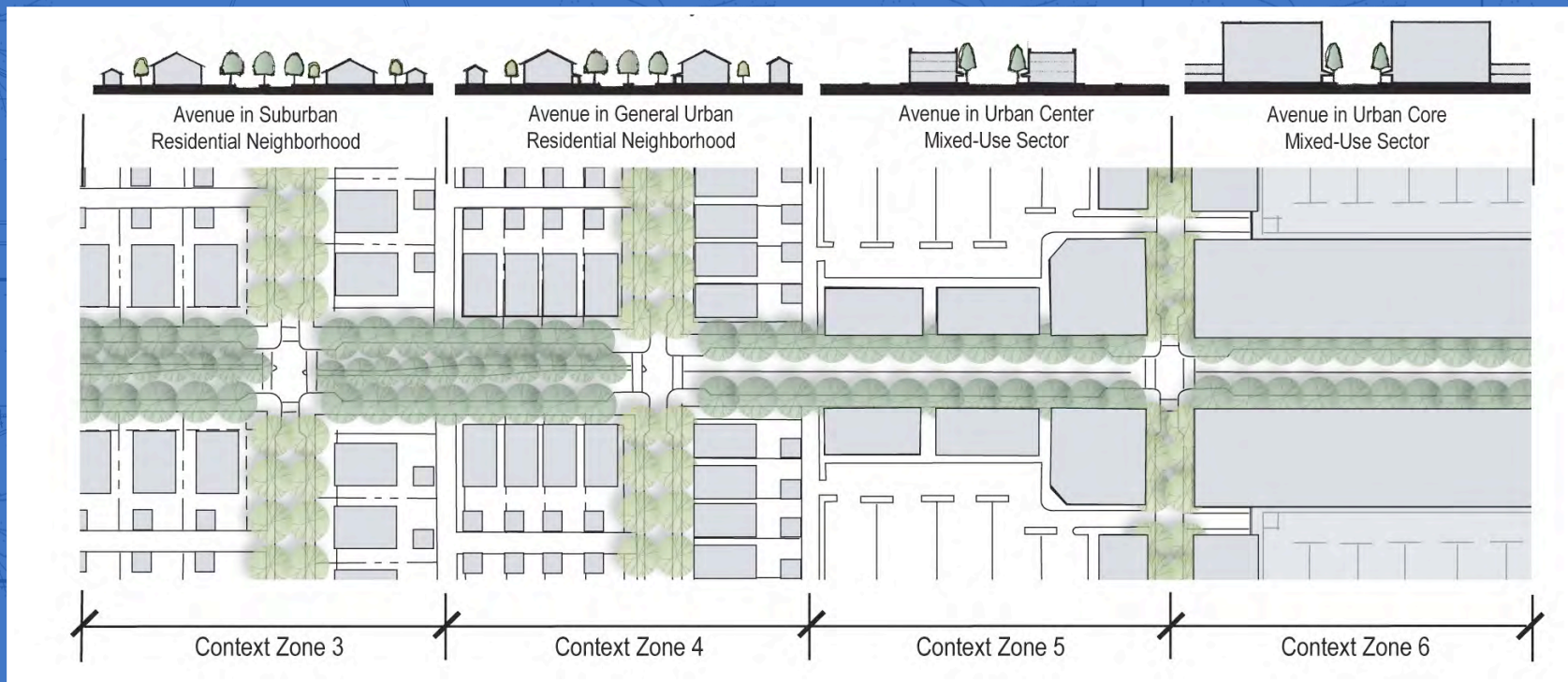


Comparison of 3 Manuals

- ITE/CNU Major Urban Thoroughfares
- Liveable Neighbourhoods Street Design
 - Manual for Streets



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Objectives of the Manuals

<p>ITE/CNU Major Urban Thoroughfares</p>	<ul style="list-style-type: none">• Describe CSS and apply it to major urban streets• Balance needs of modes• Define street & context types and how to apply them• Provide design criteria for design of key elements (within AASHTO flexibility)
<p>Liveable Neighbourhoods Street Design</p>	<ul style="list-style-type: none">• Tool to assist evaluation of and planning for livable neighborhoods• Support implementation of walkable neighborhoods• Provide more detailed guidance for<ul style="list-style-type: none">–Link with urban design–Street layout & design–Traffic management
<p>Manual for Streets</p>	<ul style="list-style-type: none">• Improve the design of streets to support sustainable, inclusive, mixed communities• Focus on ‘lightly-trafficked’ residential streets• Assist in creating streets for all users• Create streets that are part of a well-connected network

Intended Users of Document

ITE/CNU Major Urban Thoroughfares	<ul style="list-style-type: none">• Transportation/civil engineers• Transportation planners• Land use planners• Design professionals• Architects, urban designers, landscape• Stakeholders• Elected officials, agencies, developers, citizens
Liveable Neighbourhoods Street Design	<ul style="list-style-type: none">• Public planners and traffic engineers• Private (designing) planners and traffic engineers
Manual for Streets	<ul style="list-style-type: none">• Broad range of private and public organizations and authorities• Traffic engineers, designers, and broad range of professionals• All groups with a stake in the design of streets

How do they address some key issues?

	Address Network	Lane Width	Number of Lanes
ITE/CNU Major Urban Thoroughfares	Not very well	10-11 ft In commercial areas - 10-12 ft	Boulevard - 4-6 Avenue - 2-4
Liveable Neighborhoods Street Design	Very well A major focus	Distributor - determined by Authority Integrator - 10.5-11.5 ft Connector - 9.5 ft Access - 9.0 ft	Distributor - 4-6 Integrator - 2-4 Connector - 2 Access - 1-2
Manual for Streets	Relatively detailed design discussion	Appropriate to context & use With no parking - 11.5 ft carriageway Fire wants 12 ft carriageway	N.A.

