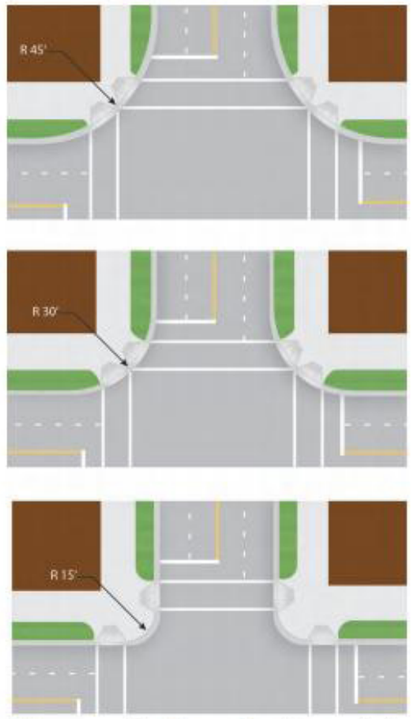
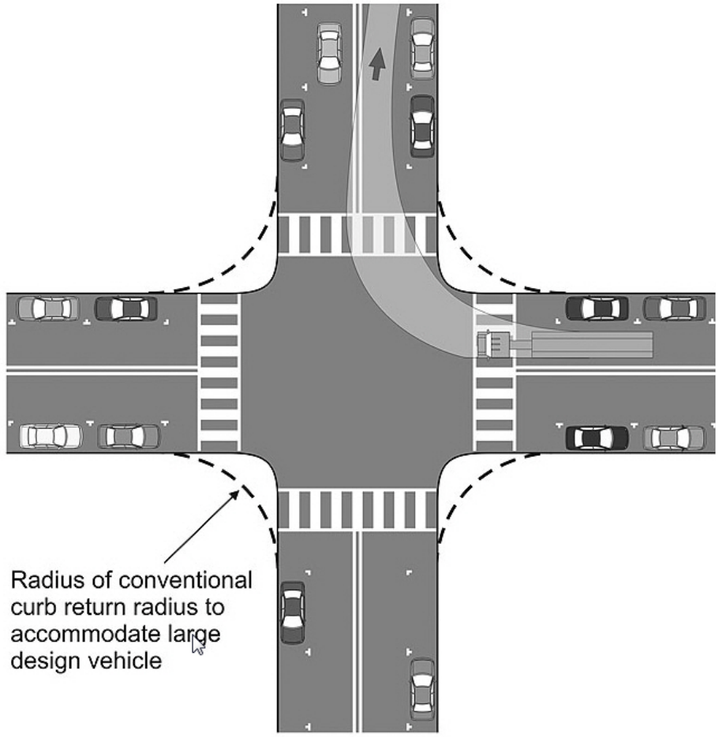


Tighter corner radii reduce crossing distance and slow turning traffic (Credit: Michele Weisbart)



Reduced curb radii

Definition

Reduction in the length of the radii defining the curved connection of curbs in the corners formed by the intersection of two streets or other vehicular ways. It is important to note that the curb radius can often be reduced without affecting the effective turn radius.

Objective

To shorten crossing distances and reduce vehicle speeds during turning movements.

Advantage

Reduces speed of turning vehicles, which may also reduce crashes and crash severity.

Shortens crossing distances, which benefits vehicles with a shorter cycle length at signalized intersections.

Increases visibility of pedestrians and improves their view of oncoming traffic.

Requires less ROW.

Challenge

May adversely affect the turning movements of large vehicles. (This issue can be mitigated by the use of mountable apron/curb area. For an example of this type of adaptation, see 'pillow' type curb extension discussed at http://seattletransitblog.com/2013/01/31/a-pillow-of-cement/.)

Images (clockwise from main image):

Diagram of reduced curb radii.
Source: Institute of Transportation Engineers (ITE).

Additional examples:
Sources: Dan Burden, pedbikeimages.org; Steven Vance, Flickr; Michael Hintz; Chicago Metropolitan Agency for Planning; Michele Weisbart, Living Streets Manual.

Resources

ITE Designing Walkable Urban Thoroughfares: A Context Sensitive Approach http://www.ite.org/css/ (Chapter 10).

FHWA Pedestrian Safety Improvements — Countermeasures (Curb Radii) http://safety.fhwa.dot.gov/saferjourney/library/countermeasures/09.htm.

NACTO Urban Street Design Guide – Turn Radii http://nacto.org/usdg/corner-radii/.

BIKESAFE: Bicycle Countermeasure Selection System http://www.bicyclinginfo.org/bikesafe/countermeasure.cfm?CM_NUM=16.

City of San Francisco Better Streets Plan http://www.sf-planning.org/ftp/BetterStreets/docs/Draft_BSP_5_Street_Designs.pdf (Chapter 5.2).

FHWA Designing Sidewalks and Trails for Access: Part II Best Practices Design Guide http://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/sidewalk2/sidewalks208.cfm (Chapter 8.3).

Wisconsin Guide to Pedestrian Best Practices: Chapter 5—Designing Pedestrian Facilities http://www.dot.wisconsin.gov/projects/state/docs/ped-guide-chap5.pdf (Section 5.2.1.4).

Guide for the Planning, Design, and Operation of Pedestrian Facilities, 1st Edition, AASHTO, 2004 https://bookstore.transportation.org/item_details.aspx?id=119 (Chapter 3.3.1).

Signalized Intersections: Informational Guide http://www.fhwa.dot.gov/publications/research/safety/04091/03.cfm (Sections 3.5 and 3.51).