

A photograph of a modern residential street. The street is paved and has a central median with a young pine tree and a road sign. The sign is a diamond-shaped warning sign with a black background and a yellow border, featuring a black silhouette of a tree and a black arrow pointing down. The street is lined with young trees and shrubs. In the background, there are modern houses with large windows and balconies. The sky is clear and blue.

Urban Street Trees

by Victor Dover
Dan Burden



Walkability and Street Parts



“You can extend your life by 12 years past the American average if you change how you do things just a little bit.” – Dan Buettner



20%

GENETICS

20%

ENVIRONMENT

50%

HEALTHY BEHAVIORS

10%

**ACCESS
TO CARE**

BLUE ZONES PROJECT

Research suggests there is a relationship between environmental quality and people's willingness to walk; they are more likely to walk where they feel comfortable and where the environment is pedestrian-friendly (Giles-Corti 9 & Donovan 2003; Frank & Engelke 2001; ; Humpel et al. 2002)





Old San Juan, Puerto Rico

Target Speed



Create safer walking environments

In the very rare event when a motorist significantly errs in their driving task, street trees deflect or fully stop a motorist from taking a human life.

Deployment of air bags, seat belts and steel cages protect motorists at urban speeds. Only trees protect pedestrians from out-of-control cars.





Trees

Building Placement

Canopies

Umbrellas

Sources of Shade

Text by Pete Sechler

Lynch's *Image of the City* taxonomy includes:

1. Paths — streets, walkways, transit lines, and other ways that people move

2. Edges — the linear element not used or considered as paths. They are the boundaries between two places, linear breaks in continuity.

3. Districts — the medium-to-large- sections of the city that a person mentally enters inside of, recognizable as having some identifying character.

4. Nodes — are points, the strategic spots in a city into which an observer can enter, often a street corner hangout or an enclosed square.

5. Landmarks — another type of point-reference, but not a space you enter, but a defined physical object: gateway, legacy building, sign, vista point, used as a radial reference.