Distinguishing Guidance

<p>ITE/CNU Major Urban Thoroughfares</p>	<ul style="list-style-type: none">• Focus on major thoroughfares• Linkage to context zones
<p>Liveable Neighbourhoods Street Design</p>	<ul style="list-style-type: none">• Network Guidance
<p>Manual for Streets</p>	<ul style="list-style-type: none">• Place & Movement Approach• Design Details

Place & Movement Matrix

- Manual for Streets



Lane Width - swept path analysis

- Manual for Streets

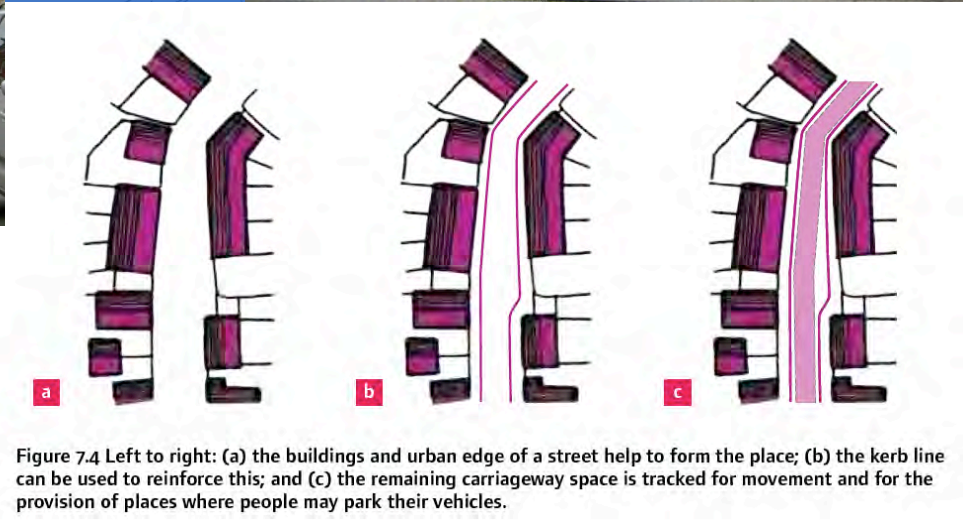


Figure 7.4 Left to right: (a) the buildings and urban edge of a street help to form the place; (b) the kerb line can be used to reinforce this; and (c) the remaining carriageway space is tracked for movement and for the provision of places where people may park their vehicles.

