

Designing streets for people

Good street design is a key element of smart development. Streets are considered to be the place where land use and transportation connect. The major components of street design are

- Width of the street
- Pattern of the street network
- Physical elements along the streetscape.

In the past, the major concern of engineers who designed streets were speed and capacity – to move as many cars as fast as possible. Today, more consideration is given to other concerns such as the livability of neighborhoods in the areas that the streets pass through, and the importance of serving different street users, including non-motorized users such as pedestrians, bicyclists, rollerbladers, and skateboarders

In his pioneering publication *Livable Streets*, Don Appleyard called streets the “most important part of our urban environment.” Appleyard goes on to say, “We should raise our sights for the moment. What could a residential street—a street on which our children are brought up, adults live, and old people spend their last days—what could such a street be like?”¹

Street Width

Narrow streets make motorists drive slower and are thus safer for all street users. However, the typical street standards produced by federal and state governments require very wide

streets for new subdivisions. Instead of following outdated federal and state standards, a town can require street widths that are consistent with the needs and desires of its residents. Rick Chellman, a New Hampshire traffic engineer argues that

“...some of the best-loved streets and those with the highest values (both for economics and livability) are streets that do not conform to current subdivision criteria.”²

Street Network

An irregular cul-de-sac street pattern has very long blocks and lots of dead ends. This makes it difficult to get where you want to go. With so few route options, all of the traffic is forced onto a few arterial roads that can get really congested. Having only a few arterial roads means they must be designed to be very wide and support heavy traffic. This makes them very unpleasant for pedestrians, bicyclists, and motorists alike.



Narrow, shaded streets (above), rather than wide streets (below), can improve livability.



A pattern of streets with lots of connections and short blocks, makes it easier to move around - people have more than one way to reach a destination. Street design that considers this concept can help reduce traffic congestion. It can also make it possible for children to walk or bicycle to school.

For more information...

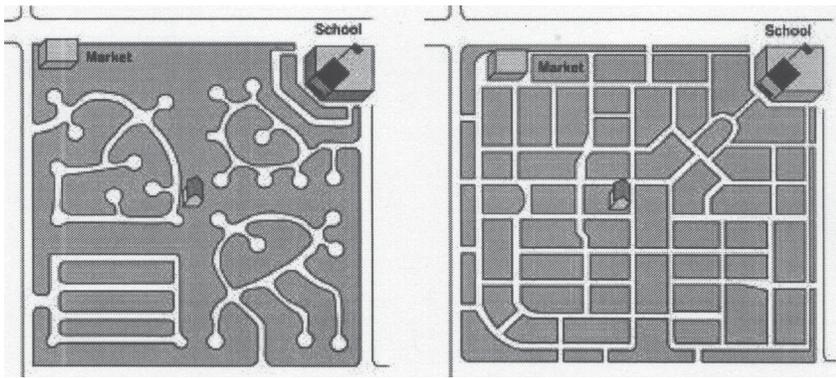
Neighborhood Street Design Guidelines; An Oregon Guide for Reducing Street Widths. Available on-line at www.lcd.state.or.us/tgm/publications.htm or call (503) 373-0050 ext. 230

Creating Livable Streets: Street Guidelines for 2040. Call Metro at (503) 797-1839 to order.

Great Streets website:
www.greatstreets.org

ODOT Bicycle and Pedestrian Plan. Available on-line at www.odot.state.or.us/techserv/bikewalk/planimag/toc-imag.htm or call Michael Ronkin, ODOT (503) 986-3555

Traffic Calming: State of the Practice. Available on-line at <http://www.ite.org/traffic/tcstate.htm#tcsop> or call Institute of Transportation Engineers at (202) 289-0222



**Typical Subdivision
Cul-de-sacs**

**Well-connected
Street Network**

Connected street networks (right) provide multiple ways for all vehicles to access homes, shops, and other destinations. In addition, a connected street system encourages slow, cautious driving.

Streetscape Features

On-street parking can enhance the pedestrian environment. On-street parking:

- Buffers pedestrians from traffic
- Decreases traffic speed since it narrows the roadway.

