



Vehicle dimensions

This ReVeAL building block fact sheet is one of a series of 33, each describing one Urban Vehicle Access Regulation (UVAR) building block and providing an example of its use in a city. The ReVeAL building blocks can be combined with one another to create a structured UVAR package for a city. Try out the ReVeAL online tool, www.AccessRegulationsForYourCity.eu, to receive suggestions of appropriate UVAR building blocks for your city as well as guidance in their implementation.

The EU-funded research and innovation project, CIVITAS ReVeAL, aims to add Urban Vehicle Access Regulations and associated policies and technologies to the standard range of urban mobility measures in cities across Europe. The project mission is to enable cities to optimise urban space and transport networks use to improve urban accessibility, sustainability, and liveability.

For more information, please visit: www.civitas-reveal.eu.

Spatial Interventions

Spatial interventions are where the road layout has been altered to favor more sustainable mobility and prevent vehicles entering. Examples of these are removing road and parking space taken for vehicles and using the space for sustainable mobility or amenities (bus lanes, logistics hubs, parklets, restaurants and more)

Speed reduction

Traffic filter:

- Recirculation of traffic
- Road block
- Capacity restraint

Reallocating parking space:

- Parklet
- Drop-off zone shared mobility
- Logistics bay (mini-hub)
- Kiss & Ride (K&R)

Reallocating road space for pedestrians:

- Widen pavement
- Pedestrian priority street or zone

Reallocating road space for cycling:

- Cycle lane
- Cycling street

Reallocating road space for public transport:

- Bus or tram priority lane

Pricing Aspects

Pricing aspects are when the entry to an area or to the entirety of the city is given a price tag to encourage more sustainable transport. Pricing aspects also include the (differential) levels of penalty fees to encourage (and enforce) compliance.

Road charges / tolls:

- Charge applied to a perimeter or an area (congestion charge)
- Charge applied to specific points
- Distance-based charge
- Time-based charge
- Permit charge
- Charge based on emission standards (pollution charge)

Parking charge:

- Dynamic price (real time)
- Fixed price
- Charge based on emission standards (pollution charge)
- Workplace levy
- From on-street to off-street parking

Regulatory Measures

Regulatory measures are those where there is a legal instrument that states who can and cannot enter an area. They could often also be called "bans" and include Zero Emission Zones, Low Emission Zones, and Limited Traffic Zones.

Regulation by emissions:

- Euro standard
- Zero-emission vehicles

Regulation by vehicle type and dimensions:

- Vehicle type
- Dimensions

Regulation by trip purpose:

- Delivery and logistics
- Through traffic ban

Regulation by permit:

- Permit to travel
- Parking permit
- Planning permit conditions



Vehicle dimensions

Definition of the building block

Vehicle access is regulated by the physical vehicle attributes, such as weight, length, width, number of axles. The regulation (banning) of vehicles of all dimensions would result in a pedestrian zone.

Timing, phasing, scaling and replication

This building block has no-timing related issues requiring specific attention.

Time windows

In combination with other regulatory building blocks, options include:

- Allowing vehicle access at particular times of day
- Allowing vehicle access on given days of the week (e.g., weekends)
- Allowing seasonal vehicle access
- Having no time differentiated vehicle access
- Triggered access restrictions (e.g., by pollution levels)

When used alone, options include:

- Allowing vehicle access at particular times of day
- Allowing vehicle access on given days of the week (e.g., weekends)
- Having no time differentiated vehicle access

Enforcement options

- Cameras with automated number plate recognition (ANPR)
- Manual enforcement through visual inspection
- Physical barriers
- Road signs

Gender and equity

Consider putting in place exemptions for specially adapted vehicles, such as those for people with disabilities.

Future considerations

In a future with dynamic signs (and related apps), C-ITS, IMI messaging and connected vehicles, it could become easier to direct the information on vehicle type and dimension regulations directly to the specific user. With the upcoming requirement for cities to provide digitised UVAR data, information should also increasingly be available in navigation tools, helping both vehicle drivers and owners.