Intersection Design - Place Design

- Manual for Streets

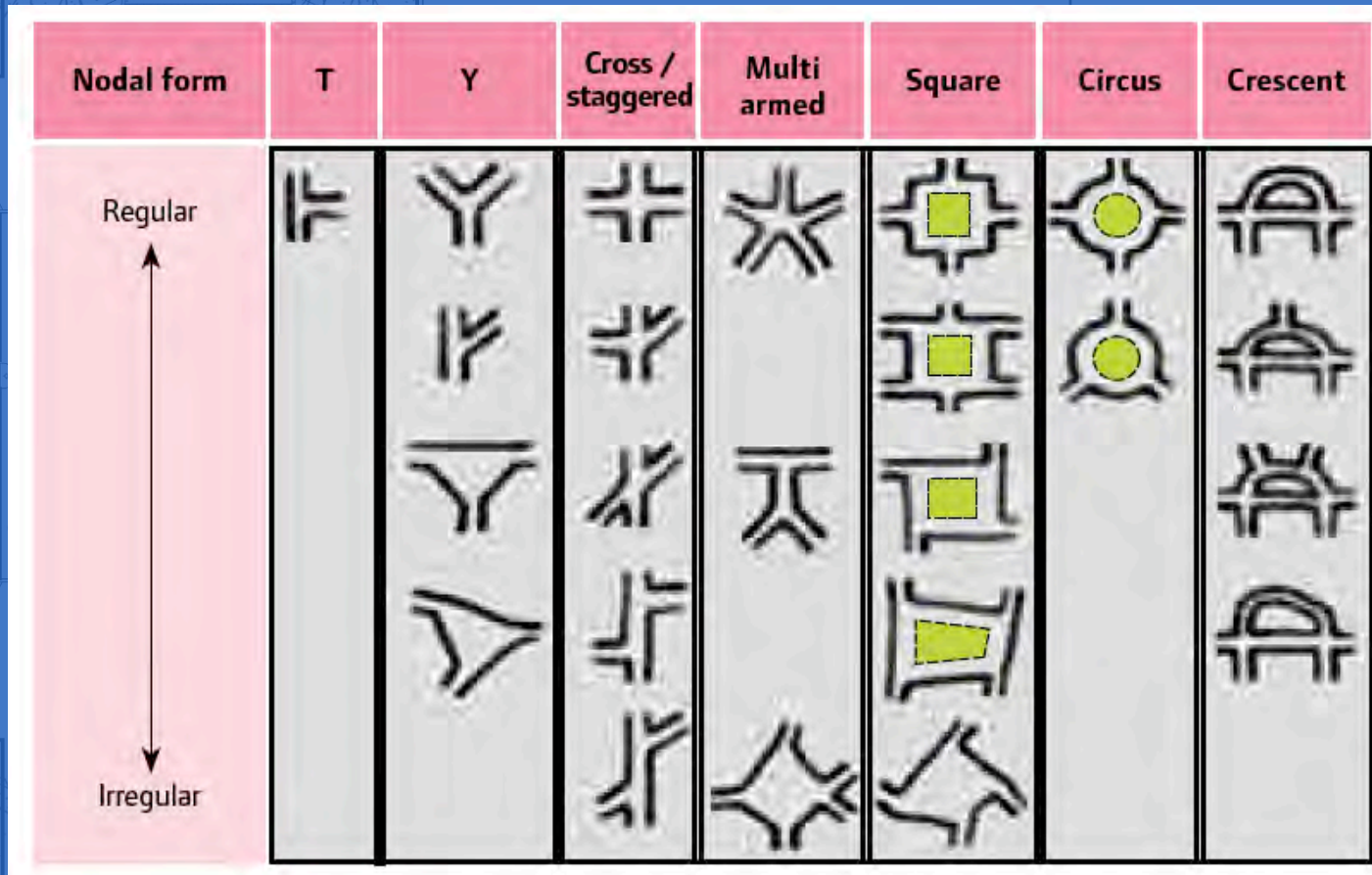
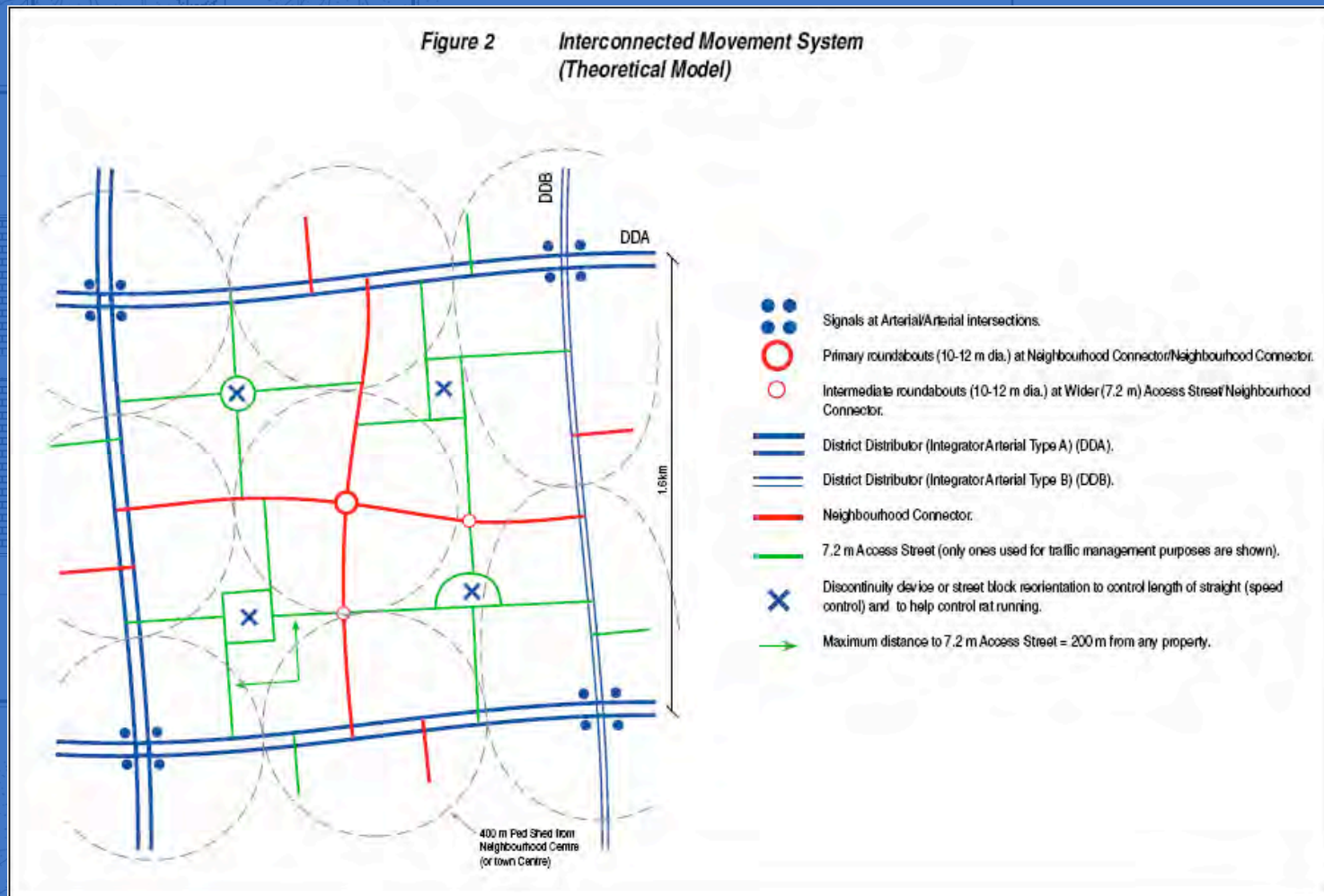


Fig. 7.9 Illustrative junction layouts.

