

II. TERMINOLOGY

To facilitate international communication and comparison a minimal set of terms is desirable with terminology chosen such that the meaning is intuitively obvious. Such a terminology is proposed and defined in Table 2.1 and figs 2.1-2.3 below. Figures 2.4 and 2.5 show how the terminology applies where the tunnel cross section above the carriageway level differs markedly as for approximately circular and rectangular cross sections.

The Working Group decided to divide the tunnel plan area under 2 headings:

1. Carriageway, comprising the area inside the inner edges of the outermost traffic lane markings;
2. Off-carriageway, comprising those areas in plan outside the carriageway, including edge lane markings, clearances, emergency lanes, sidewalks and safety barriers.

The distinction is justified in that there appears to be general agreement about the use and dimensions of the carriageway while the dimensions of and requirements for elements of the off-carriageway differ greatly between countries.

Since in countries where traffic drives on the right, the emergency lane is on the right hand side and in countries where driving is on the left it is on the left hand side, use is made of the terminology “adjacent to the driving lane” where areas are meant to the right hand side in right driving countries or to the left hand side in left driving countries and “adjacent to the overtaking lane” for areas on the other side.

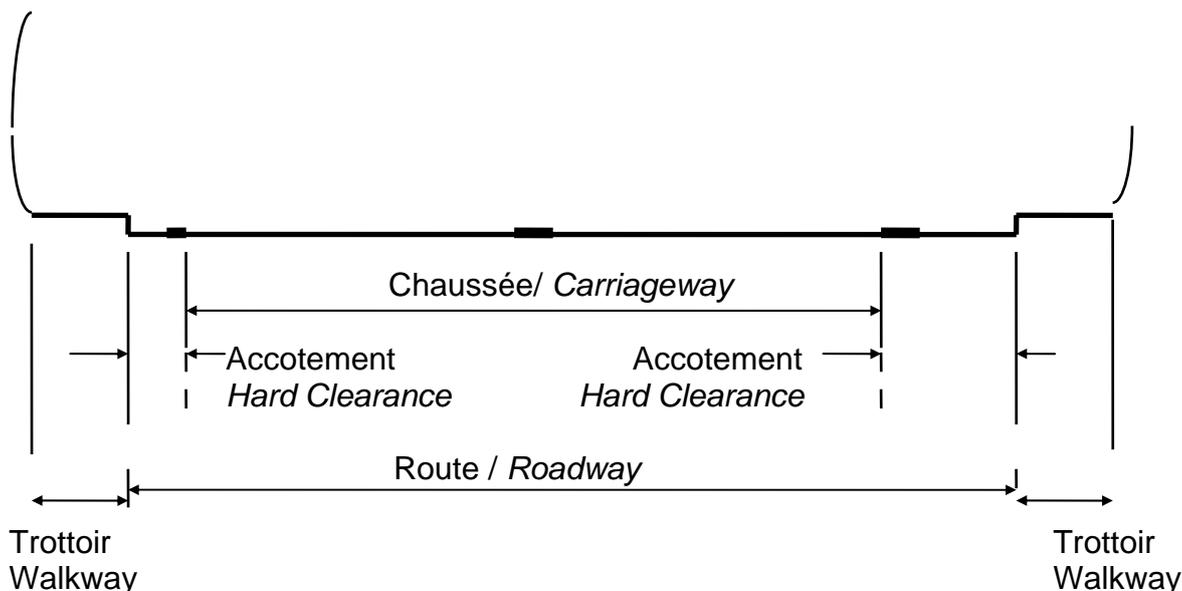


Figure 2-2: Configuration secondaire de la plate-forme et configuration de la route / Secondary partition of the platform and partition of roadway

Table 2-1: Terminology and Definitions as used in this report in order of appearance

Term	Definition
Road Tunnel	An enclosed road structure with a length of at least 5 times the width of one tube, intended for use by authorised traffic on the carriageway
Motorway	Generic name for expressway, highway, freeway, i.e. high performance dual carriageways where slow moving vehicles, pedestrians and cyclists are forbidden
Design Speed	Theoretical speed that is used as a parameter to design the elements of a road The actual or planned speed limit can be different
Reference Speed	Planned speed limit
Free Flow Speed	Speed of traffic, averaged over all vehicles present on the length of a considered section of the road
Paved Area (Platform) (= Roadway + Walkways)	Area of paved construction designed to support vehicles safely
Roadway (= Carriageway + Hard Clearances)	Area between kerbs of walkways or between guard rails (or safety barriers) used by traffic in normal operation and including accidental crossing of edge lane markings
Carriageway	Area of road, traversed by traffic in normal operation, extends between inner edges of edge lane markings ¹
Traffic Lane	Area of road for a row of vehicles, extends between edge lane marking and the centre of traffic lane marking ²
Driving Lane or Slow Lane	Traffic lane on the right side of the carriageway in right driving countries; on the left side in left driving countries
Overtaking Lane or Fast Lane	Traffic lane on the left side of the carriageway in right driving countries; on the right side in left driving countries
Traffic Lane Marking	Marking showing boundary between traffic lanes
Edge Lane Marking	Marking delineating the carriageway extent
Off-carriageway	Area between inner edge of edge lane marking and the tunnel wall, including hard clearance and walkway and/or barrier and/or guard rails
Hard Clearance	Area between inner edges of edge lane markings and kerbs or guard rails
Object Distance	Minimum measure of hard clearance as margin for safety and comfort
Redress Lane	Part of the hard clearance, measured from the outer side of edge lane marking, used to correct course in case of accidental crossing of edge lane marking
Emergency Lane	Area of hard clearance to park vehicles in case of emergency
Walkway, (U.S.: Sidewalk)	Area for maintenance staff and motorists to walk following incident or emergency
Kerb (U.S.: curb)	Construction element forming the edge of walkway
Roll-over kerb	Low height kerb which is not crossed by traffic in normal operation, but may be crossed by vehicles following incident or emergency
Pedestrian Safety Margin	Margin (Zone) on the walkway between kerb and pedestrian lane
Pedestrian Lane	Part of the walkway meant for safe walking
Guard Rail	Flexible or frangible beam type construction supported on poles to prevent vehicles colliding with the tunnel side-wall
Safety Barrier	Massive construction to guide vehicles colliding with the tunnel side-wall safely back in the direction of traffic
Structure Gauge	Spatial envelope within which no fixed structure, fitting or fixture, is allowed
Minimum Headroom	Design height of heavy goods vehicle, increased with cinematic envelope to cope with bumping movements etc.
Maintained Headroom (U.S.: Clear Height) (Minimum Headroom + Comfort Margin)	Headroom which shall be preserved at all times to ensure passage of authorised traffic.
Construction Headroom	Height between top of pavement and roof, including maintained headroom, construction allowances and equipment clearances
Walkway Headroom	Headroom to be maintained above walkways

