Street Design Manual

New York City
Department of Transportation

2009

www.nyc.gov/dot

Lower East Side, Manhattan (1910)

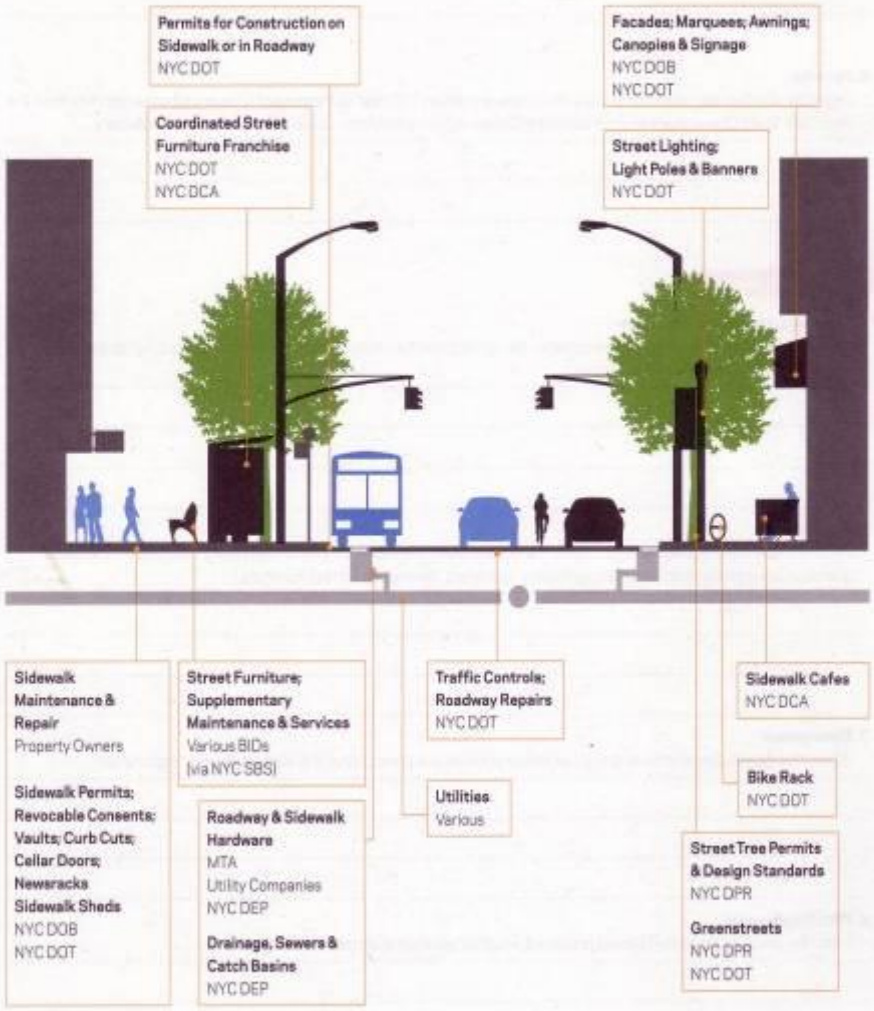
CATION
TE
AS
EUTIC
TY, INC.
IGHWAY

Traffic Signal
Untinted Concrete (Residential District)
Raised Crossing
Median Barrier with Bike Channel
Bus Bulb with Bus Shelter
ONLY BUS
2813
Pedestrian Ramps
Curb Extension with Bicycle Parking
Furnishing Zone with Square Pavers
Bike Lane

Agency Roles on the City's Streets

This diagram summarizes the roles and responsibilities of city agencies and other entities related to the most visible aspects of the City's streets. It does not include all agencies with street-related roles and is not intended to be a literal representation of appropriate street furniture locations.

An expanded listing follows.



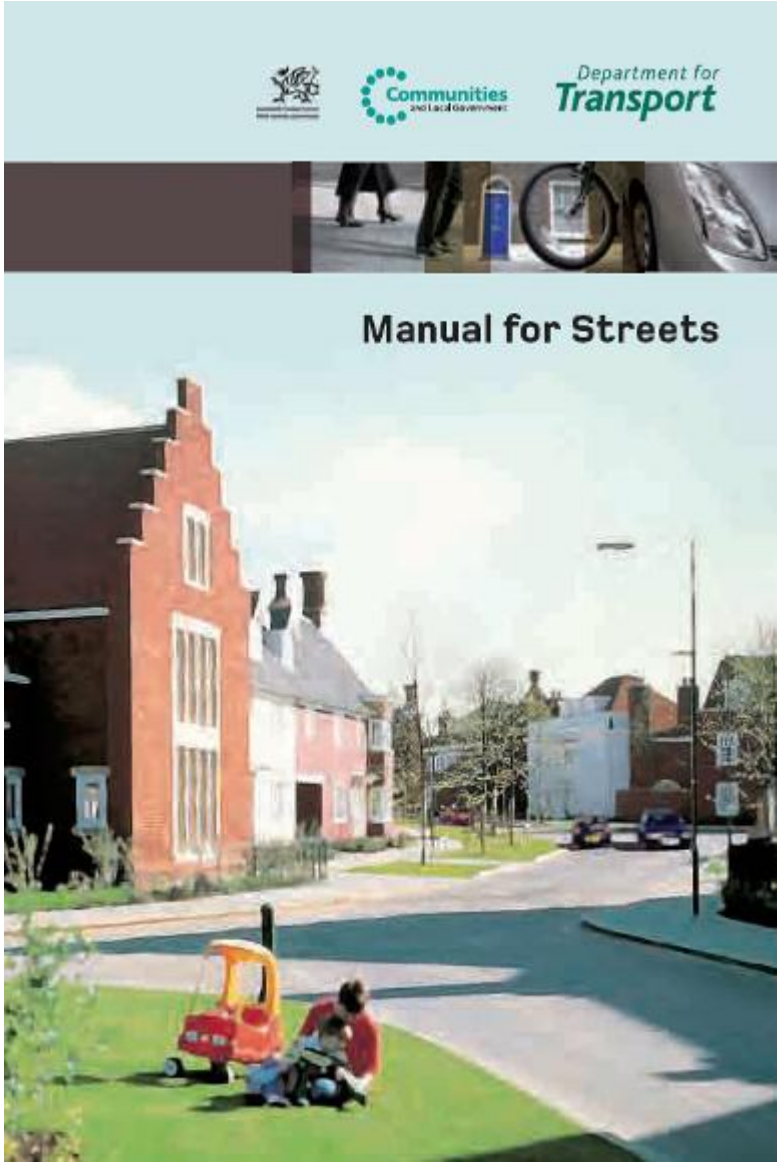
Greenstreet with stormwater-capturing design: Amsterdam Avenue, Manhattan (Credit: NYC DPR)

9th Avenue, Manhattan after "complete street" improvements

42 St

COMMODORE CRITERION

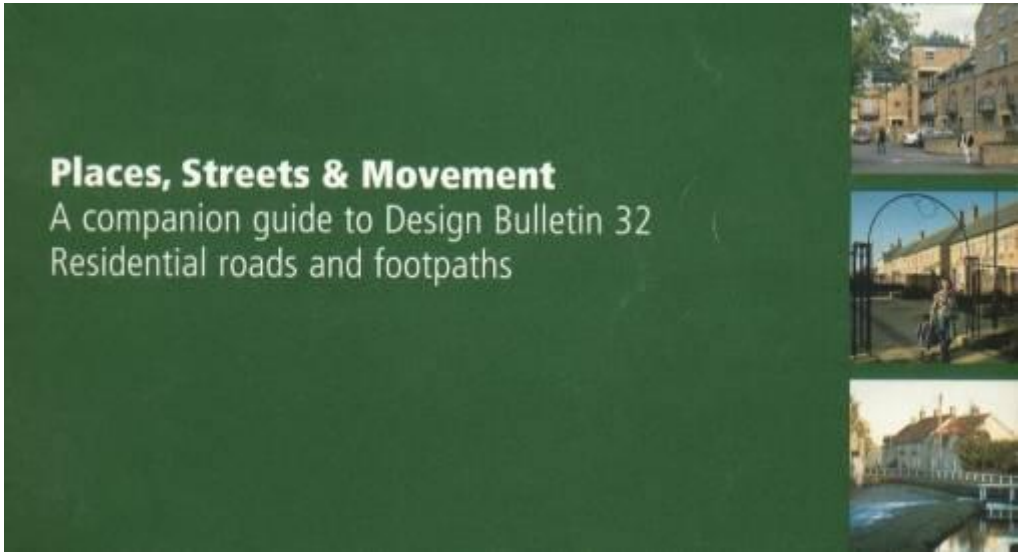
ARMACY



From Mike Biddulph CPLAN University of Cardiff

- Streets in context
- The design process
- Layout and connectivity
- Quality places
- Street users’ needs
- Street geometry
- Parking
- Traffic signs and markings
- Street furniture and street lighting
- Materials, adoption and maintenance

From Mike Biddulph CPLAN University of Cardiff



- Supersedes ***Design Bulletin 32*** and ***Places, Streets and Movement***

- It focuses on residential streets, but many of its principles are applicable to high streets and lightly-trafficked lanes

From Mike Biddulph CPLAN University of Cardiff

- reducing the emphasis on the movement function of residential streets
- higher priority to pedestrians and cyclists
- more concern for the place function of residential streets, so that well-designed streets and spaces can serve the community in a number of ways
- emphasises the importance of collaborative working

From Mike Biddulph CPLAN University of Cardiff

Streets have five principal functions;

- **place**: *local distinctiveness, visual quality, social activity*
- **movement**: *pedestrians, cyclists, public transport, other private vehicles*
- **access**: *to buildings and public spaces for **all** users*
- **parking** and
- **drainage, utilities and street lighting**.

