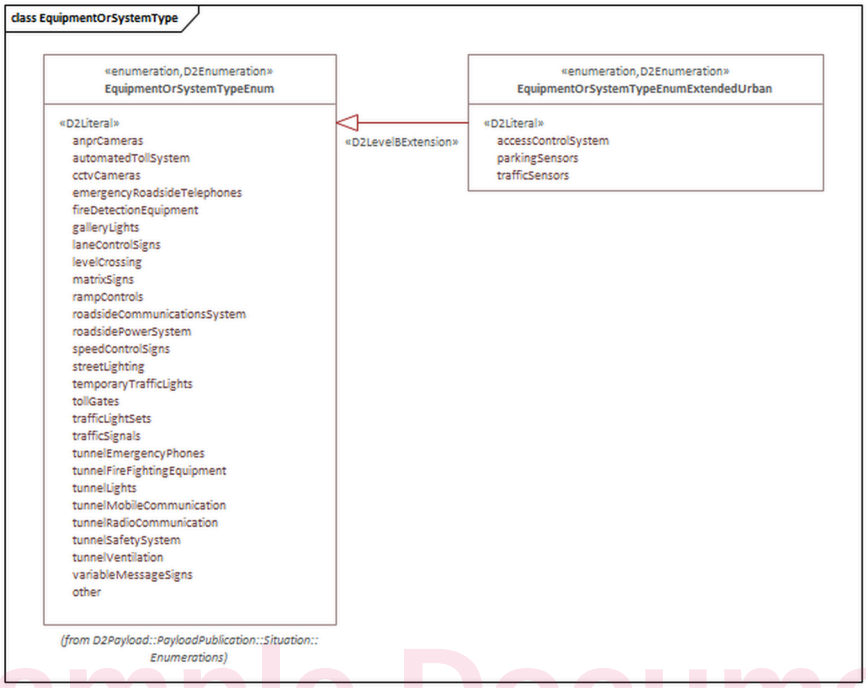

Figure 3 — Extension to equipment or system type

6.4 GeneralInstructionsToRoadUsers Class

The "GeneralInstructionsToRoadUsersTypeEnum" enumeration defined in EN 16157-3:2018 shall be extended by two further enumerations with instructions for cyclists and pedestrians (see Figure 4).

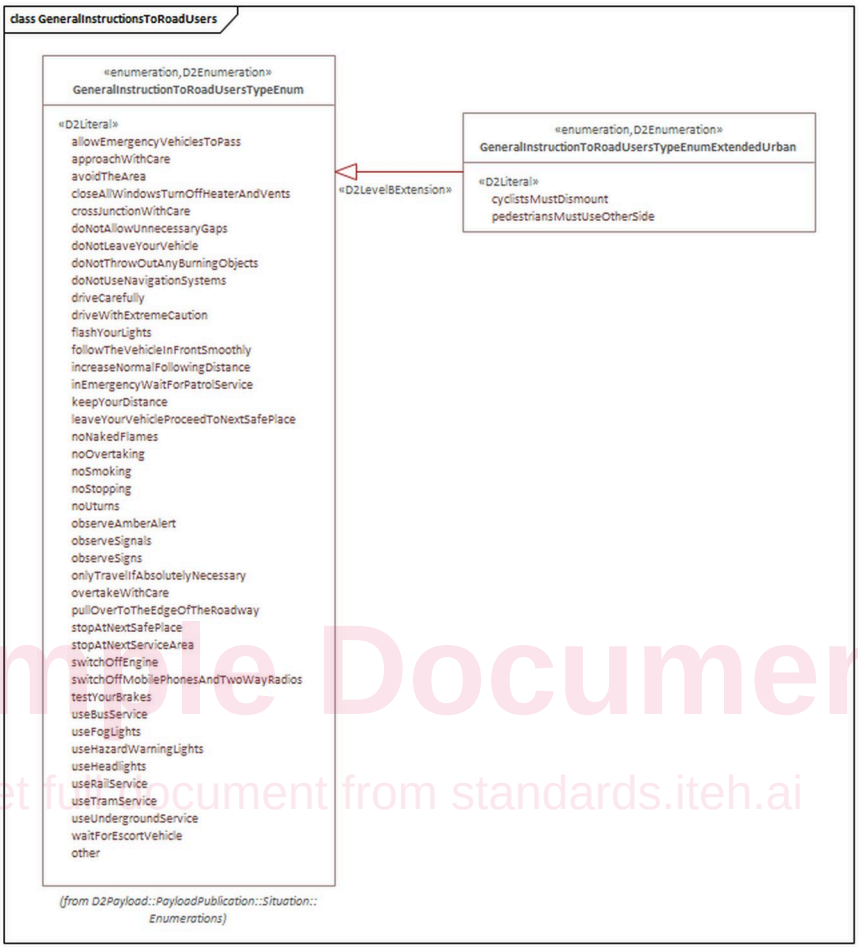

Figure 4 — Extension to General instructions to road users

6.5 GeneralNetworkManagementType Class

The "GeneralNetworkManagementTypeEnum" enumeration defined in EN 16157-3:2018 shall be extended by three further enumeration literals for general management concerning restricted areas and tolling (see Figure 5).