Trees and Edges

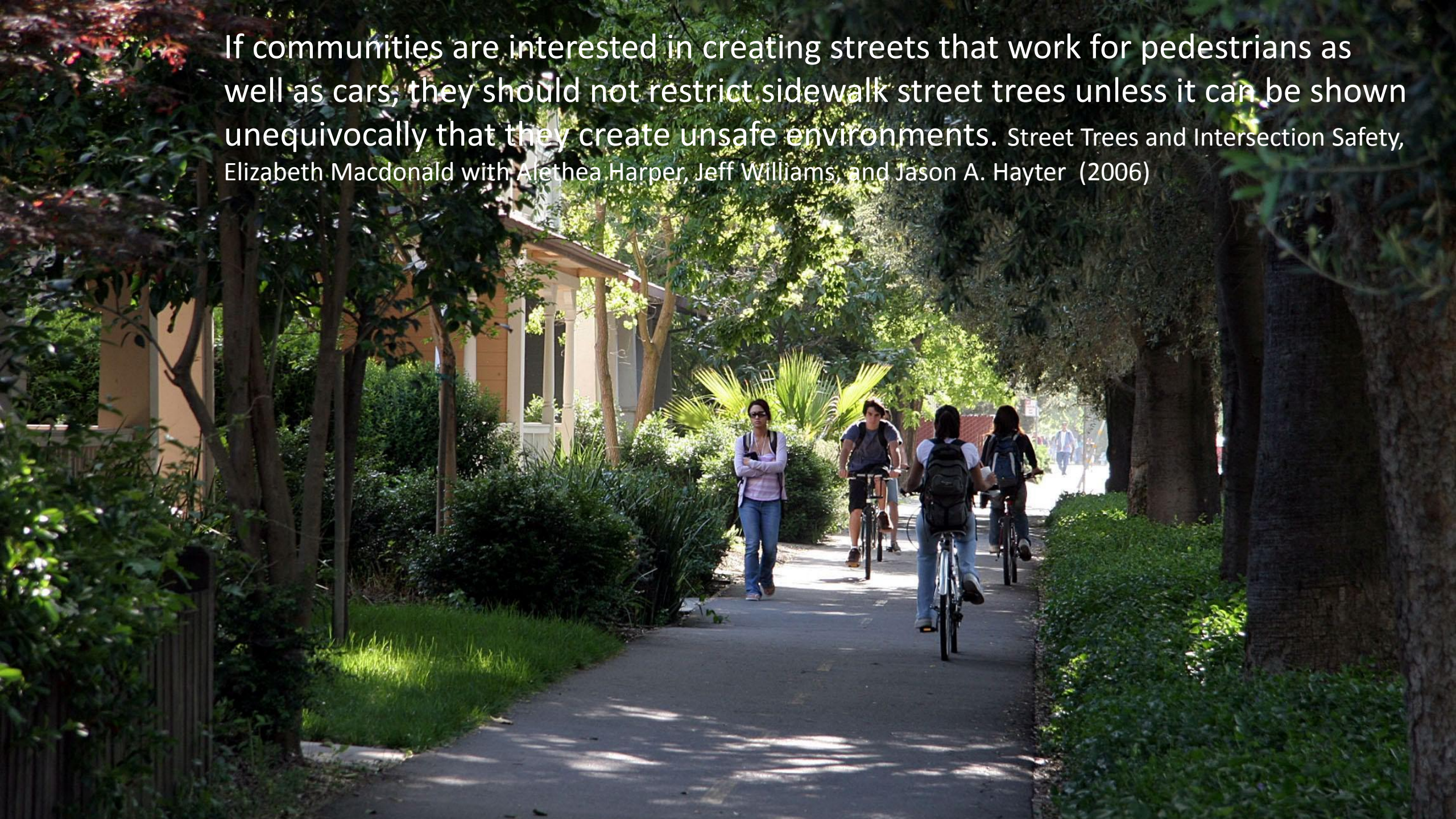


A photograph of a tree-lined urban sidewalk. On the left, there is a paved path with a person walking. To the right of the path is a row of trees and a street with parked cars. The scene is bright and sunny, with shadows cast by the trees.

Lynch's *Image of the City* taxonomy includes:

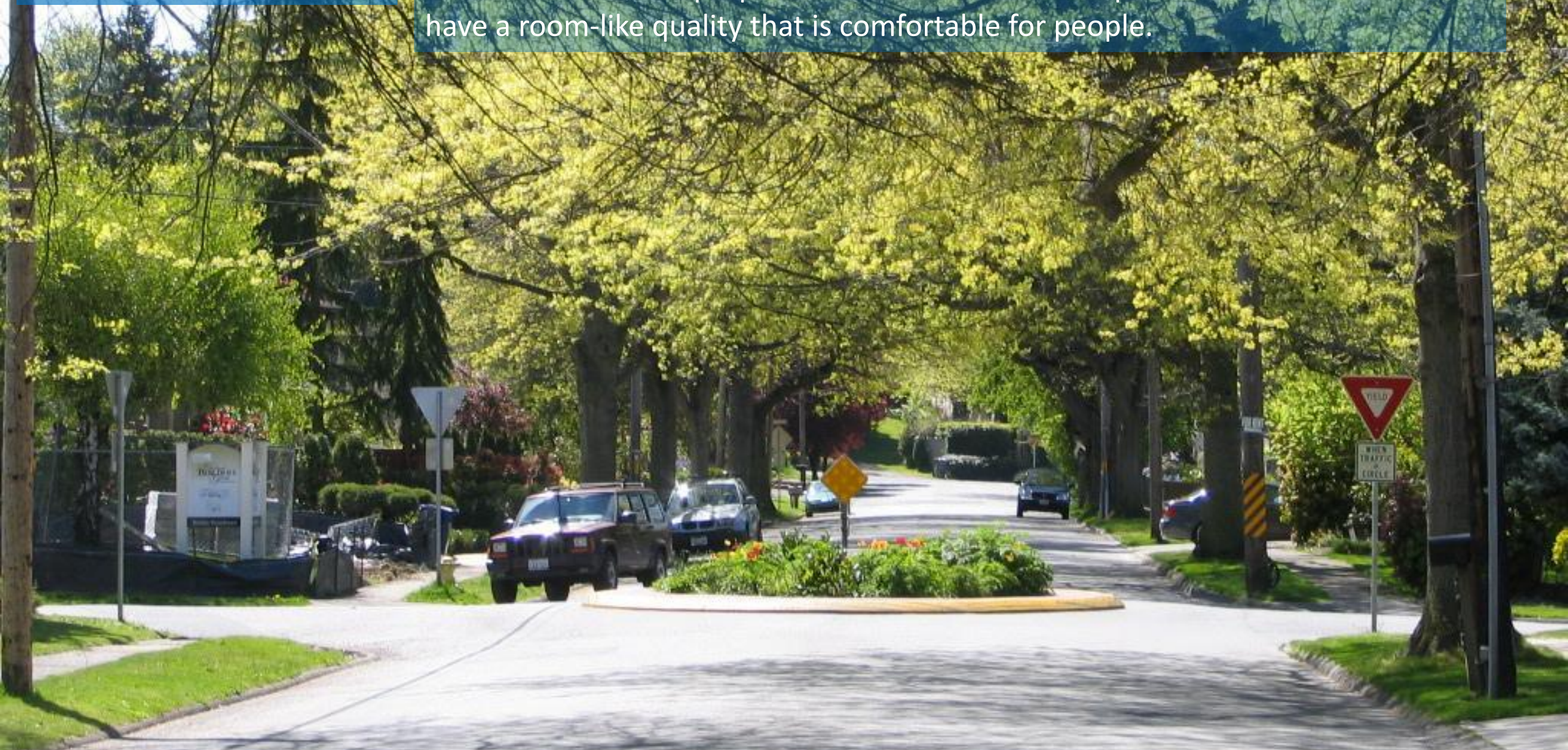
Closely planted trees on urban streets can contribute to pathway imageability, which can help people make sense of urban spatial environments, help them create clear cognitive maps, and help them navigate from one place to another (Lynch 1960; Golledge 1992).