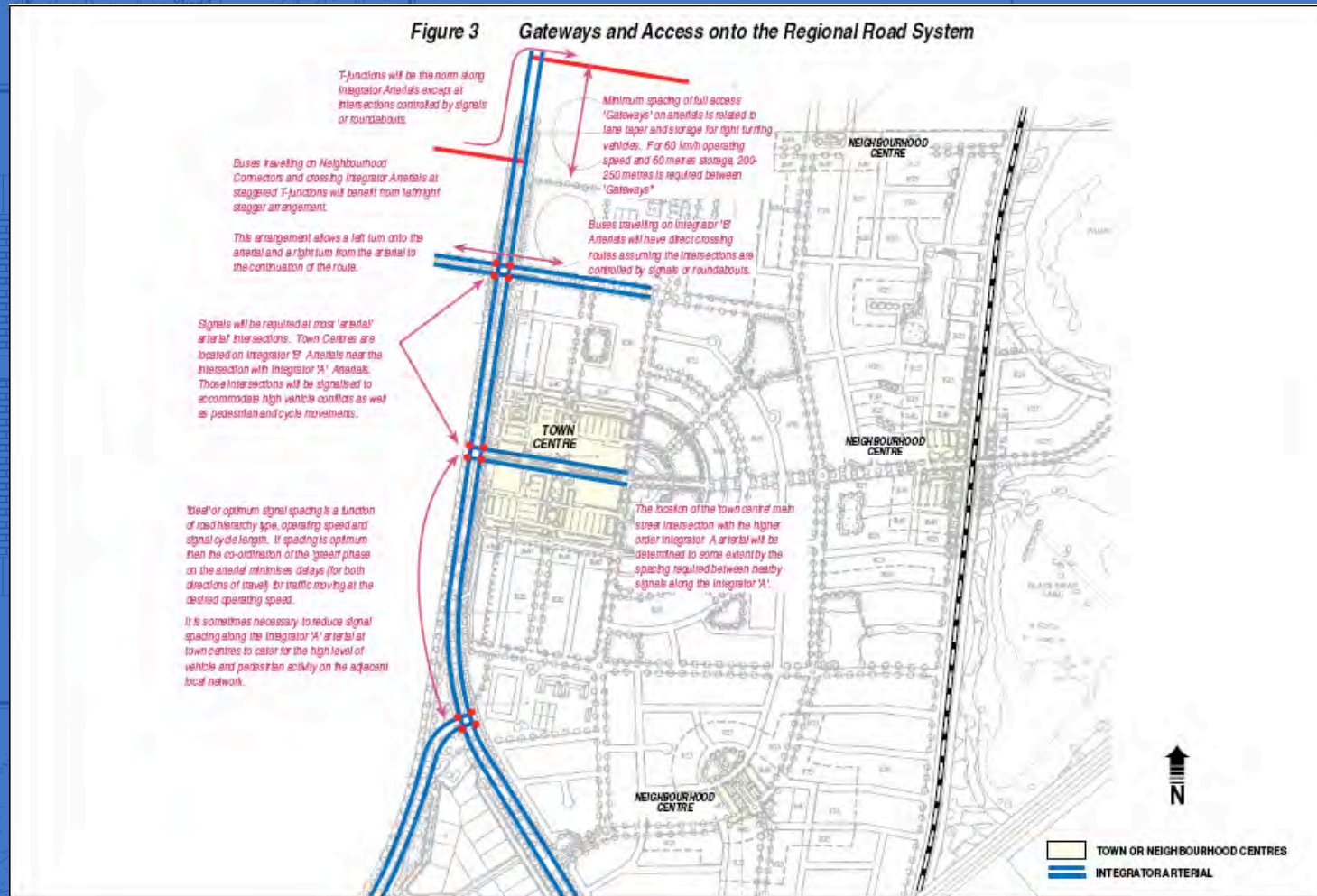
Network Definition & Guidelines

- Liveable Neighbourhoods Street Design



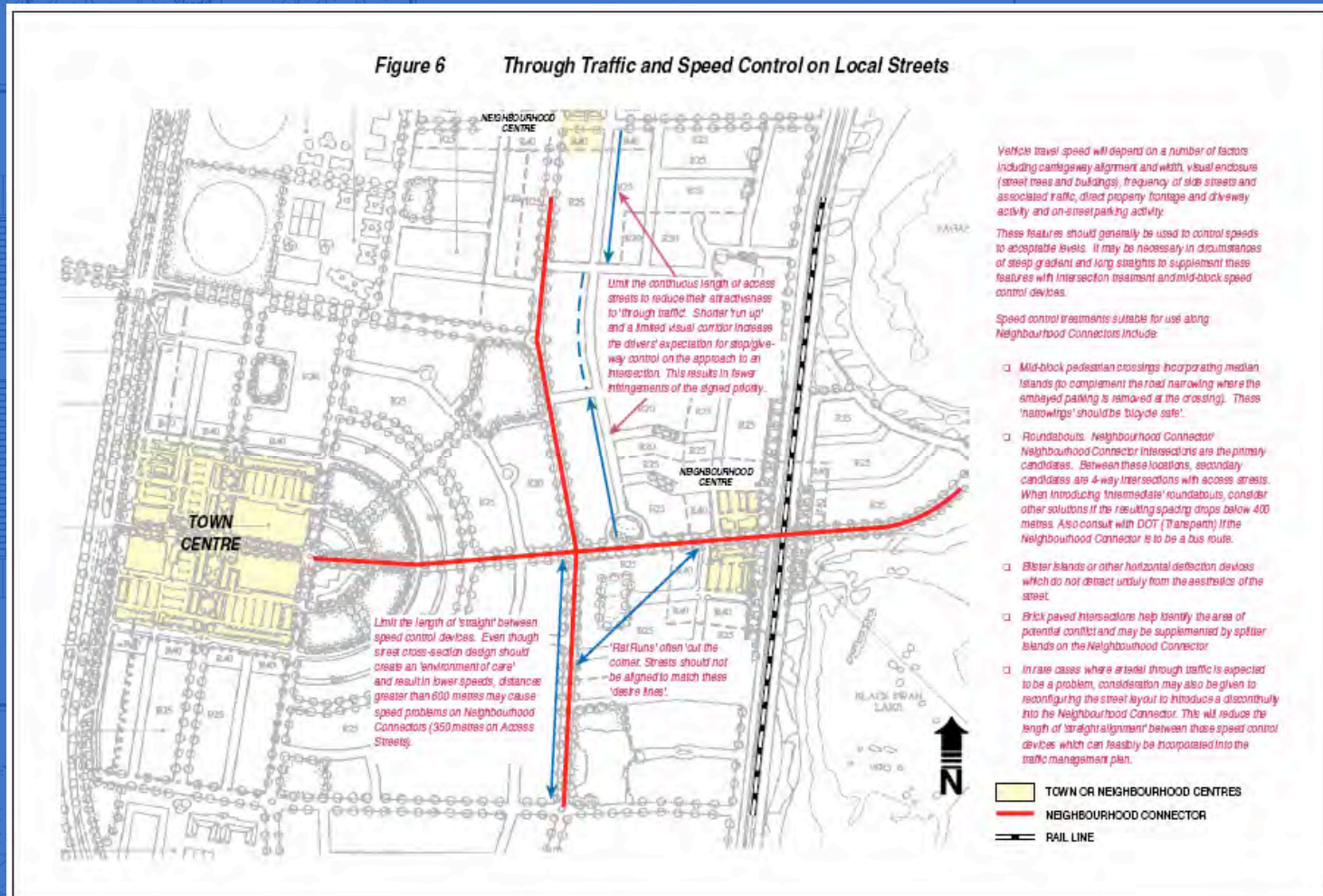
Network Definition & Guidelines

- Liveable Neighbourhoods Street Design



Network Definition & Guidelines

- Liveable Neighbourhoods Street Design



Network Definition & Guidelines