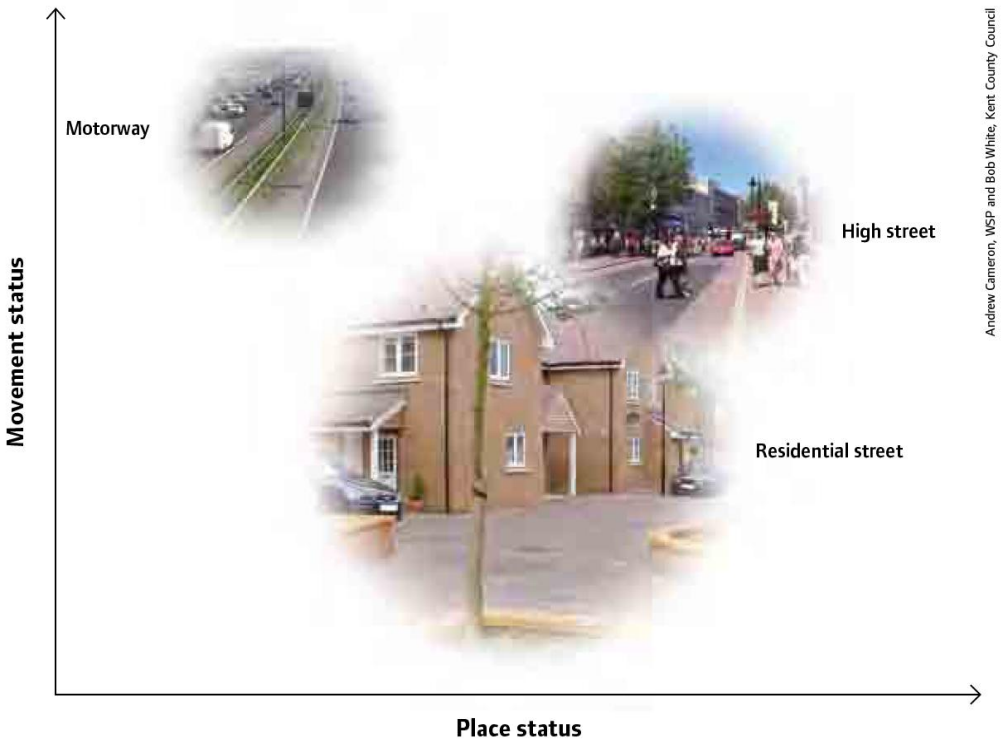


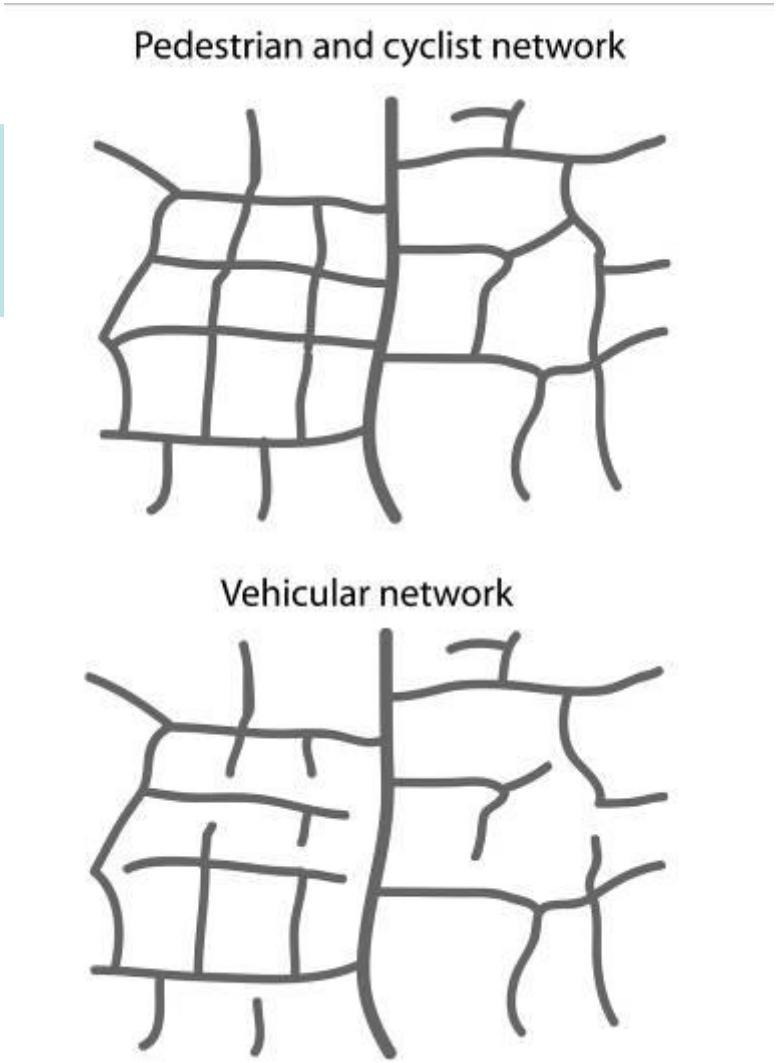
Figure 2.5 Typical road and street types in the Place and Movement hierarchy.

Source: Manual for Streets

From Mike Biddulph CPLAN University of Cardiff

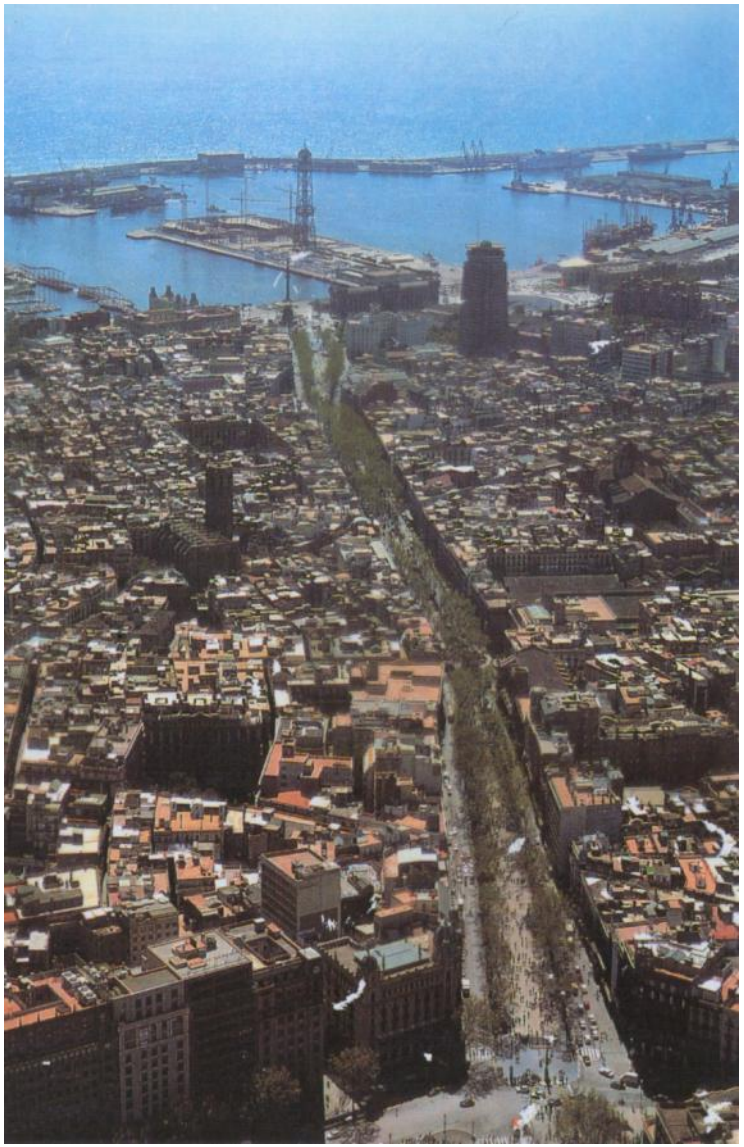
Study and propose a movement framework

Consider first	Pedestrians
↓	Cyclists
	Public transport users
	Specialist service vehicles (e.g. emergency services, waste, etc.)
Consider last	Other motor traffic



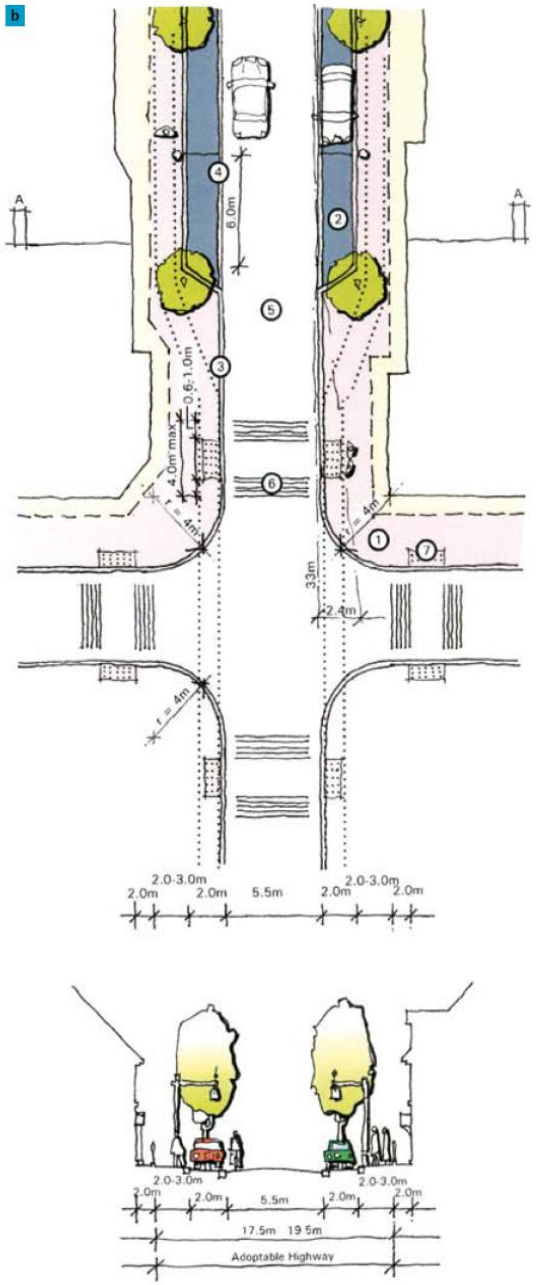
From Mike Biddulph CPLAN University of Cardiff

Accessibility and visual signals – legibility
Barcelona: Gothic quarter and Ramblas



Consider the following highways related issues in the development of schemes:

- connections to the surrounding area;
- connections through the site;
- street layout and dimensions;
- building lines;
- building heights;
- routes for utilities;
- parking provision,
- landscape design and structural planting;
- materials, management and maintenance regime;
- servicing and access for emergency vehicles;
- speed control;
- and SUDS and sewer routes.