If communities are interested in creating streets that work for pedestrians as well as cars; they should not restrict sidewalk street trees unless it can be shown unequivocally that they create unsafe environments. Street Trees and Intersection Safety, Elizabeth Macdonald with Alethea Harper, Jeff Williams, and Jason A. Hayter (2006)



Trees Help Streets Achieve Enclosure

Enclosure refers to the extent to which buildings, walls, trees and other vertical items frame a street and public space. Public spaces that are framed by vertical elements in relative proportion to the width of the space between the elements have a room-like quality that is comfortable for people.







Tree Patterns and Types

CANOPY Tree Form



Medium to large spreading canopy; variable spread and height depending on species.



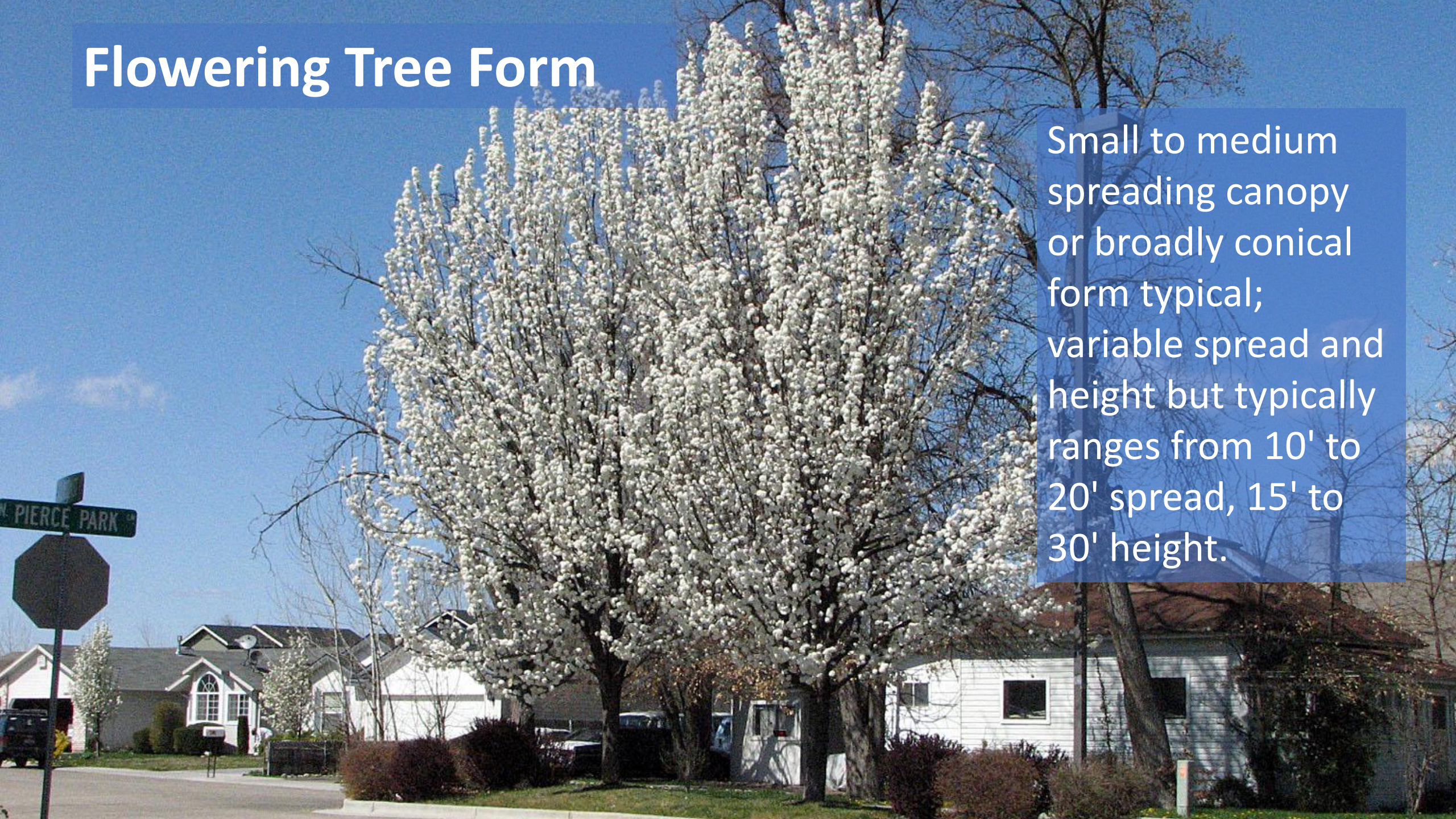
Flowering Tree Form

Small to medium spreading canopy or broadly conical form typical; variable spread and height but typically ranges from 10' to 20' spread, 15' to 30' height.