- Liveable
Neighbourhoods
Street Design

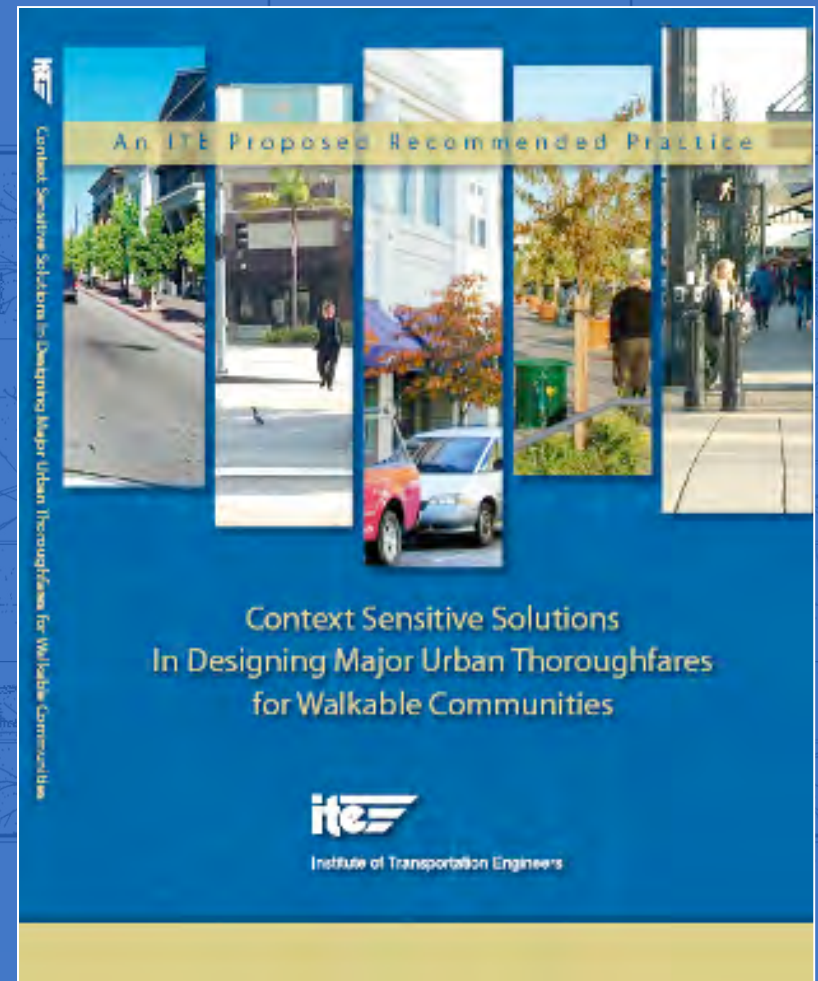


KEY

- 1 Integrator A – with service roads
- 2 Neighbourhood connector A or B
- 3 Access street A – Avenue
- 4 Access street B – Wider access street
- 5 Access street C – Yield (or give way) street
- 6 Access street D – Narrow yield (or give way) street
- 7 Rear lane