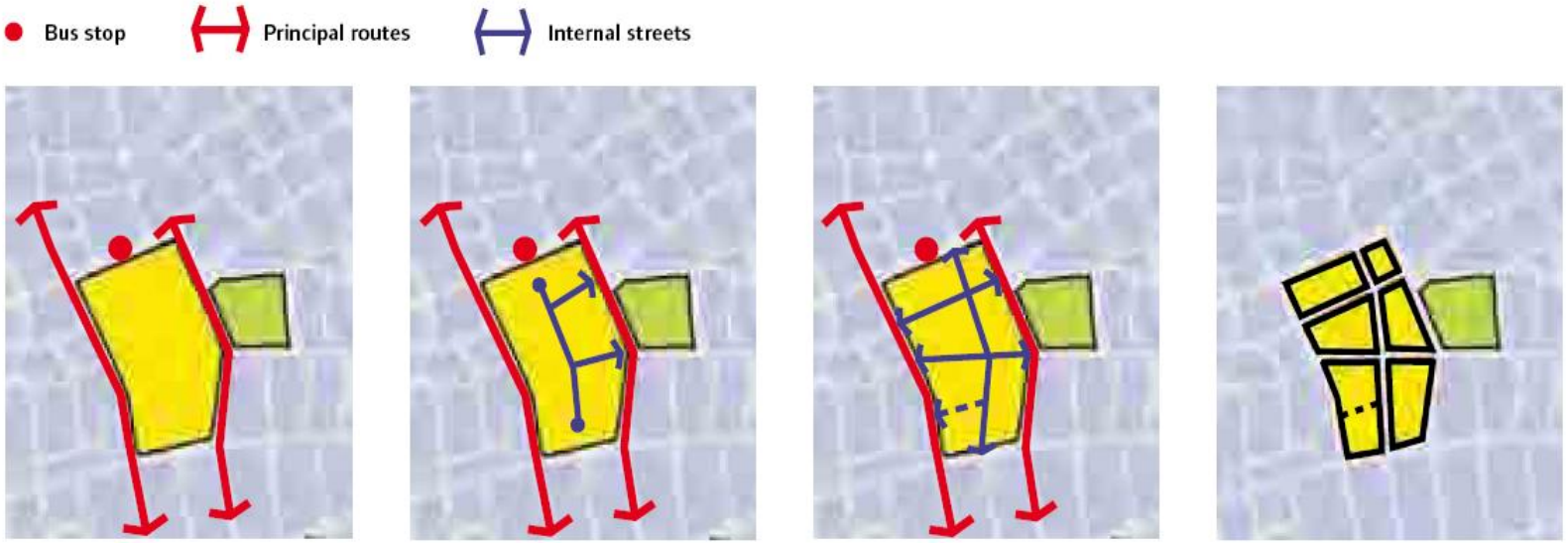


Source: Manual for Streets

From Mike Biddulph CPLAN University of Cardiff

Layout and connectivity

Integrate new developments into the existing fabric



Consider how best the site can be connected with nearby main routes and public transport facilities.

The typical cul-de-sac response creates an introverted layout which fails to integrate with its surroundings.

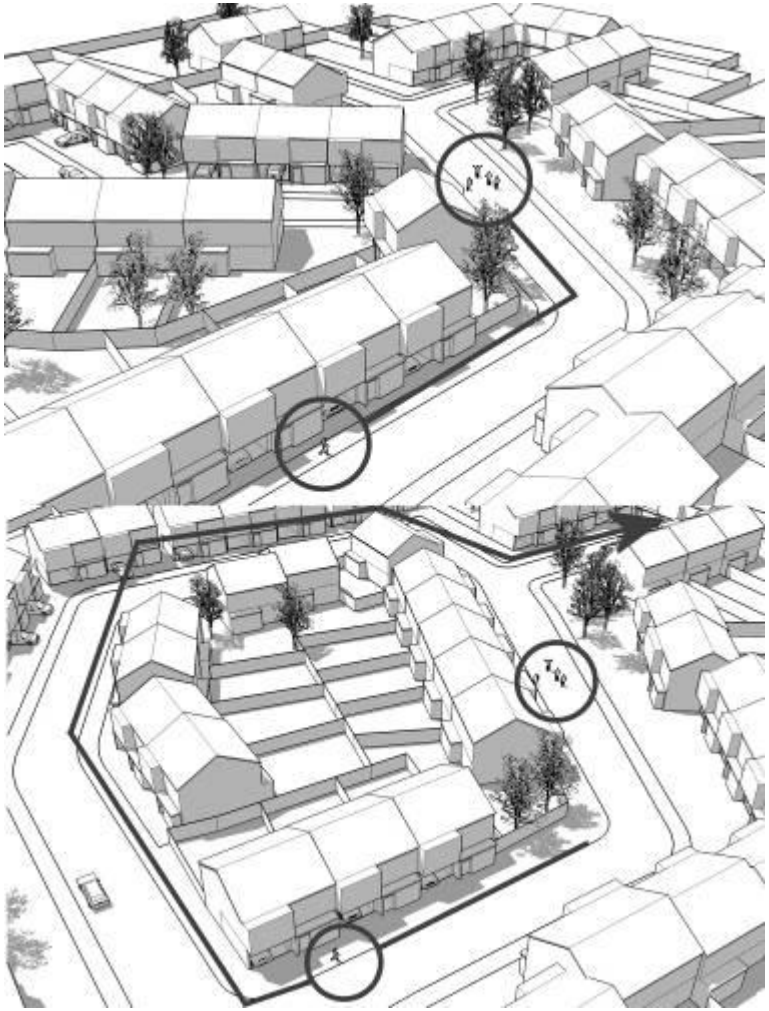
A more pedestrian friendly approach that integrates with the surrounding community. It links existing and proposed streets and provides direct routes to bus stops.

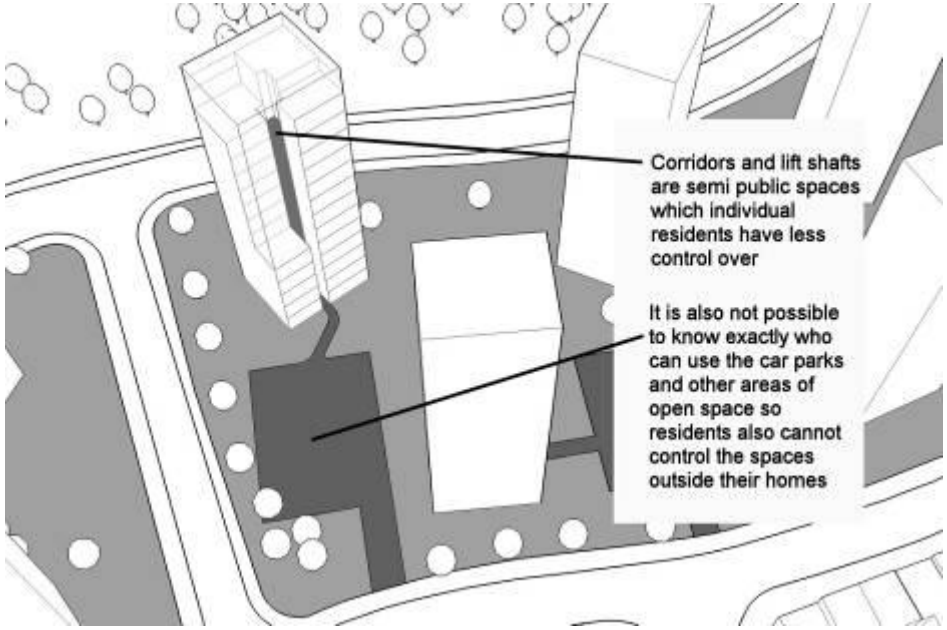
This street pattern then forms the basis for perimeter blocks which ensure that buildings contribute positively to the public realm.