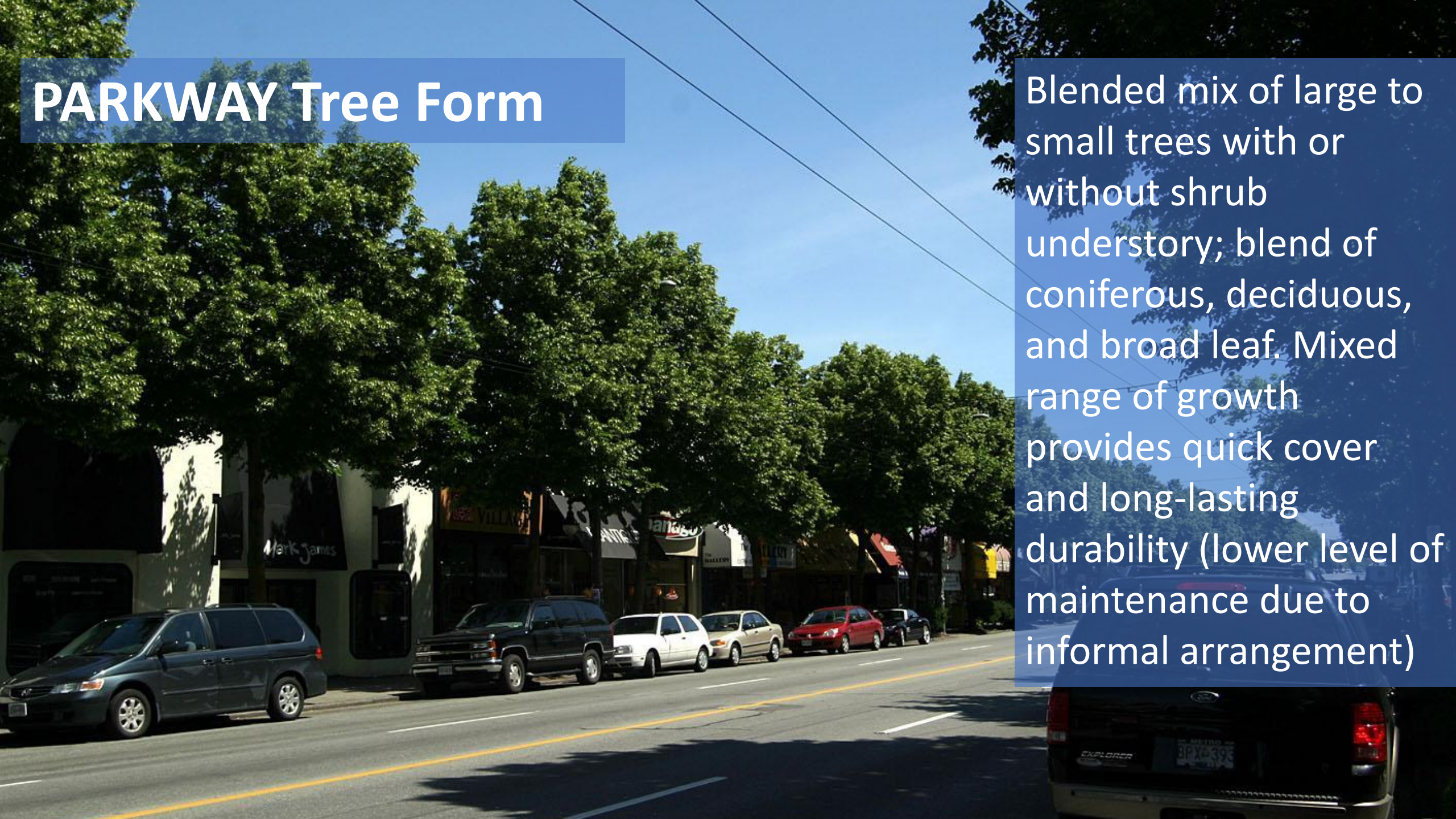
Flowering Tree Form

Small to medium spreading canopy or broadly conical form typical; variable spread and height but typically ranges from 10' to 20' spread, 15' to 30' height.