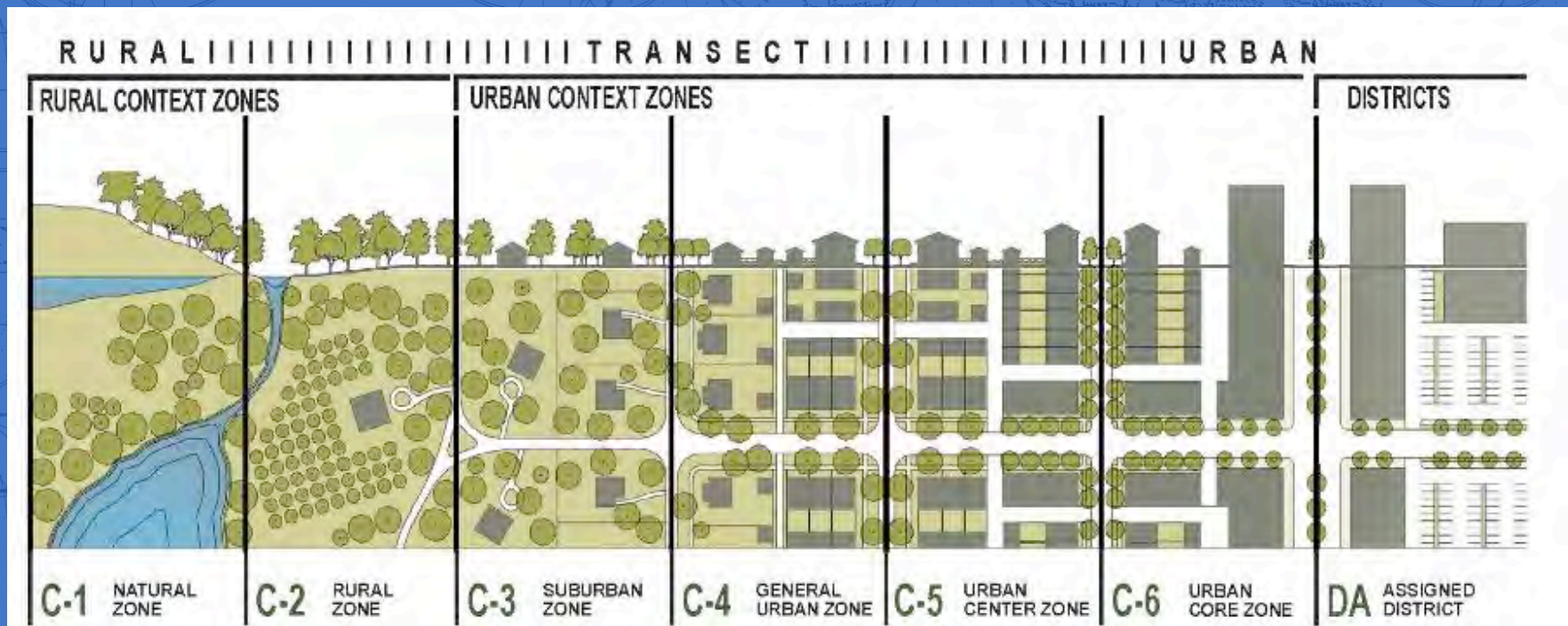
Communities and Practitioners Want

- Flexibility
- Compatibility with adjacent land uses
- Balanced land use/transportation functions
- Support for adjacent activity
- Multimodal facilities
- Streets that are quality public space



Context Zones – the Organizing System

- Classifies different parts of cities emphasizing characteristics/design criteria that create walkable communities



Source: Duany Plater-Zyberk and Company

Context Zones - the Organizing System

Table 4.1 Context Zone Characteristics

Context Zone	Distinguishing Characteristics	General Character	Building Placement	Frontage Types	Typical Building Height	Type of Public Open Space
C-1 Natural	Natural landscape	Natural features	Not applicable	Not applicable	Not applicable	Natural open space
C-2 Rural	Agricultural with scattered development	Agricultural activity and natural features	Large setbacks	Not applicable	Not applicable	Agricultural and natural
C-3 Suburban	Primarily single family residential with walkable development pattern and pedestrian facilities, dominant landscape character	Detached buildings with landscaped yards	Varying front and side yard setbacks	Lawns, porches, fences, naturalistic tree planting	1 to 2 story with some 3 story	Parks, greenbelts
C-4 General Urban	Mix of housing types including attached units, with a range of commercial and civic activity at the neighborhood and community scale	Predominantly detached buildings, balance between landscape and buildings, presence of pedestrians	Shallow to medium front and side yard setbacks	Porches, fences	2 to 3 story with some variation and few taller workplace buildings	Parks, greenbelts
C-5 Urban Center	Attached housing types such as townhouses and apartments mixed with retail, workplace, and civic activities at the community or sub-regional scale.	Predominantly attached buildings landscaping within the public right-of-way, substantial pedestrian activity	Small or no setbacks, buildings oriented to street with placement and character defining a street wall	Stoops, dooryards, storefronts, arcaded walkways	3 to 5 story with some variation	Parks, plazas and squares, boulevard median landscaping
C-6 Urban Core	Highest-intensity areas in sub-region or region, with high-density residential and workplace uses, entertainment, civic and cultural uses	Attached buildings forming sense of enclosure and continuous street wall landscaping within the public right-of-way, highest pedestrian and transit activity	Small or no setbacks, building oriented to street, placed at front property line	Stoops, dooryards, forecourts, storefronts, arcaded walkways	4+ story with a few shorter buildings	Parks, plazas, and squares, boulevard median landscaping
Districts	To be designated and described locally, districts are areas that are single-use or multi-use with low-density development pattern and vehicle mobility priority thoroughfares. These may be large facilities such as airports, business parks and industrial areas.					

(Based on transect zone descriptions in SmartCode V-6.5, Spring 2005 Credit: Duany Plater-Zyberk & Company.)

Shaded cells represent context zones that are not addressed in this report.

CSS vs. Conventional Design Approach

- Conventional

- Context:

- Urban or rural

- Design criteria based on:

- Functional class
 - Design speed
 - Travel demand forecasts
 - Level of service objectives

- CSS Approach

- Four urban contexts:

- Suburban, General Urban, Urban Center, Urban Core

- Features that create context


- Design criteria based on:

- Community objectives
 - Thoroughfare type
 - Functional class
 - Adjacent land use

Thoroughfare Types

Table 4.3 Relationship Between Functional Classification and Thoroughfare Type

Functional Classification	Thoroughfare Types						
	Freeway/expressway/ Parkway	Rural Highway	Boulevard	Avenue	Street	Rural Road	Alley/rear Lane
Principal Arterial							
Minor Arterial							
Collector							
Local							

 Correspondence between Functional Class and Thoroughfare Type.
 Shaded cells represent thoroughfare types that are not addressed in this report.

