

RECOMMENDATIONS: WHAT MAKES PEDESTRIAN CROSSINGS SAFER

Planners and administrations

- Pedestrian mobility should always be the object of specific planning and projecting activities aiming at finding out adequate solutions to safety needs of pedestrians, also taking into account all the interactions with the other motorized and non motorized mobility components. Therefore, location and layout of pedestrian crossings should be considered as key elements of a comprehensive system of pedestrian mobility within the framework of the entire urban mobility planning.
- Good visibility at all pedestrian crossings should be considered as one of the most important design guideline to be met. Pedestrian crossings should be planned and designed avoiding the presence of obstructions limiting the visibility between pedestrian and drivers. Where it is impossible to forbid vehicles to park close to pedestrian crossings (even by means of special zigzag markings), the provision of curb extensions placed in advance of on-street parking, should be encouraged.
- Advance stop lines marked at a distance of 6 - 15 metres before reaching pedestrian crossing, not only make it easier for vehicles to stop before approaching the crossings but also improve visibility both for pedestrians and for vehicles on all traffic lanes.
- At intersections, it is necessary to avoid design solutions limiting visibility both to pedestrians and turning vehicles, removing obstacles from street angles.
- At longer crossings, refuge islands should be installed to avoid potentially dangerous situations and to increase pedestrian safety at pedestrian crossings.
- Highly reflective road signs should be installed and additional safety measures, such as devices especially designed for improving nighttime visibility, should be adopted. Additional road markings, reflecting devices, traffic signals (flashing lights, urban and road lighting, traffic lights mounted on poles over the roadway, etc.), are essential elements for increasing pedestrian safety.
- High visibility standard at night-time is of highest importance and, where necessary, it is essential to increase intensity of road lights.
- Pedestrian crossings should be systematically maintained in good conditions, meeting the required high standards of safety. In particular, road surfaces approaching to pedestrian crossings should always be maintained in perfect conditions in order to provide always a maximum grip (rough surfaces are to preferred to materials like stones, with a lower level of grip, for a better performance in case of a sudden braking).
- Pedestrian crossings should be the theme of regular safety reviews, in order to pinpoint problems and decide the measures to be designed for the achievement of adequate safety levels.

- At signalized pedestrian crossings, the different phases should be timed so as to allow pedestrians to safely cross the road (see separate text). At crossings with non-exclusive pedestrian signal phases, additional flashing lights could better advise drivers that there are pedestrians attempting to cross.
- Accessibility for disabled pedestrians (wheelchair users) at road crossings should be provided by installing ground level curbs, or at least ramps with a maximum gradient not exceeding 8%.
- Tactile paths, audible signals or tactile devices mounted on traffic lights, together with curb ramps at pavement level, separated from sidewalk/steps, should be installed in order to assist visually impaired and partially-sighted pedestrians to safely cross the road. The installation of low metal bollards to stop vehicle from parking behind the crossings is very dangerous for these people and should be avoided.
- Additional road markings indicating approaching vehicles should be installed (such as the "Look right" signal) in order to enhance safety for hearing-impaired pedestrians (and also for the other road users).
- Special care should be given to solving conflicts with other road users, in particular with cyclists and trams, avoiding potentially dangerous solutions for pedestrians waiting to cross the street (tramlines running too close to sidewalks, bicycle paths in conflict with ground level curbs provided for disabled pedestrians).
- Some technological solutions could avoid accidents between vehicles and pedestrians. It is to be hoped that such devices will be widespread in the future (such as automatic sensors detecting the presence of pedestrians approaching the crossing and providing oncoming drivers with advanced visual warning of the danger). Traffic lights for pedestrians should more often be equipped with countdown devices enabling the users to take their own decision related to the safe crossing/clearing of the crossing, consistently with their own physical performances (walking speed). The introduction of LED based traffic lights should be encouraged all over Europe, due also to their better visibility performances especially at night.

Politicians and legislators

- It is urgent to introduce a set of behavioural rules at European level. The great differences in the regulations governing the pedestrian/driver relationship are not only very confusing, but they are also the cause of serious dangers for tourists and foreign visitors. A European citizen, of British nationality, for example, knows he has the right of way from the moment he is standing on a sidewalk, waiting to cross. The same citizen travelling in Italy, would be confronted with a real danger since drivers are obliged to yield the right of way only to pedestrians who are already walking on the crosswalk.
- Another difference requiring an in-depth examination is the transition phase of the traffic lights from green to red. Actually, there are too many differences in this field and, again a greater uniformity should be required in order to avoid a serious danger for tourists and foreign visitors.

In any case, as it is difficult to find rapidly a solution both efficient and safe, pedestrians should always be advised through lights and colours consistent with the desired behaviour (walk, don't walk, don't start crossing or clear the intersection).

- Also road surface markings used at European pedestrian crossings should be carefully examined by national and the European Authorities. Again, too many differences among the European countries: in Germany zebra crossings are not used at crossings equipped with traffic lights (a solution forcing pedestrians to pay more attention when crossing but reducing driver visibility). In Spain zebra stripes are removed at signalized pedestrian crossings for enhancing safety for two-wheelers, assuring a better grip on the road surface. In Switzerland, orange painted stripes are installed, providing a good daylight visibility but a very poor visibility at night-time and in case of bad weather.
- The use of coloured road paving, by local administration, should be discouraged as it may generate confusion and it is even less efficient and visible compared to the traditional white on a black asphalt.