PARKWAY Tree Form

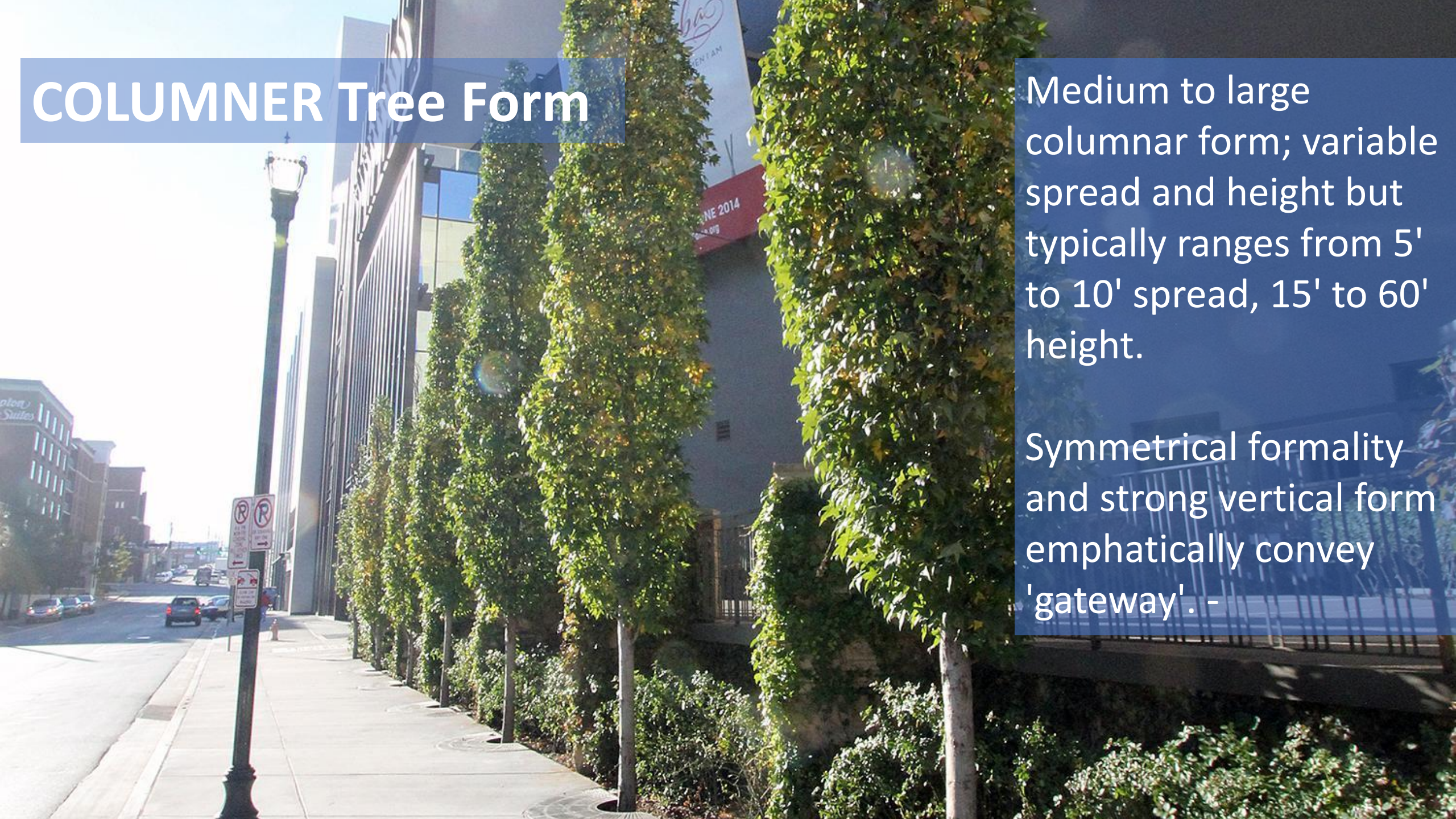
Blended mix of large to small trees with or without shrub understory; blend of coniferous, deciduous, and broad leaf. Mixed range of growth provides quick cover and long-lasting durability (lower level of maintenance due to informal arrangement)



COLUMNER Tree Form

Medium to large columnar form; variable spread and height but typically ranges from 5' to 10' spread, 15' to 60' height.

Symmetrical formality and strong vertical form emphatically convey 'gateway'.









STITUTE

people

A photograph of a residential street. In the foreground, a road sign on a metal post stands in a landscaped median. The sign is a diamond-shaped warning sign with a black arrow pointing down and two black arrows pointing up and outwards, indicating a Y-intersection. Below it is a smaller, square yellow sign. The street is paved and lined with young pine trees and other vegetation. In the background, there are several houses, including a large, multi-story house with a prominent chimney and a smaller house with a blue roof. The sky is clear and blue.

Local Streets
Collector Streets
Commercial Boulevard Streets
Main Streets

Location

Streets make up the bulk of the public space in cities, and are distributed more evenly throughout the urban environment than are public parks. They offer the biggest opportunity for the public provision of trees within cities.

(Lynch 1960; Golledge 1992).