Thoroughfare Types

Table 4.4 Urban Thoroughfare Characteristics

Urban Thoroughfare Type	Number of Through Lanes	Design Speed (mph)	Operating Speed (mph)	Intersection Spacing [1]	Transit Service Emphasis	Median	Driveway Access	Curb Parking	Pedestrian Facilities [2]	Bicycle Facilities	Freight Mvmt. [3]
FREEWAY	4 to 6+	50-70	45-65	1 to 2 miles	Express	Required	No	No	No	Optional Separated Pathway	Regional Truck Route
EXPRESSWAY/PARKWAY	4 to 6	50-60	45-55	1/2 to 1 mile	Express	Required	No	No	Optional Separated Pathway	Optional Separated Pathway	Regional Truck Route
BOULEVARD	4 to 6	35-40	30-35	660 to 1,320 ft.	Express and Local	Required	Limited	Optional	Sidewalk	Bike Lanes or Parallel Route	Regional Truck Route
MULTIWAY BOULEVARD	4 to 6	30-40 (20 in access lanes)	25-35	660 to 1,320 ft. (400 to 660 ft. for access lanes)	Express and Local	Required	Yes from access lane	Yes on access roadway	Sidewalk		Regional Route/Local deliveries only on access roadway
AVENUE	2 to 4	30-35	25-30	300 to 660 ft.	Local	Optional	Yes	Yes	Sidewalk		Local Truck Route
STREET	2	30	25	300 to 660 ft.	Local	Optional	Yes	Yes	Sidewalk		Local Deliveries Only
ALLEY/REAR LANE	1	10	5	Not Applicable	None	No	Yes	No	Shared	Shared	Local Deliveries Only