Source: Manual for Streets

From Mike Biddulph CPLAN University of Cardiff

Consider crime prevention advice





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Quality Places

Consider the impact of the section on the quality of a street

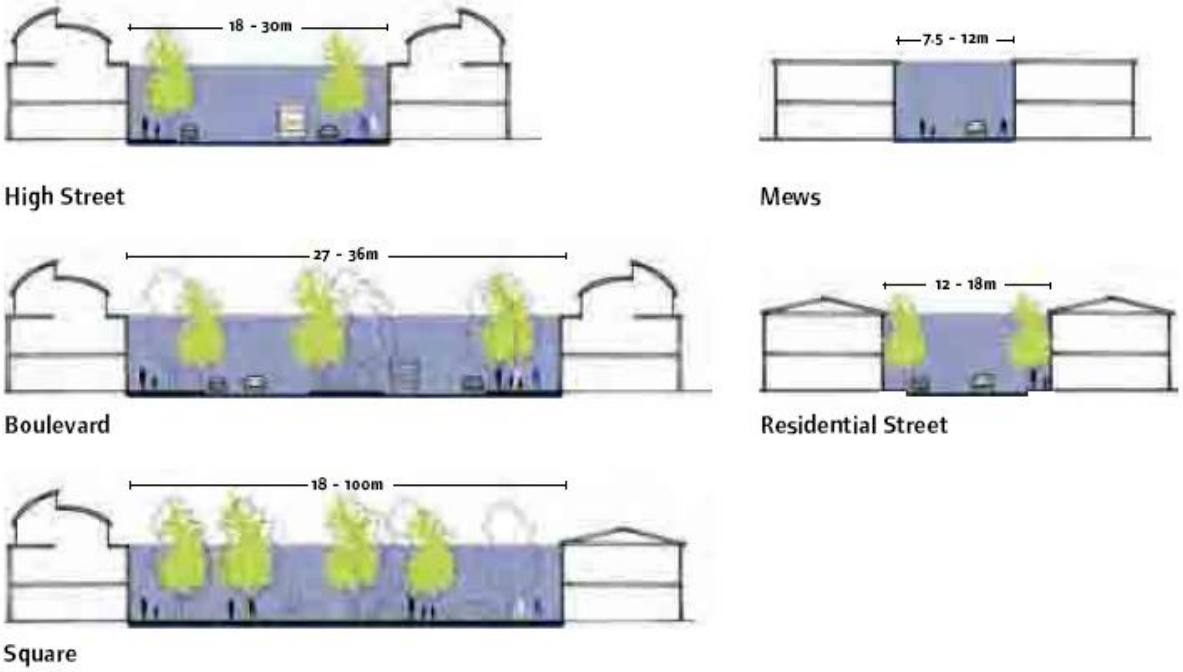


Figure 5.3 Typical widths for different types of street.

Source: Manual for Streets

From Mike Biddulph CPLAN University of Cardiff

Ramblas, Barcelona,
Central Promenade, Ramblas
from Allan B Jacobs, Great Streets

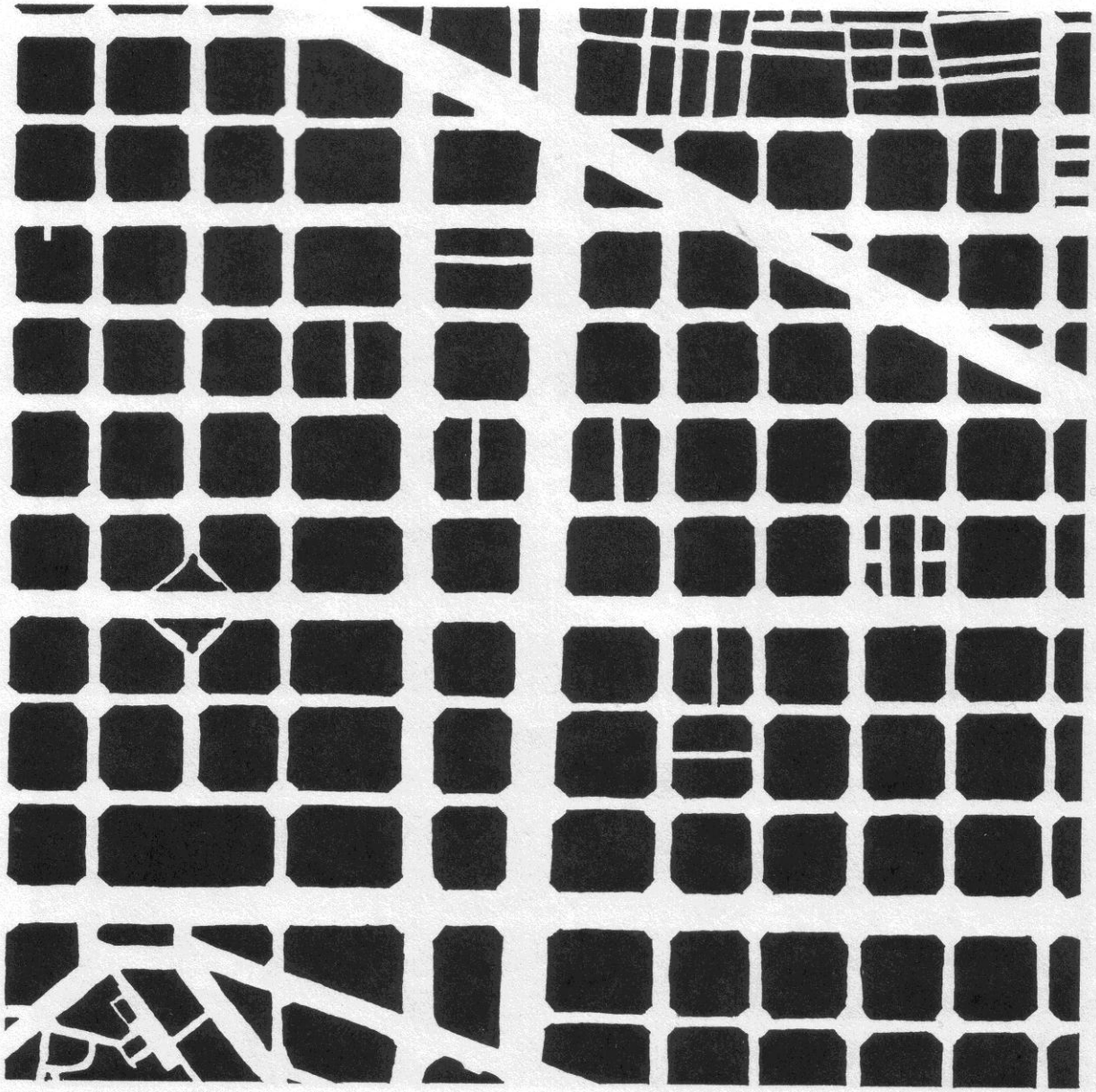
Ramblas, Barcelona,
from Allan B Jacobs, Great Streets

Planting, street trees, lighting, hard landscaping and street furniture

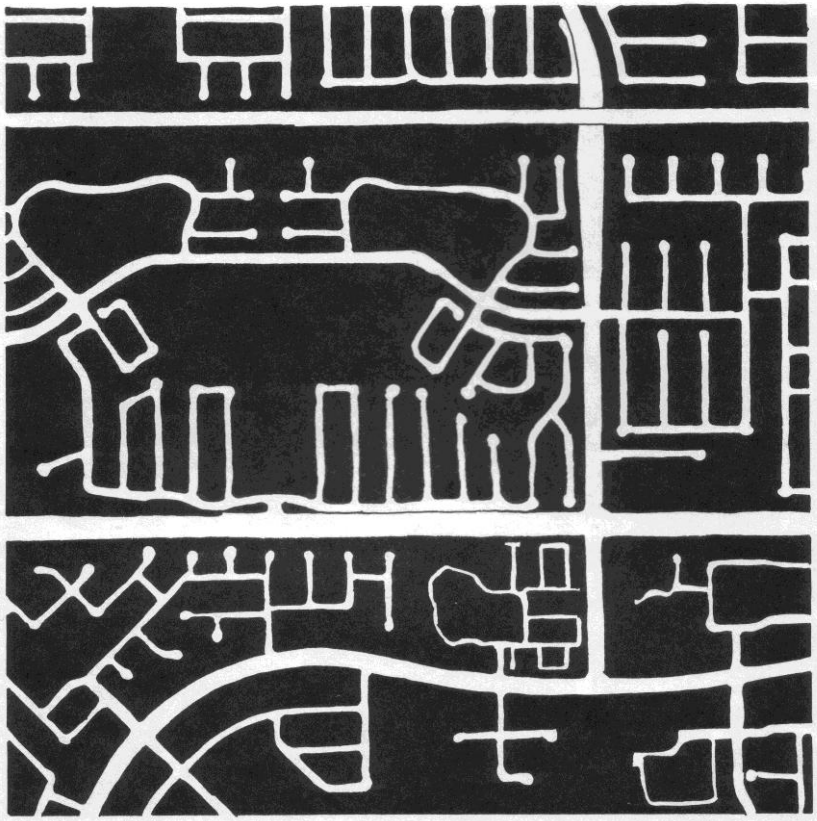
- reduce visual clutter: signage/road markings
- use local materials
- use "in keeping" street furniture and signage from a coherent palette
- retain historic associations
- integrate planting with ideas for the urban scene
- planting adds value
- protect and enhance habitats and biodiversity