A photograph of a tree-lined residential street. The street is paved and runs through the center of the frame. On either side, there are large, mature trees with dense green foliage. In the background, several houses are visible, including a prominent red house on the left. A few cars are parked along the street. A yellow fire hydrant is visible on the right side of the street. A blue rectangular box with the word "Local" in white text is positioned at the bottom center of the image.

Local

Local Street Parts

Note the detached sidewalks, planter strips, inset parking, ground cover, bump outs, and trees, which all work in concert to bring speeds down to acceptable levels.



Roundabout

Trees

Trees

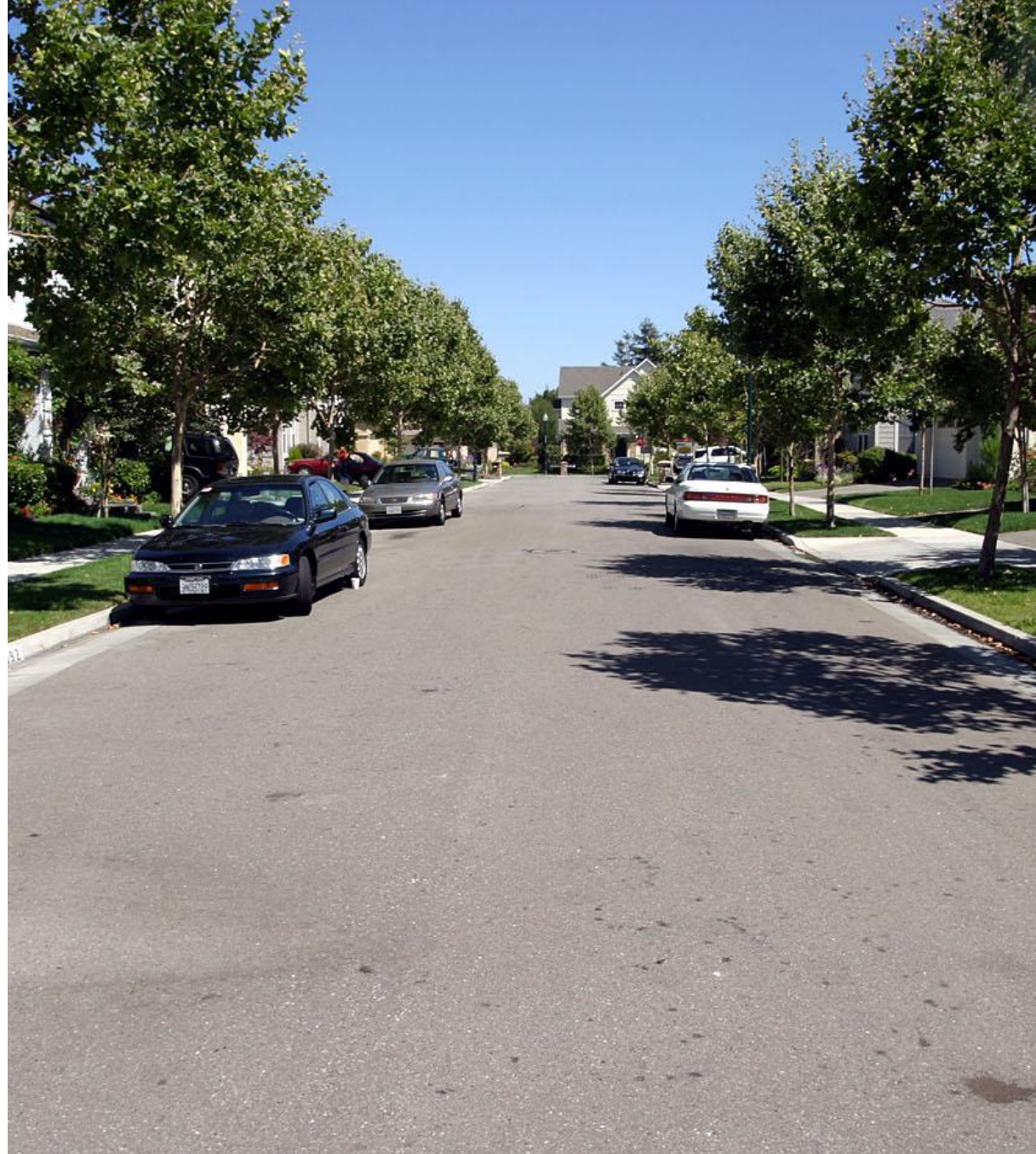
Neighborhood
Mini-Circle

Choker

Inset Parking

Ground
Cover

Local









Closely planted trees at the sidewalk edge create a transparent fence that helps protect pedestrians, psychologically and physically, from moving vehicle traffic on the adjacent roadway (Jacobs et al. 2002).