Further guidance

- Signage to communicate UVARs
- Exemptions
- Enforcement options
- Managing permits (and exemptions)
- Camera enforcement and privacy issues

Vehicle dimensions

Complementary measures

Exemptions

The types of exemptions will be different depending on the scheme type, but some examples are:

- Key exemptions for police, fire department, waste collection, etc.
- User needs exemptions, e.g. for people with disabilities with forced car dependency, taxis, classic car owners, residents, deliveries
- Exemptions for adapted vehicles (e.g., retrofitted or converted electric or hybrid vehicles)
- Limited numbers of purchased exemptions for entry (e.g., per day/month/year) to a specific zone
- Specified maximum amount of kilometre “credits” allocated to individuals or businesses

Other building blocks put in place

Pricing Aspects

Road charges / tolls:

- Charge applied to a perimeter or an area (congestion charge)
- Charge applied to specific points
- Distance-based charge
- Time-based charge
- Permit charge
- Charge based on emission standards (pollution charge)

Parking charge:

- Dynamic price (real time)
- Fixed price
- Charge based on emission standards (pollution charge)

Regulatory Measures

Regulation by emissions:
Zero-emission vehicles

Regulation by vehicle type and dimensions: Vehicle type

Regulation by trip purpose:
Through traffic ban

Regulation by permit: Permit to travel



Regulation by dimensions is active in Milan Area C. In the picture an access point to both Area B and Area C. Bicocca district in Milan (C40 Knowledge, 2019)

Regulation by dimensions is often used in combination with other regulatory measures or with road charges/tolls. When used alone, often simply a road sign is used rather than other enforcement methods.

Vehicle dimensions

*Example: Area C, Milan, Italy***Description**

In Milan, there is a regulation by dimension for vehicles longer than 7.5 metres entering the inner-city area delimited by the ring road (called Area C). The regulation includes a ban on access and circulation for vehicles and combination of vehicle + trailers exceeding this length and that do not comply with EURO emissions standards. Regulations by type, dimensions and regulations by emission are connected, and they have been becoming progressively stricter from 2019 to 2030.

Enforcement methods

Automated number plate recognition (ANPR)

Time windows

- In effect: From Monday to Friday, 7.30 to 19.30
- Not in effect on public and bank holidays
- Loading and unloading is allowed all hours except 8.00 - 10.00.

Phasing and upscaling

- 2008. Pollution charge ("Ecopass") in the inner city centre (Cerchia dei Bastioni)
- 2011. Public referendum for Area C and pilot project
- 2013. Area C was made permanent with the same geographic extent as the pilot
- until 30 September 2022. Exemption test for electric vehicles or combinations of vehicle + trailers longer than 7.5 meters.

Other building blocks put in place**Pricing Aspects**

Road charges / tolls:

- Charge applied to a perimeter or an area (congestion charge)
- Permit charge

Parking charge:

- Fixed price
- From on-street to off-street parking

Regulatory Measures

Regulation by emission: EURO standard

Regulation by vehicle type and dimensions: Vehicle type

Regulation by trip purpose:

- Delivery and logistics
- Through traffic ban

Regulation by permit: Permit to travel

Complementary measures

Exemptions

To be exempted from the access ban, the number plate must be communicated by midnight of the day before access, using an online procedure and a form. If applicable, the access ticket has to be paid. Exempt from access limitation:

- Public utility services
- Accessing construction sites located within the LTZ
- Money transport
- Supply of heating
- Purging of wells
- Postal services
- Roadside assistance
- Authorized operators
- Exemption test for electric vehicles or vehicle combinations longer than 7.5 meters.
- Exemption from the access ban in the time slot between 08.00 and 10.00.

Exempt from access limitation (no registration required): collective transport

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