Intersection Design

- Avoiding large undefined open spaces

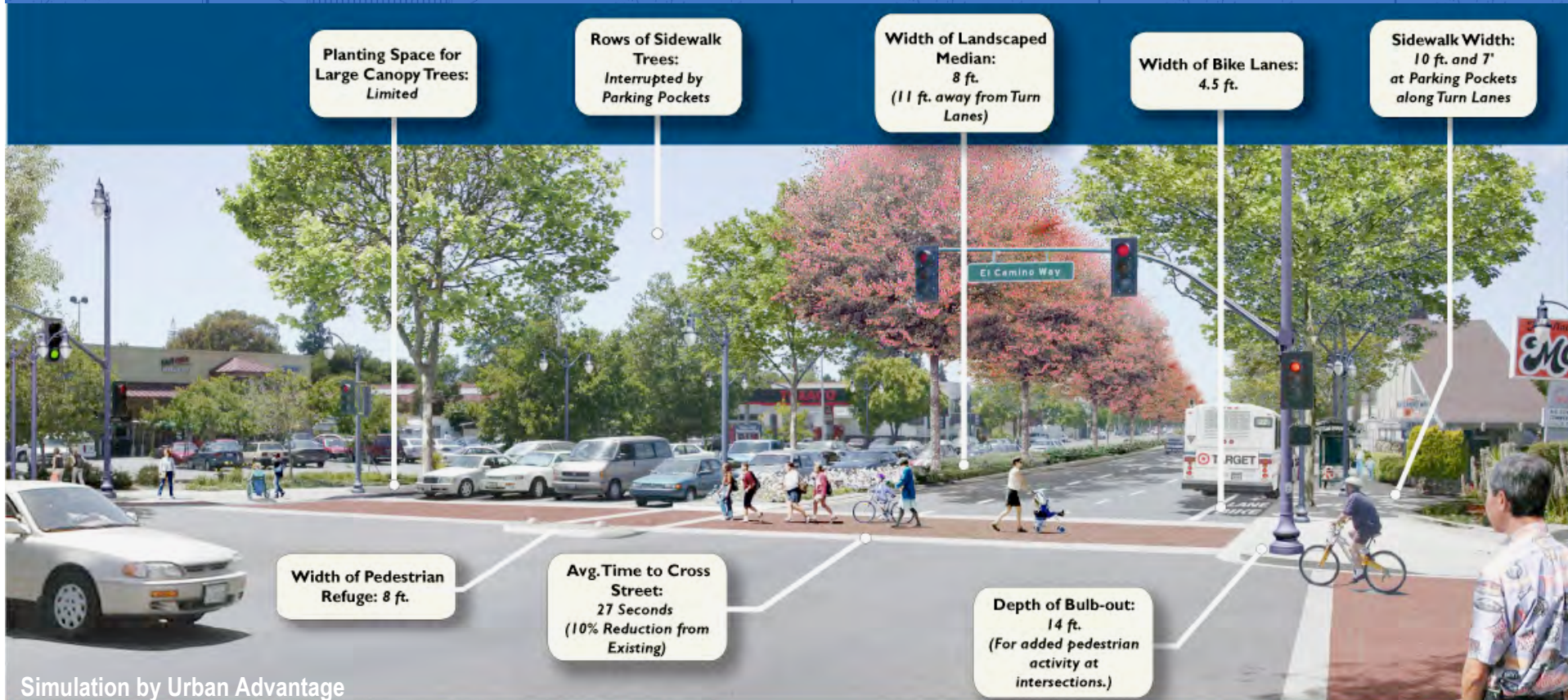


El Camino Real @ Los Robles – EXISTING CONDITIONS

Palo Alto, California

Intersection Design

- Creating opportunities to improve context



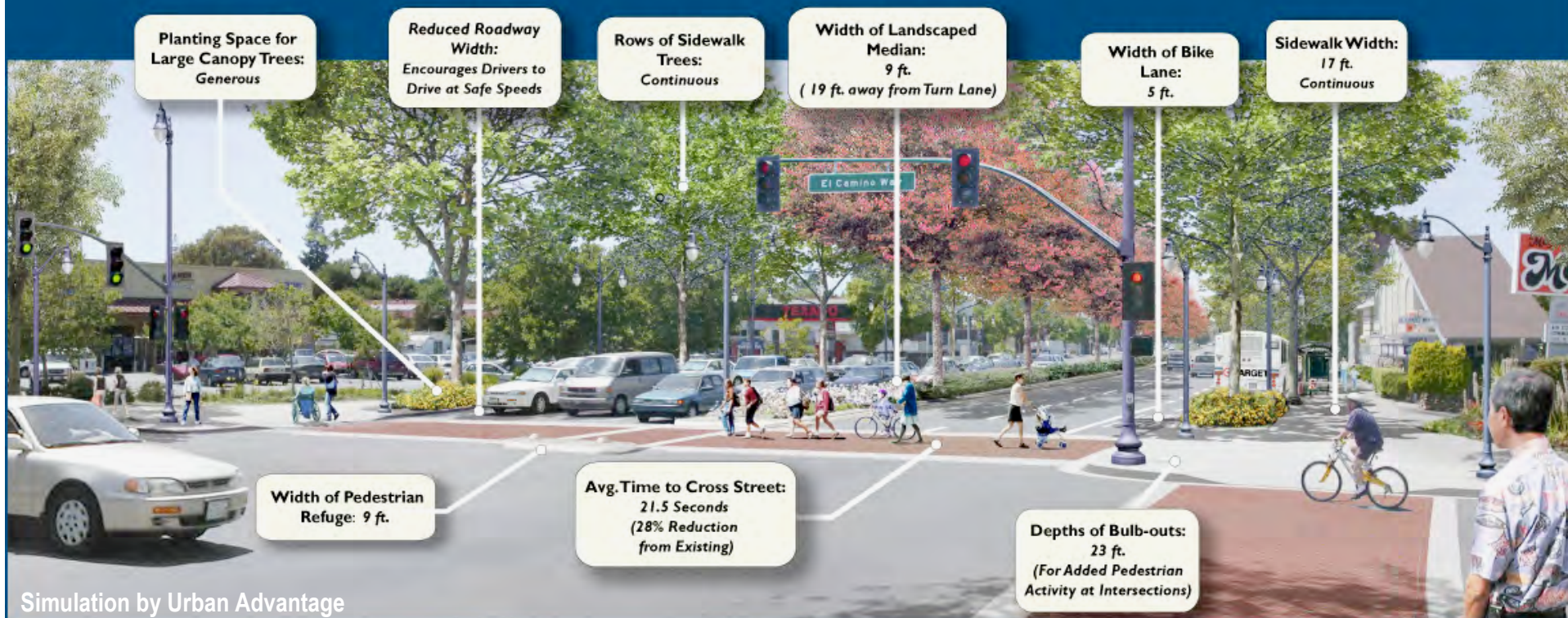
Simulation by Urban Advantage

El Camino Real @ Los Robles – PROPOSED IMPROVEMENTS - 6 Lane

Palo Alto, California

Intersection Design

- Creating opportunities to narrow roads

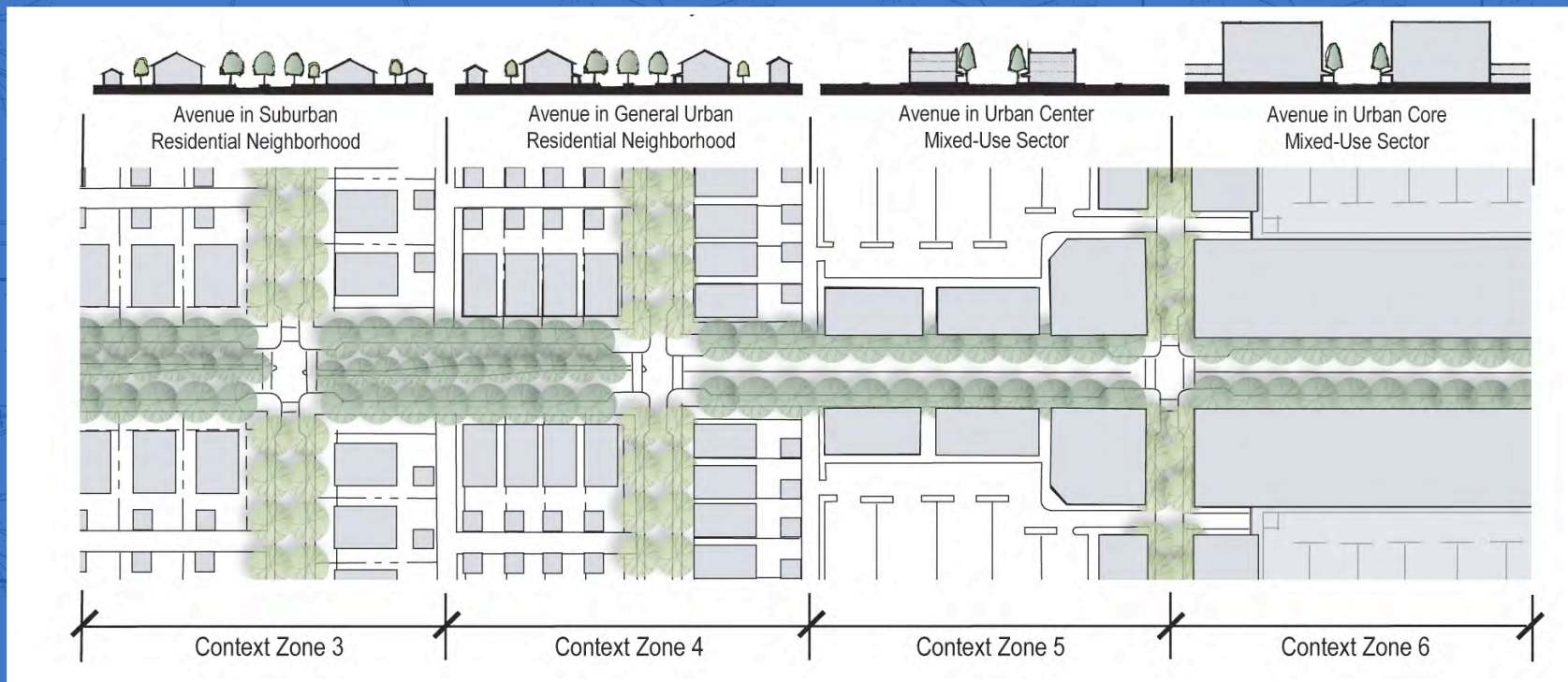


El Camino Real @ Los Robles – PROPOSED IMPROVEMENTS - 4 Lane

Palo Alto, California

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