From Mike Biddulph CPLAN University of Cardiff

Ramblas, Barcelona,
from Allan B Jacobs, Great Streets

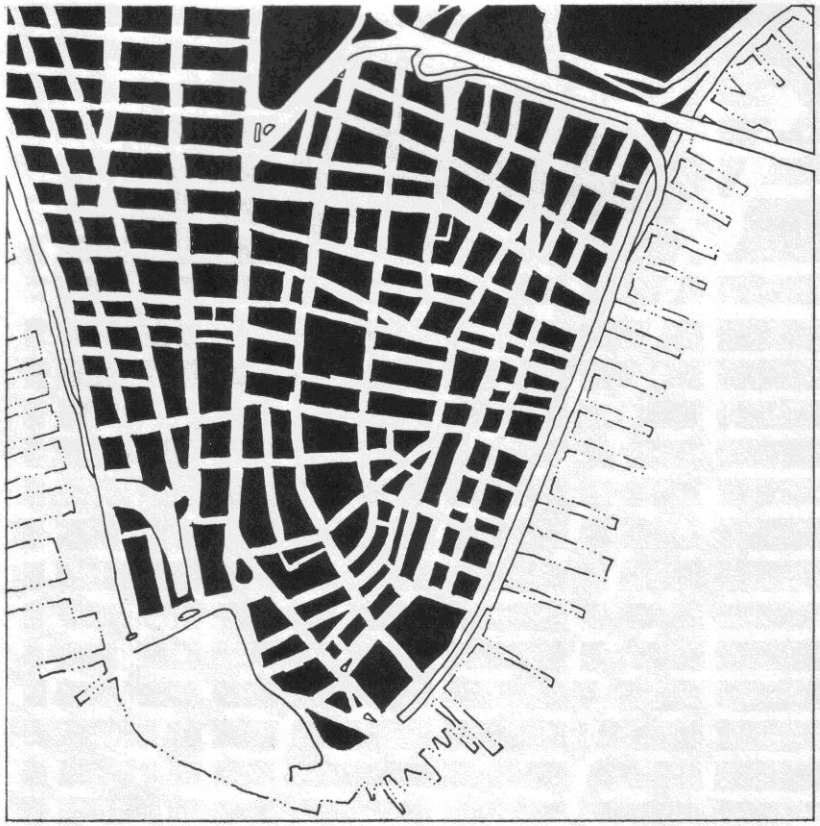


Cerda's Grid, Barcelona,
from Allan B Jacobs, Great Streets

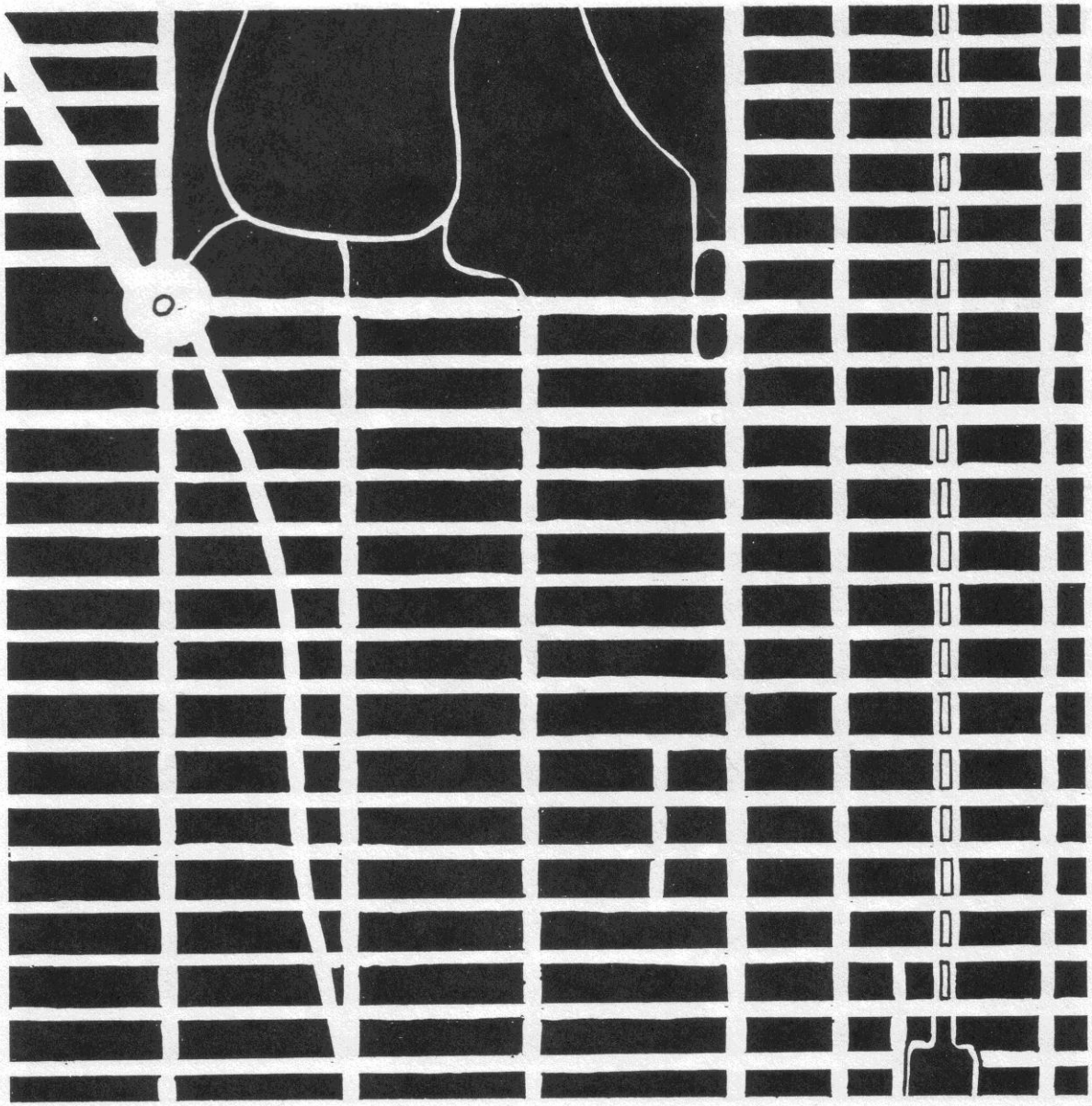


Irvine, CA,
from Allan B Jacobs, Great Streets

times. Knowing, in addition, that Venice has over 1,500 intersections, that lower Manhattan has about 220, and that the Irvine business area has 15 gives some dimensions to those differences. In 1989 the mayor of Irvine, interested in having a "downtown" in his city, one that had some street life as well as a mixture of uses that included housing, and supportive of a plan that might achieve such a center, looked at the one-square-mile map of his city next to others of Los Angeles and Santa Monica and San Francisco and said, "Ah, that explains it."[4] There are few streets in Irvine upon which a street life might take place.



Lower Manhattan, NY,
from Allan B Jacobs, Great Streets



Midtown Manhattan, NY, (Commissioners Plan 1811, from Allan B Jacobs, Great Streets

Street users' needs

Corner radii

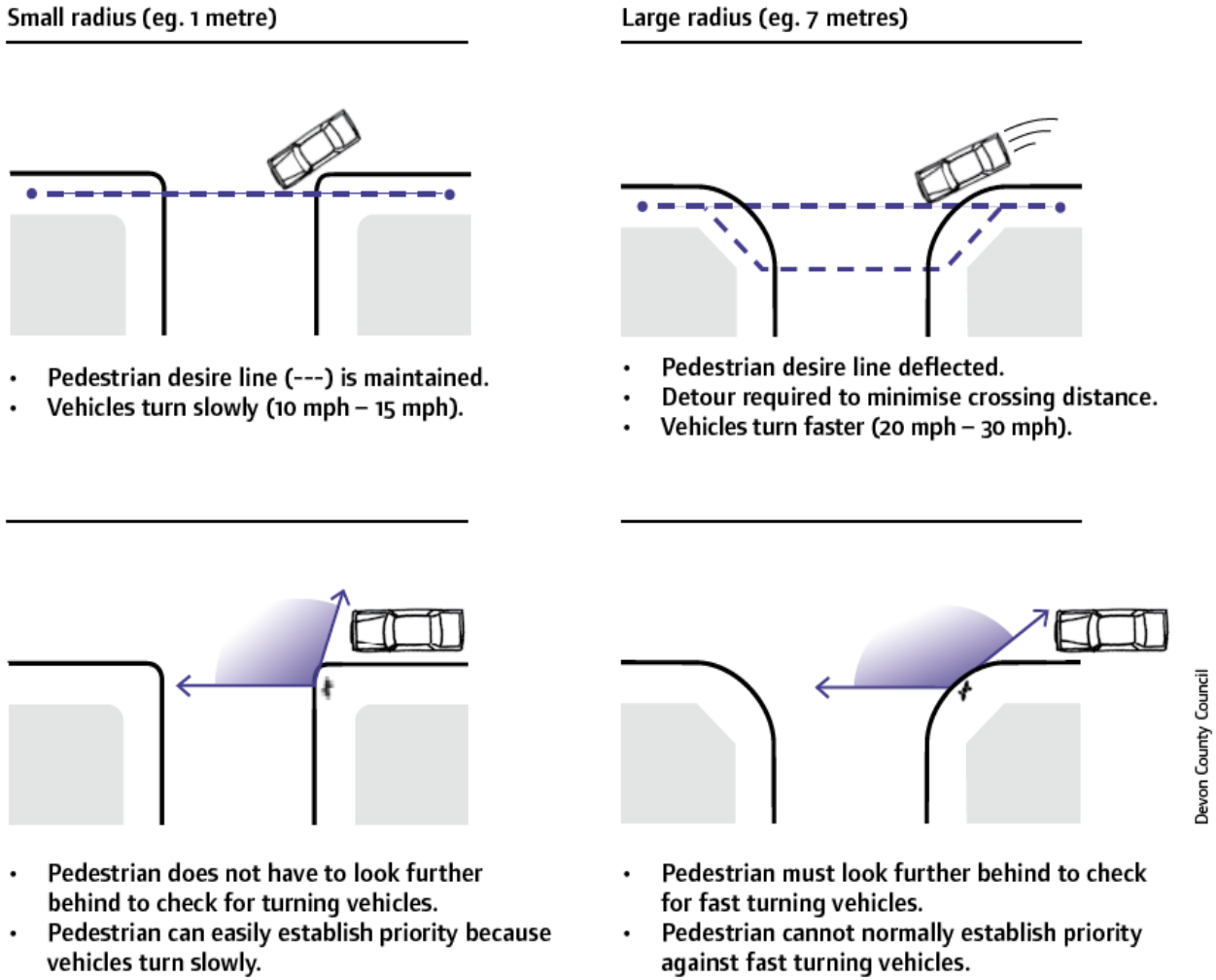


Figure 6.3 The effects of corner radii on pedestrians.