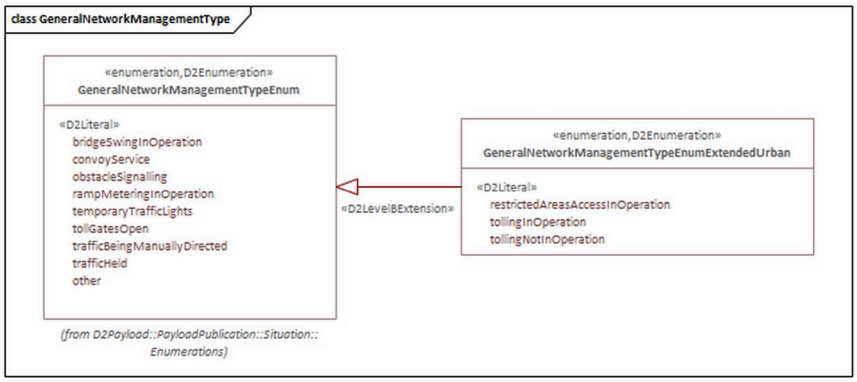

Figure 5 — Extension to general network management

6.6 InfrastructureDamageType Class

The "InfrastructureDamageTypeEnum" enumeration defined in EN 16157-3:2018 shall be extended by a literal specifying a collapsed road surface (see Figure 6).

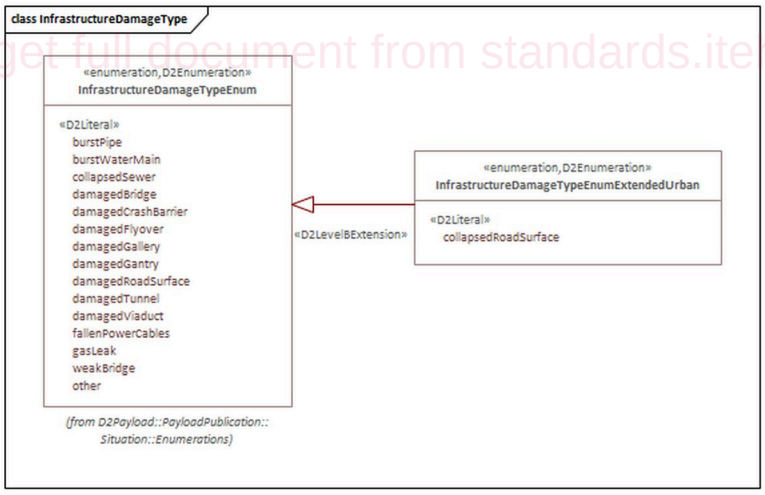

Figure 6 — Extension to infrastructure damage

6.7 InfrastructureDescriptor Class

The “InfrastructureDescriptorEnum” enumeration defined in EN 16157-2:2019 shall be extended by several literals specifying certain urban types of underpasses, bridges and crossings (see Figure 7).

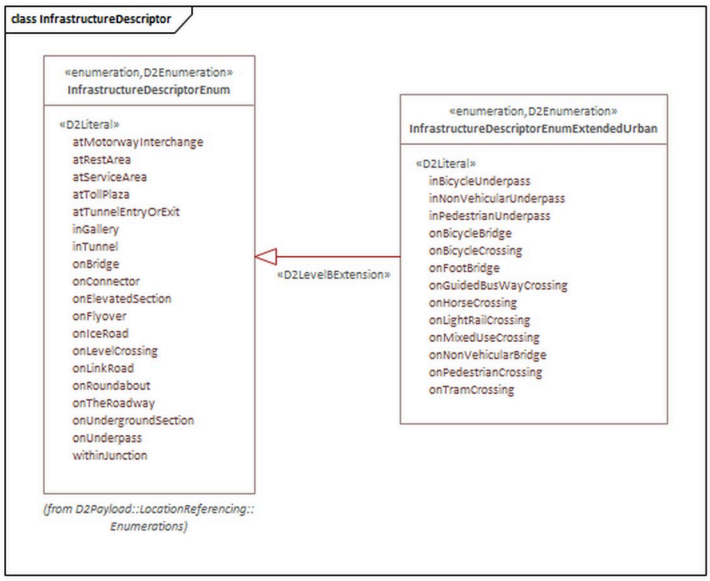

Figure 7 — Extension to infrastructure descriptor

6.8 LaneEnum Class

The “LaneEnum” enumeration defined in EN 16157-2 shall be extended by several literals, which are generally used in the urban environment (see Figure 8).

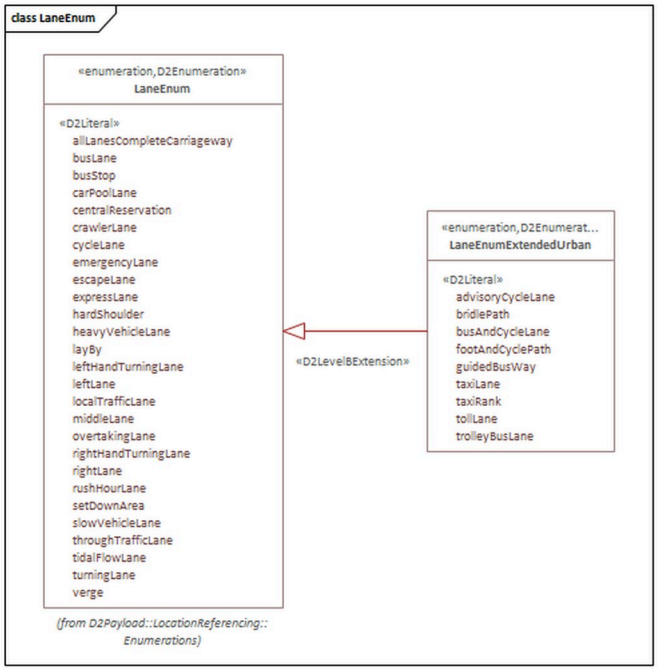

Figure 8 — Extension to lanes