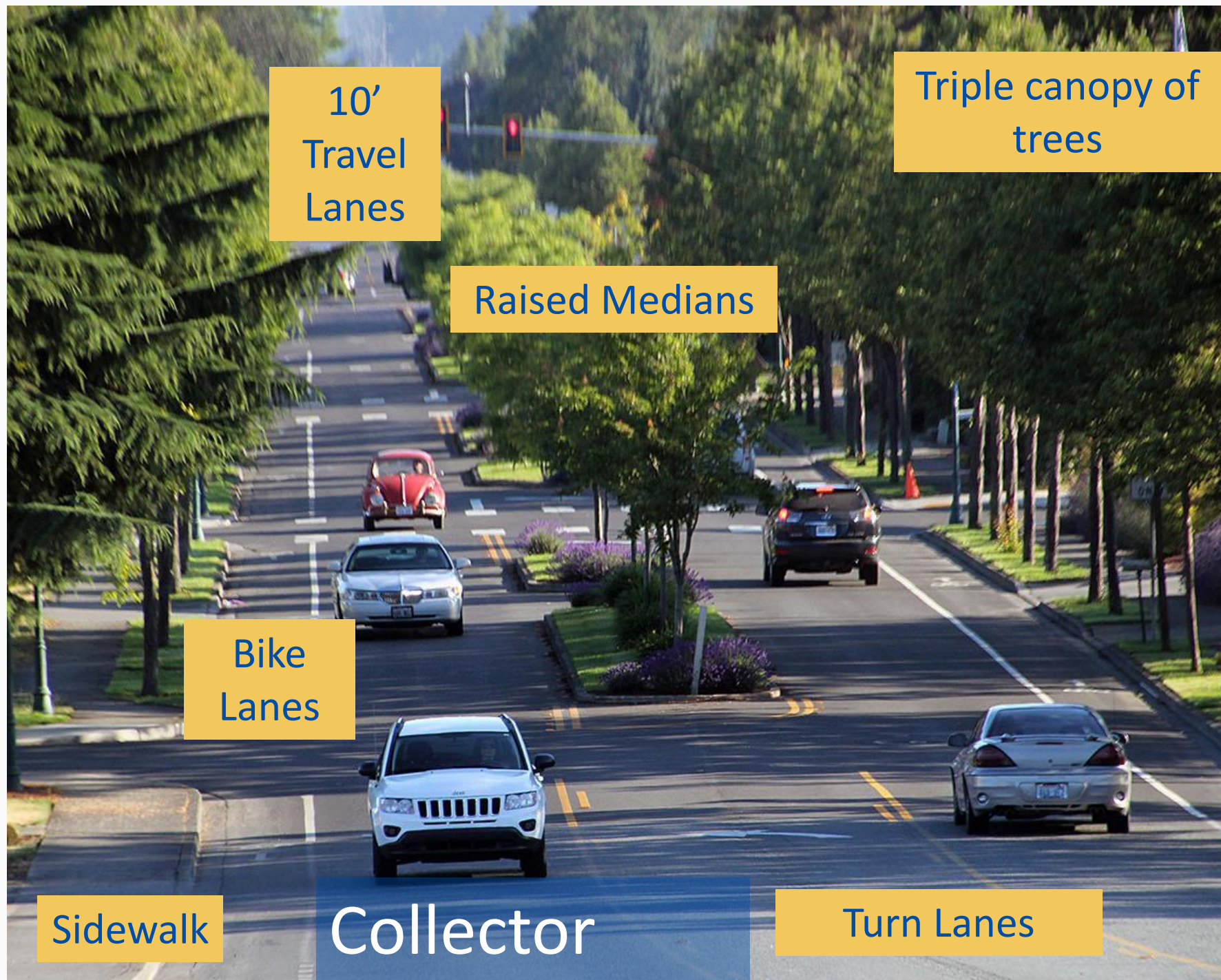


Collector

Street Parts

The functions of a street are spelled out in its various parts. This street has two high quality walkways - one on each side. Note the attached and detached sidewalks. Which is more comfortable for pedestrians? The travel lanes shown here are 10 feet wide, the bike lanes are six feet wide.

Sequim, Washington



10'
Travel
Lanes

Triple canopy of
trees

Raised Medians

Bike
Lanes

Sidewalk

Collector

Turn Lanes



Collector



Wide walkway

Well defined edge

Shrubs define corner

Tight radii

Ground Cover

Commercial Boulevard

Trees Help Streets Achieve Enclosure

Enclosure refers to the extent to which buildings, walls, trees and other vertical items frame a street and public space. Public spaces that are framed by vertical elements in relative proportion to the width of the space between the elements have a room-like quality that is comfortable for people.

Creating these outdoor rooms is important to creating places that pedestrians want to occupy. Gordon Cullen, in his book *"The Concise Townscape,"* states that "...enclosure, or the outdoor room, is perhaps the most powerful, the most obvious, of all the devices to instill a sense of position, of identity with surroundings.... it embodies the idea of here-ness."