From Mike Biddulph Cl

Traffic Signal
Untinted Concrete (Residential District)
Raised Crossing
Median Barrier with Bike Channel
Bus Bulb with Bus Shelter
ONLY BUS
2813
Pedestrian Ramps
Curb Extension with Bicycle Parking
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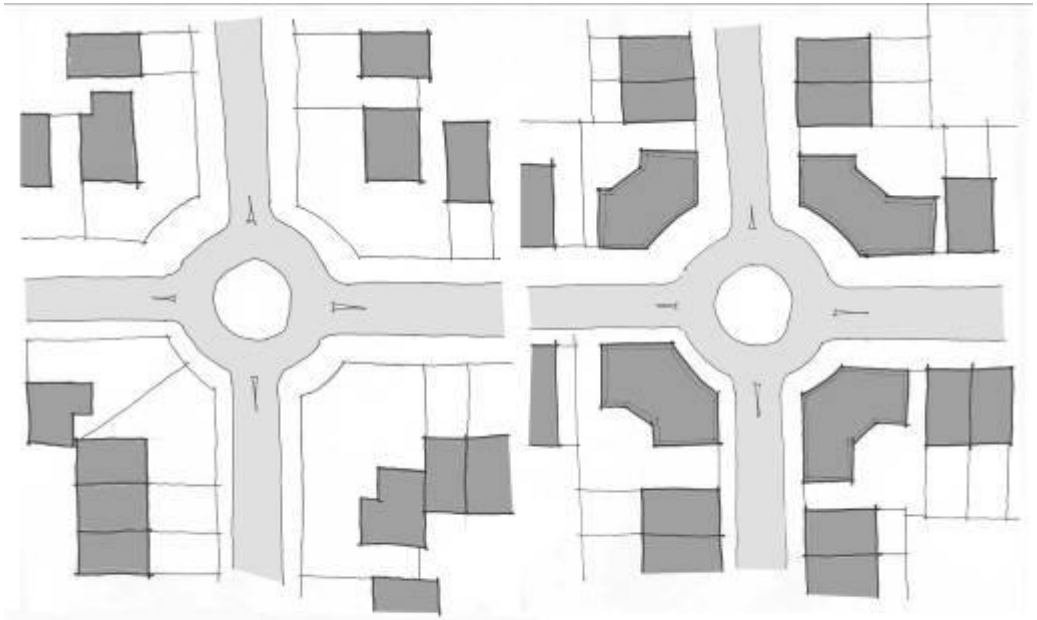
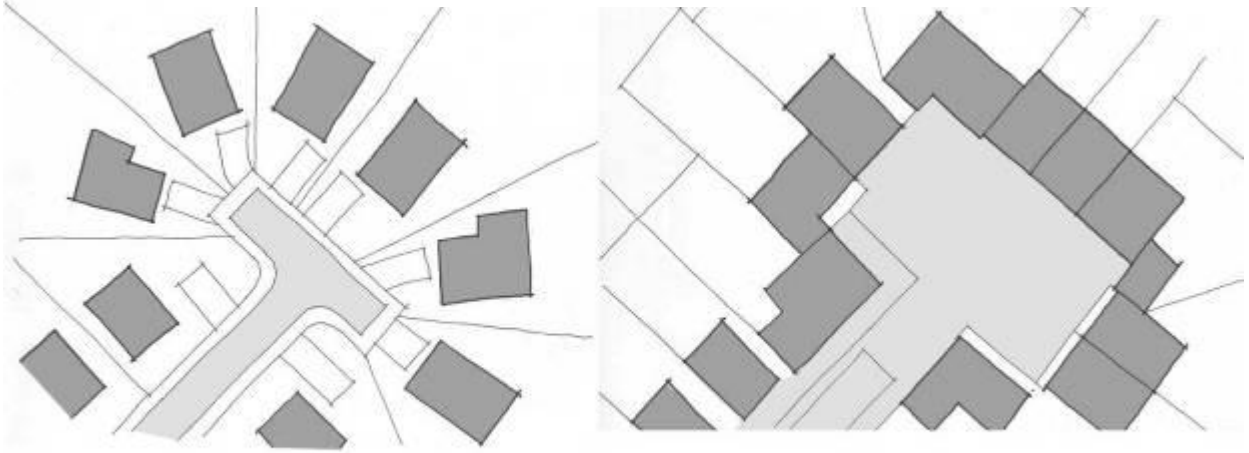
Consider the role of built form at junctions