Sidewalks and bicycle paths are other important elements of street design. Their presence allows for pedestrians and bicyclists to have their own pace along a street. The wider the sidewalks, the more enjoyable they are to walk on.

Sometimes a choice may need to be made between a wide sidewalk and a bicycle lane. The decision would depend on the type of location. In a main street area, a wide sidewalk is preferable, since lots of pedestrians will be using it.

“A shared auto/bike lane is perfectly acceptable in a main street environment, where travel speeds are slow, and automobiles and bikes can safely share a lane. Sidewalks should ALWAYS be the starting point for allocating right-of-way in a main street redesign.”³

Along these wide sidewalks, many streetscape features can be used to improve the pedestrian environment.

These include:

- Benches
- Pedestrian scaled lighting
- Trash cans
- Bike racks
- Planters
- Street trees

Additionally, buildings that face the street provide easy access for pedestrians, bicyclists, transit users, and those who park on the street.



Curb extensions (above) reduce crossing distances for pedestrians and can calm traffic.

Traffic Calming

Traffic calming is a term to describe physical devices used on a roadway to reduce automobile speeds and volumes. Some common examples include the following:

- Speed bumps and humps
- Curb extensions
- Medians
- Roundabouts
- Raised intersections
- Textured pavements
- Landscaping along the street (i.e. street trees, planters)

Traffic calming can lead to:

- Improved safety for pedestrians (especially children), bicyclists, and auto users;
- Reduced cut-through traffic, truck traffic, excessive speeding, noise, and vibration;
- Reduced crime; and
- Revitalized historic downtown main streets.

Notes

¹ Appleyard, Donald, *Livable Streets*, University of California Press, 1981.

² Chellman, Rick, “Street Design: Design Intent, History, and Emerging Concepts”, *Land Development*, Spring-Summer 1995.

³ “Main Street Troutdale,” www.greatstreets.org/MainStreets/MainStTroutdale.html

Examples from Oregon



Sisters, Oregon

Curb Extensions

This curb extension in the City of Sisters was part of a downtown renewal project in the 1980s. This design element is used to define parallel parking bays and calm traffic by forming squeeze points at intersections.

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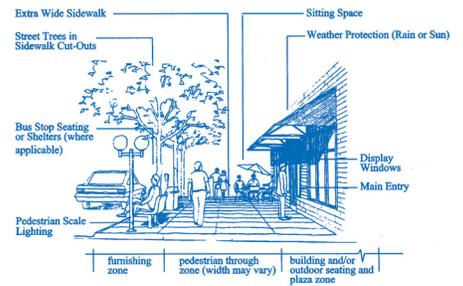
Hood River, Oregon

Streetscape Improvements

The City of Hood River established an Urban Renewal Agency to finance improvements to the downtown infrastructure. In 1997-1998 the City added bike racks, vintage streetlights and street trees, as well as burying its overhead utility lines.

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Independence, Oregon

Streetscape Improvements

In 2001, the City of Independence broke ground on an \$1.3 million project that will completely rebuild their main street, with expanded sidewalks, street trees, new street furniture, and lighting. The City was able to pay for the project with state downtown redevelopment funds, lottery funds, arts grants, and federal Transportation Enhancement funds.

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Redmond, Oregon

Narrow Streets

In 1995, a developer in Redmond, Oregon proposed a new subdivision with narrow, pedestrian-friendly, tree-lined streets. These streets were not allowed under the City's development code. A public design workshop led to increased interest in this type of street. The City then applied for, and received, a TGM grant to help them change their development codes to allow for 28 foot streets.

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Next steps

- Apply for a TGM grant to create a streetscape improvement plan for your downtown or re-write your code.
- Change your local development codes to allow for narrow streets.
- Hold a visioning session with your City Council to develop ideas for improving street design.
- Hold a meeting with stakeholders, such as public works, fire department, waste/recycling department, developers, engineers, planners, neighborhood groups, and public officials, to develop new guidelines for streets.

Developed by graduate students in the School of Urban Studies and Planning, College of Urban and Public Affairs, Portland State University, June 2003

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