THE PARTS OF A SIDEWALK



Green Building

Tree
Canopy

Transparency

Green Edge

Shoreline

12' Sidewalk

IMAGE LOCATION:
CARMEL-BY-THE-SEA,
CALIFORNIA

THE PARTS OF A SIDEWALK

Tree Canopy

Parking

4' Continuous
Tree Well

7' Sidewalk

Edge with
Ground Cover



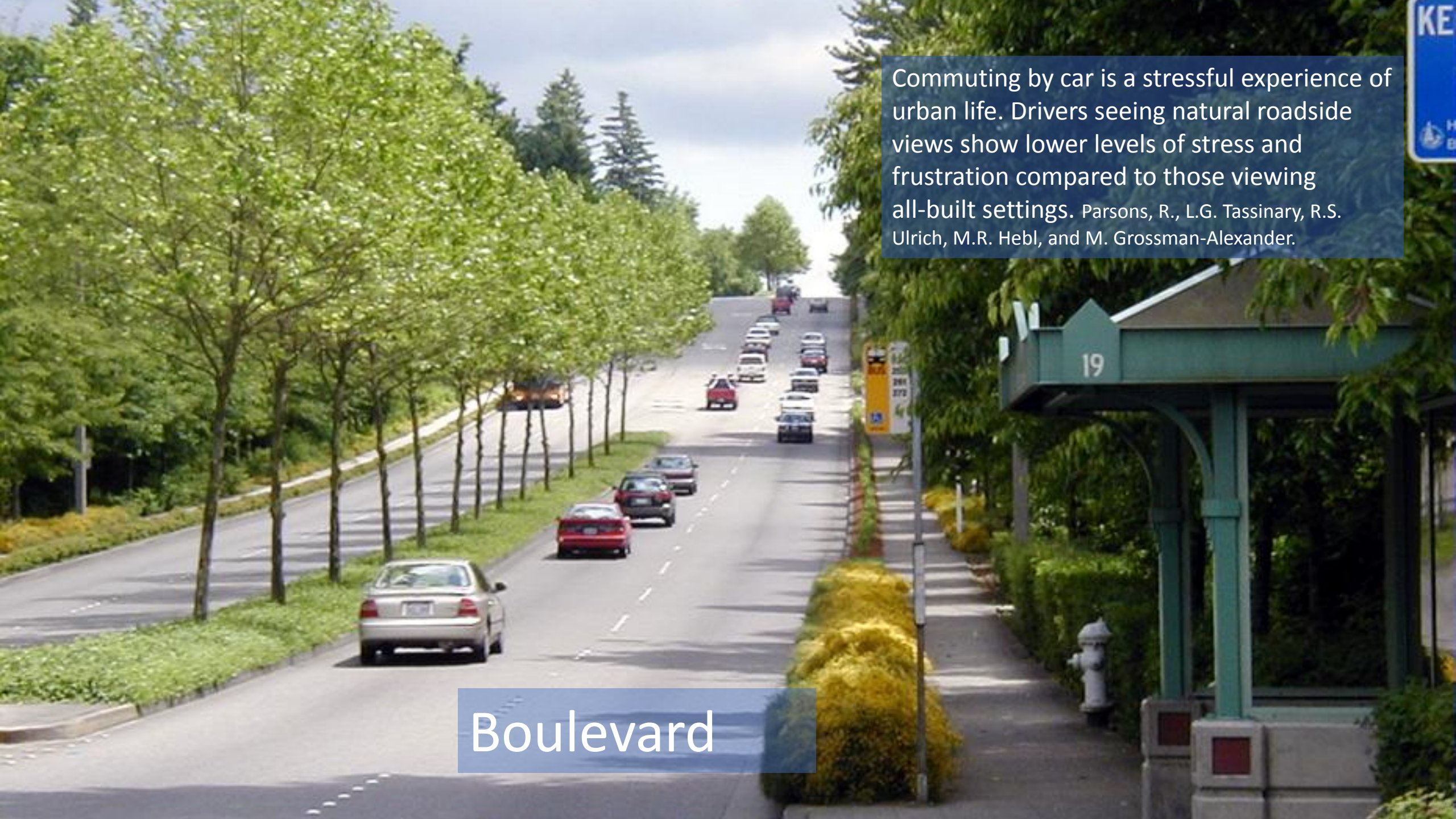
IMAGE LOCATION:
WAIKIKI, HONOLULU,
HAWAII





Boulevard

Bridgeport Way, University Place, Washington



Commuting by car is a stressful experience of urban life. Drivers seeing natural roadside views show lower levels of stress and frustration compared to those viewing all-built settings. Parsons, R., L.G. Tassinary, R.S. Ulrich, M.R. Hebl, and M. Grossman-Alexander.

Boulevard