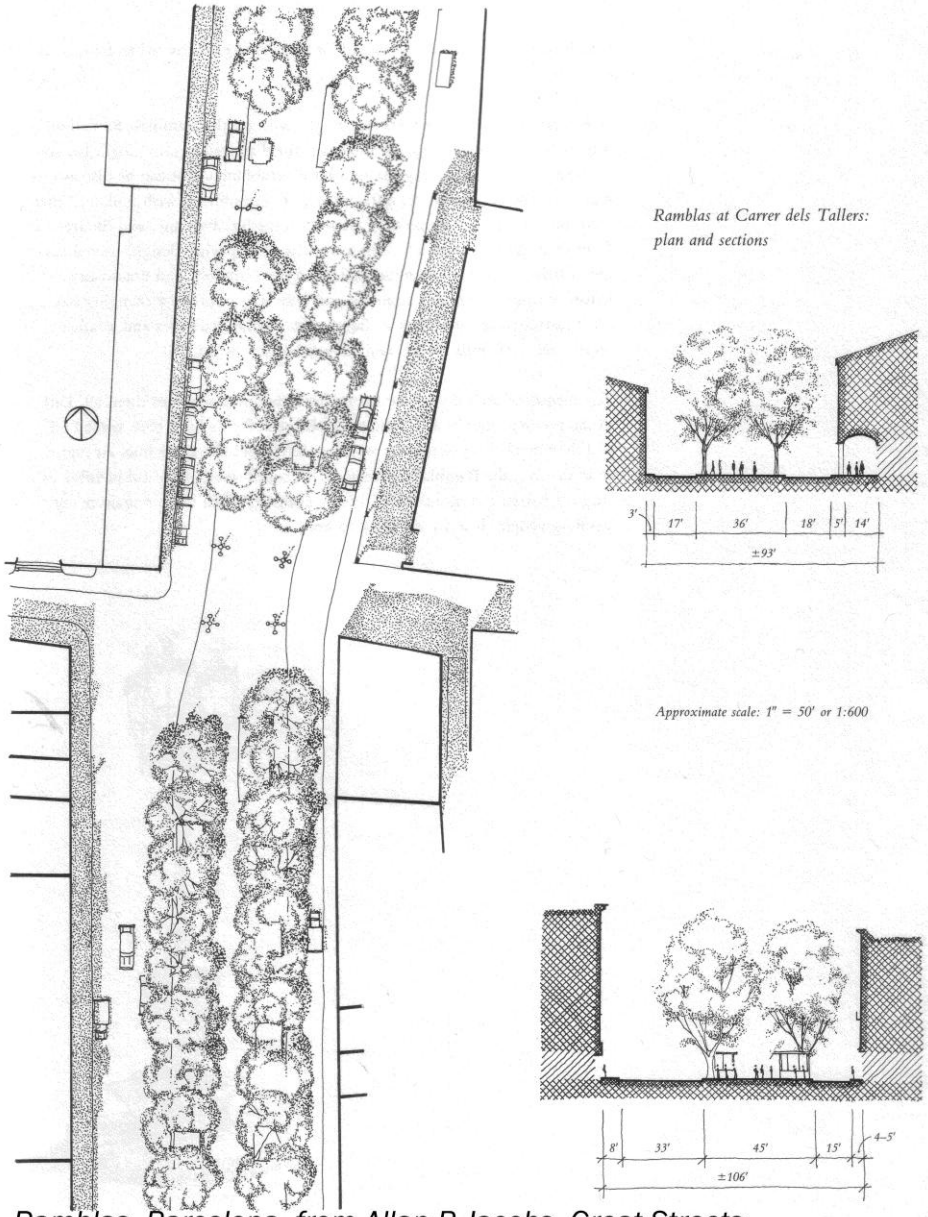


Weak Better

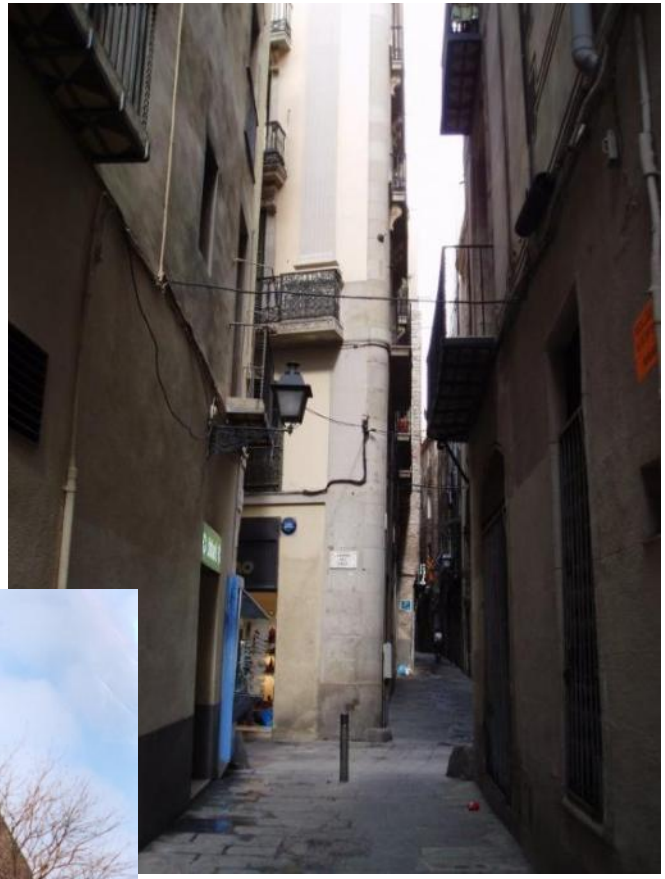


Weak Better

From Mike Biddulph CPLAN University of Cardiff



Ramblas, Barcelona, from Allan B Jacobs, Great Streets



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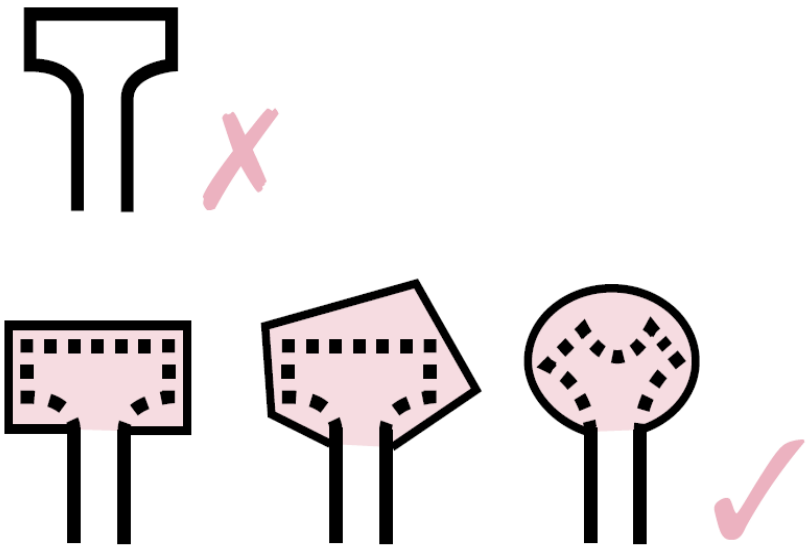


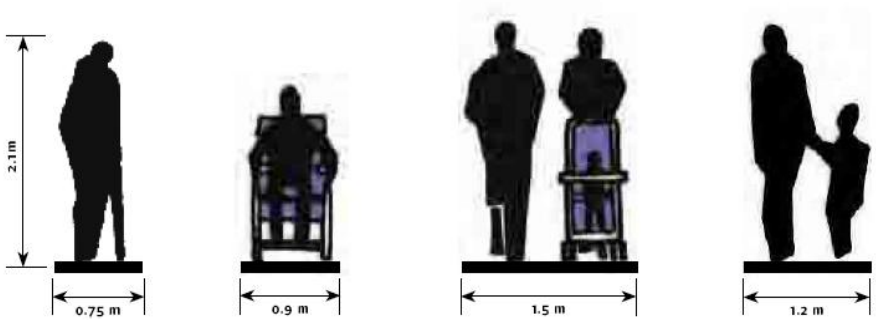
Source: Manual for Streets

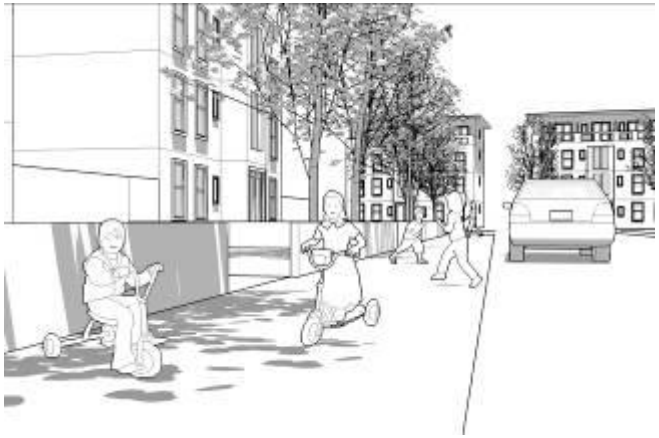
Design the space
not the turning head

From Mike Biddulph CPLAN University of Cardiff

Calming

From Mike Biddulph CPLAN University of Cardiff





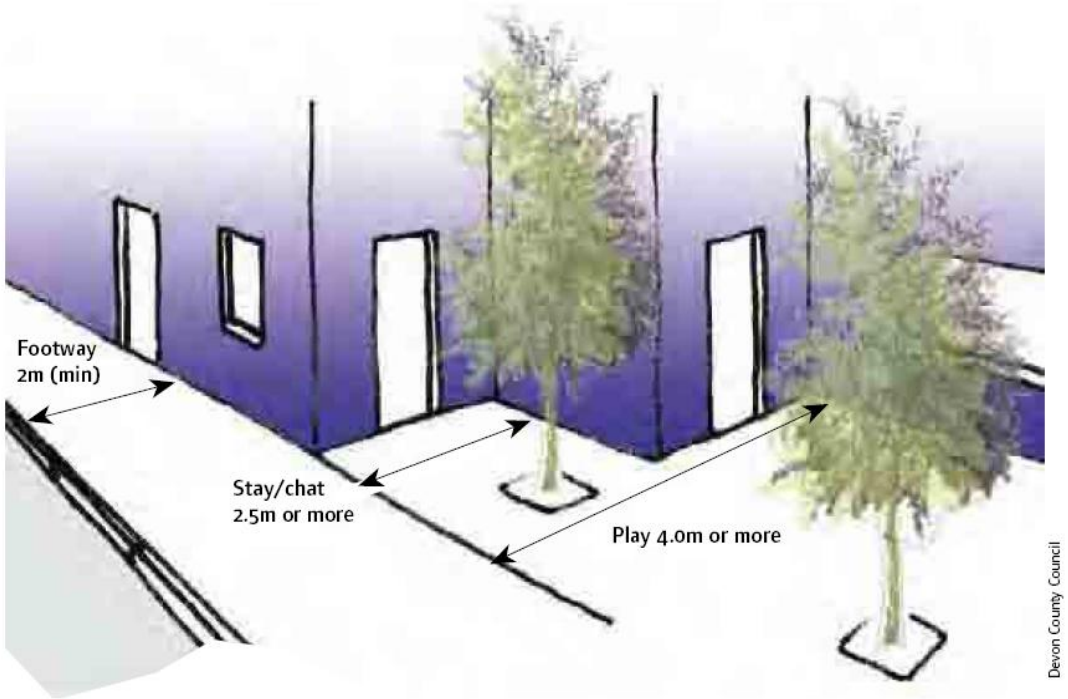


Figure 6.8 The footway and pedestrian areas provide for a range of functions which can include browsing, pausing, socialising and play.

browsing, pausing, socialising, playing

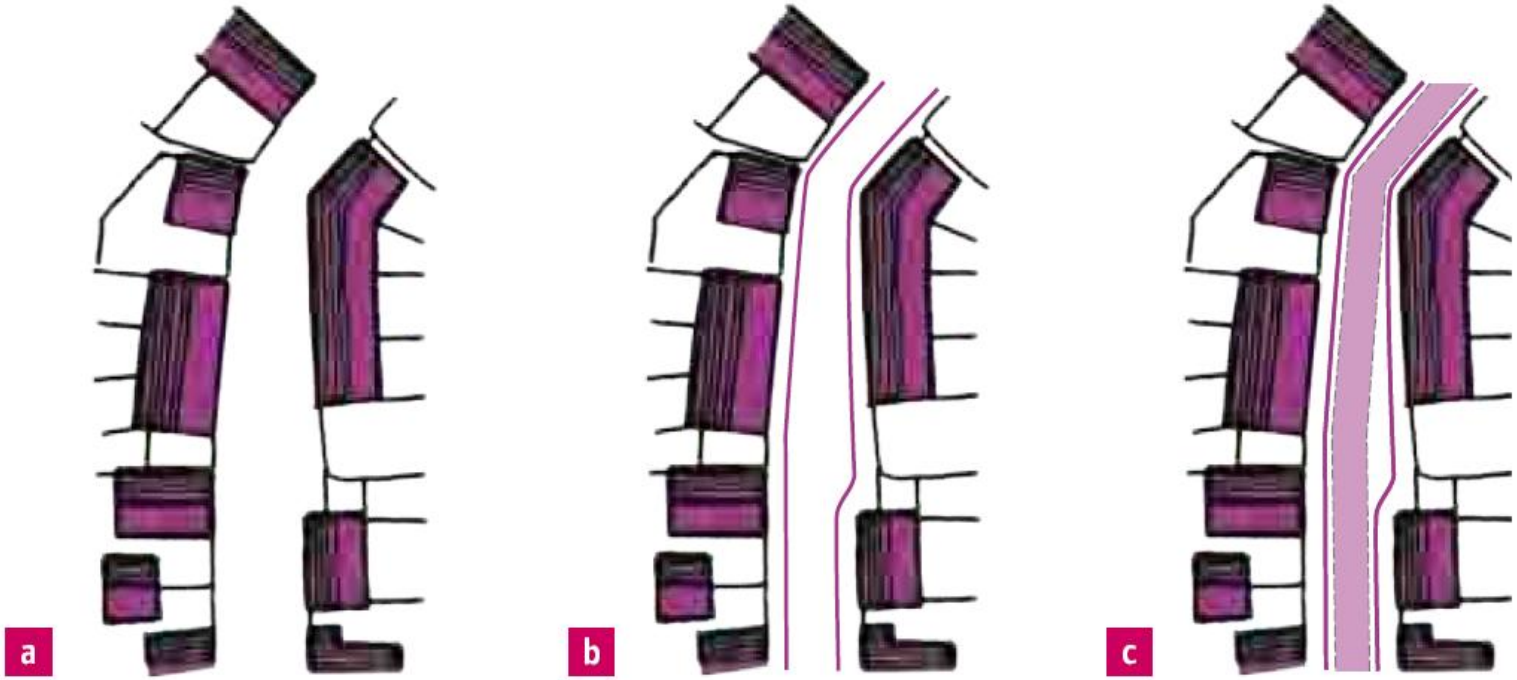
From Mike Biddulph CPLAN University of Cardiff