¹ In some countries half of the width of the edge lane markings are comprised in the definition of carriageway. In this report the definition of Table 2-1 is used.

² In some countries other definitions are used. In this report the definition of Table 2-1 is used.

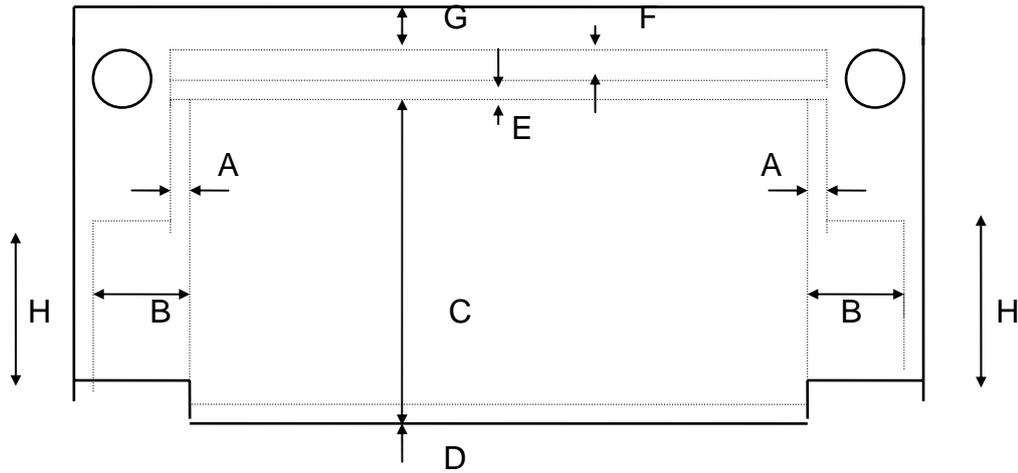


Figure 2-4: Dégagements et marges des profils rectangulaires / Clearances and Allowances for Box Profiles

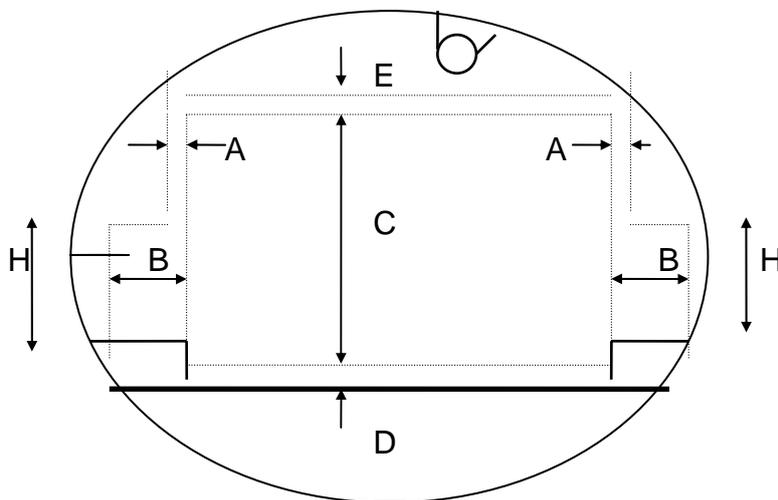


Figure 2-5: Clearances and Allowances for Arch Profiles

In figures 2.4 and 2.5 the capitals indicate:

- A. Lateral Clearance between the edges of the roadway and fixtures such as detection equipment, fans, signs etc.
- B. Walkway
- C. Maintained Headroom
- D. Additional Allowance to provide for road resurfacing
- E. Vertical Clearance between the Maintained Headroom and fixtures such as detection equipment, fans, signs etc.
- F. Allowance due to construction of the roof
- G. Vertical Clearance for fixtures such as detection equipment, fans, signs etc.
- H. Walkway Headroom