RRACE
ISH & CHIP
Tel:809-4604
New Golden Chopsticks
CHINESE RESTAURANT
77 PEARL ST.
TEL:825-0314
PIZZA
425-1266
514-8636
PEARL ST
NO
STANDIN
ANYTIM
BURGER
BURGER

GRISTEDES

Tracking analysis:

The form of a street and kerb line do not need to follow the vehicle track



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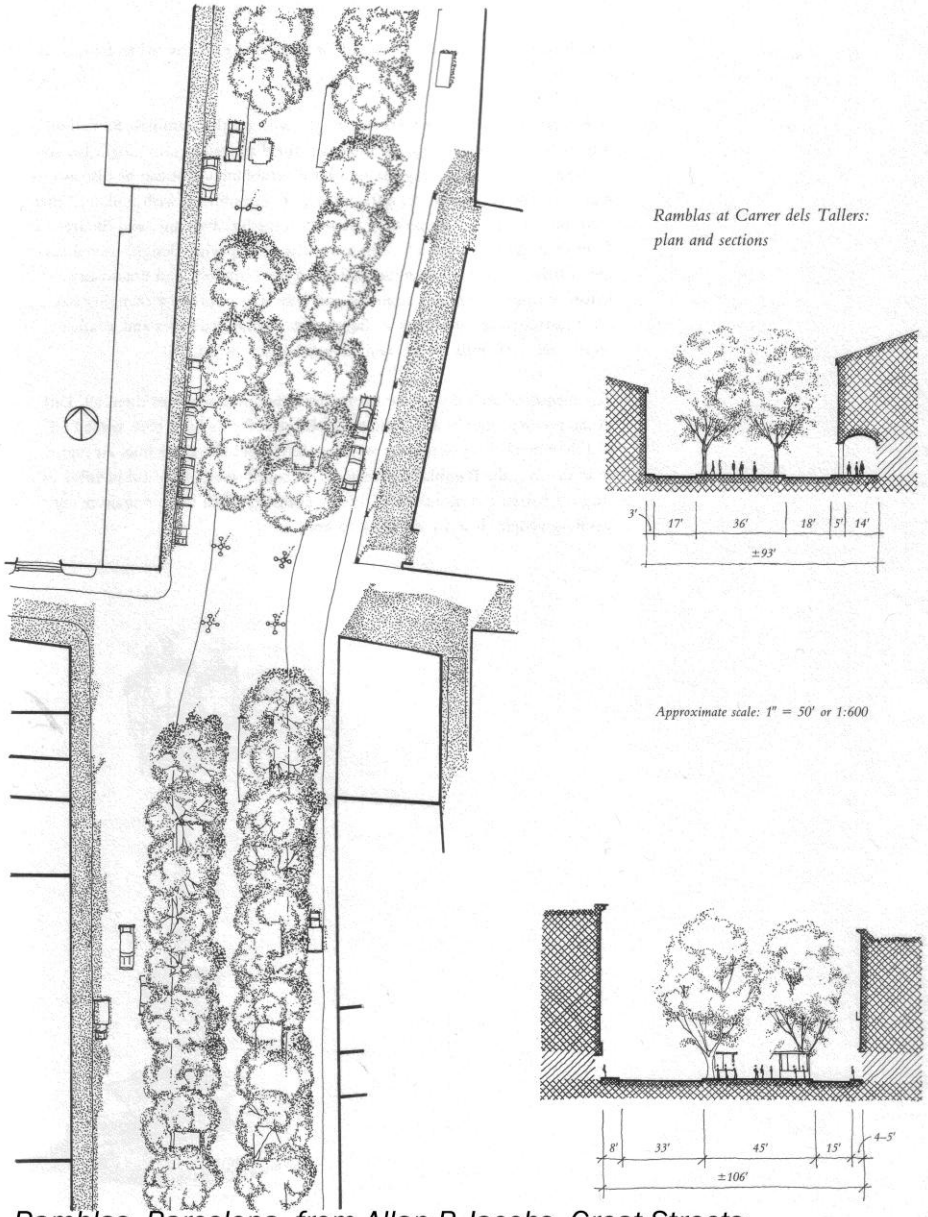


Ramblas, Barcelona, from Allan B Jacobs, Great Streets

Shared surfaces and home zones

The absence of a formal carriageway requires drivers to acknowledge other users of the street

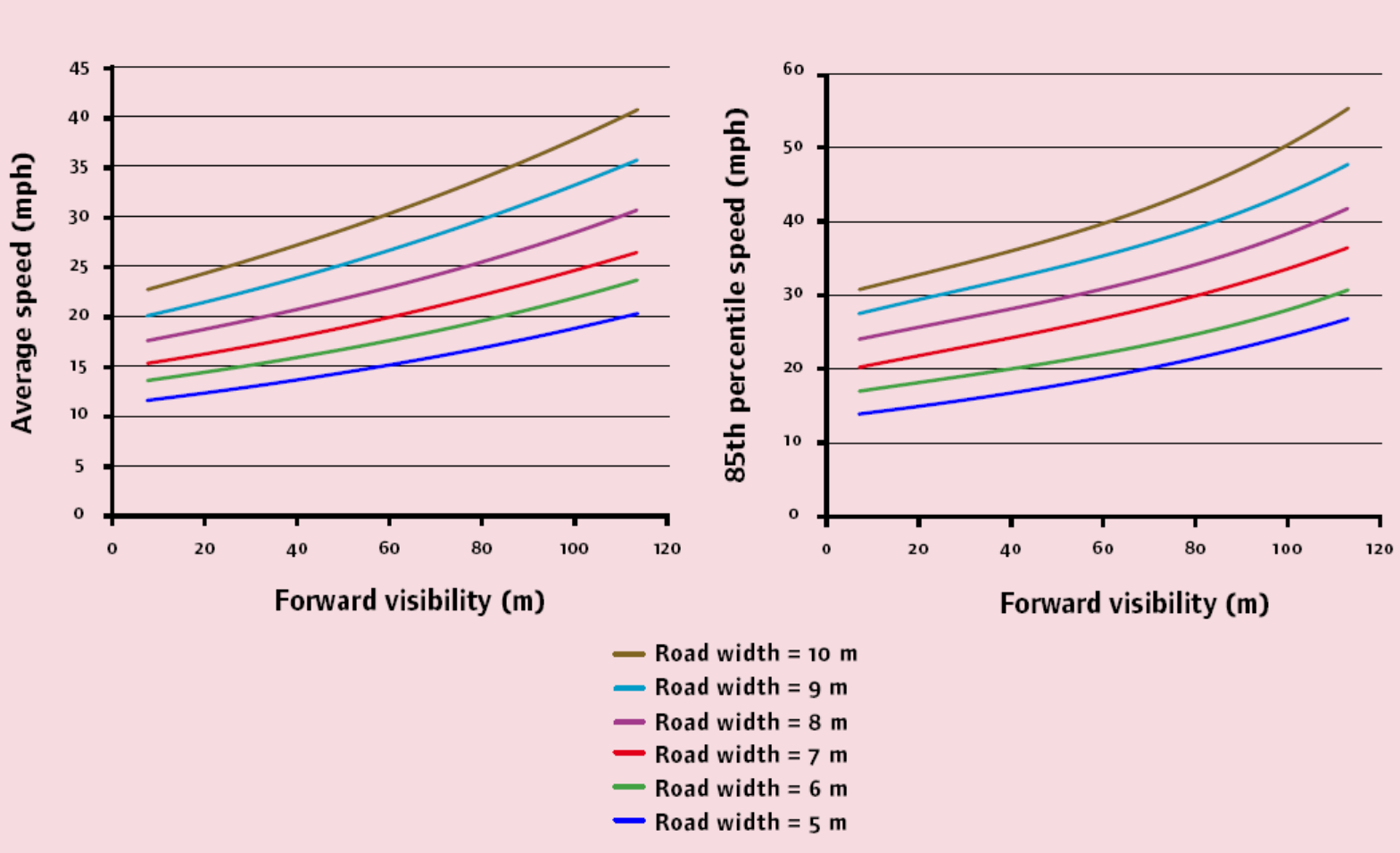
From Mik

Shared surfaces and home zone

From Mike Biddulph CPLAN University of Cardiff

Geometry and speed:

Limits to forward visibility and highway widths are effective in reducing vehicle speeds



Source: Manual for Streets

From Mike Biddulph CPLAN University of Cardiff

Parking: section starts with cycling

Parking: on street, courtyard, within the block, garages, on-plot

The guidance encourages a variety of solutions within schemes

From Mike Biddulph CPLAN University of Cardiff

Some final thoughts

The document reinforces positive innovations and trends from across the UK: all the advice has been road tested

The guidance encourages inter-professional working

Strong emphasis on urban design of which highway design is regarded as a significant part

L'BERTY

Go to Google Earth

Rambla de Catalunya, Barcelona, from Allan B Jacobs, Great Streets

- A sense of intimacy, despite the wide, almost 100-foot right-of-way, due, at least in part, to narrow sidewalks, narrow auto cartways, bay windows, signs, awnings. There is a great deal in the right-of-way.

- Many attractive stores.

- Each roadway, about 21 feet wide, can handle one parking lane and two moving lanes, though generally there is only one moving lane.

- Buildings are five to seven stories tall.

- Streetlight spacing varies: 45 to 70 feet apart.

- Trees are 21 feet apart.

- The central walkway, with benches, has a planting strip along the curb integrated with trees. This one-meter-wide planting strip stops before intersections and for about 75 feet in the center of the block.

- Cafes under temporary canvas structures are set up along parts of the central walkway during spring and summer.

Ramblas, Barcelona, from Allan B Jacobs, Great Streets

43
CASA BATLLÓ
ANTONI GAUDÍ