PROJETAR 2009
Universidade Presbiteriana Mackenzie, Sao Paulo, Brasil

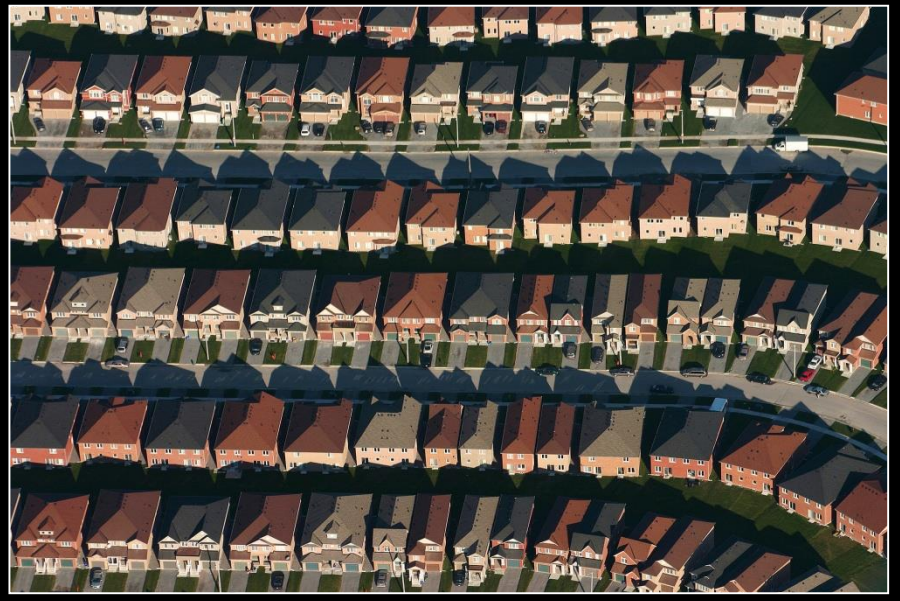
New Urbanism, Smart Growth e LEED-ND: Novos Rumos para o Projeto Urbano nos EUA e seus Ensinamentos para o Brasil

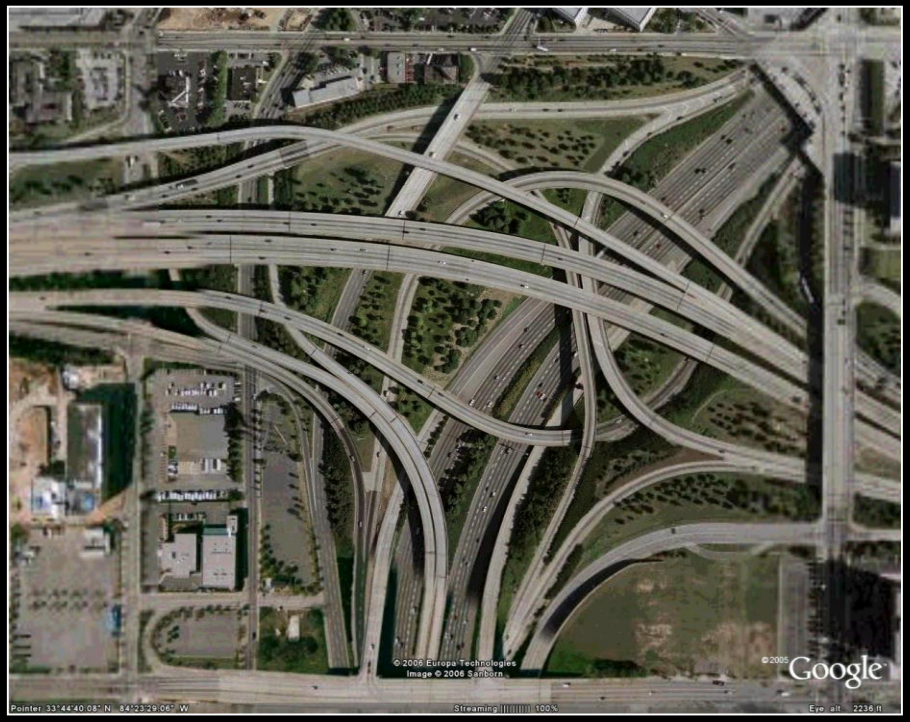
Vicente del Rio
PhD; professor titular; Cal Poly San Luis Obispo

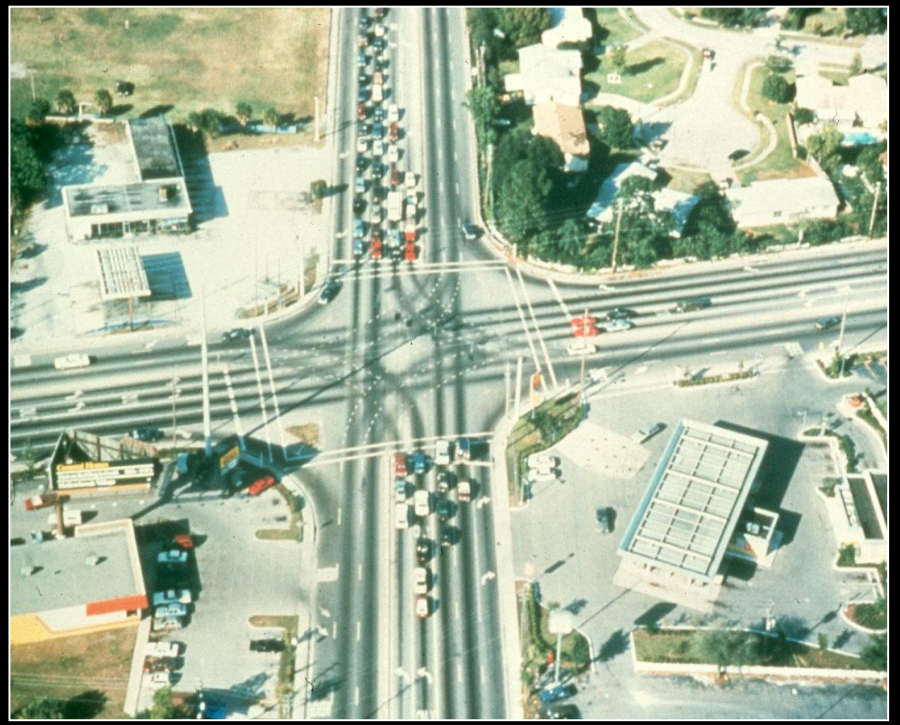
Paulo Afonso Rheingantz
PhD; professor associado; FAU-UFRJ

Scott Kaiser
Aluno, graduação em planejamento; Cal Poly San Luis Obispo


real
© All Rights Reserved




© 2008 Europa Technologies
Image © 2008 Sanborn
©2005 Google
Pointer 33°44'40.08" N 84°23'29.06" W
Streaming 100%
Eye alt 2236 ft



New Urbanism

“Giving physical shape to communities”

• sentido de comunidade
• cidade objeto de projeto
• escala do pedestre
• meio ambiente

Neo-Traditional Design (1990)

Ahwahnee Principles (1991)

Transit Oriented Development (TOD)

Influências intelectuais:

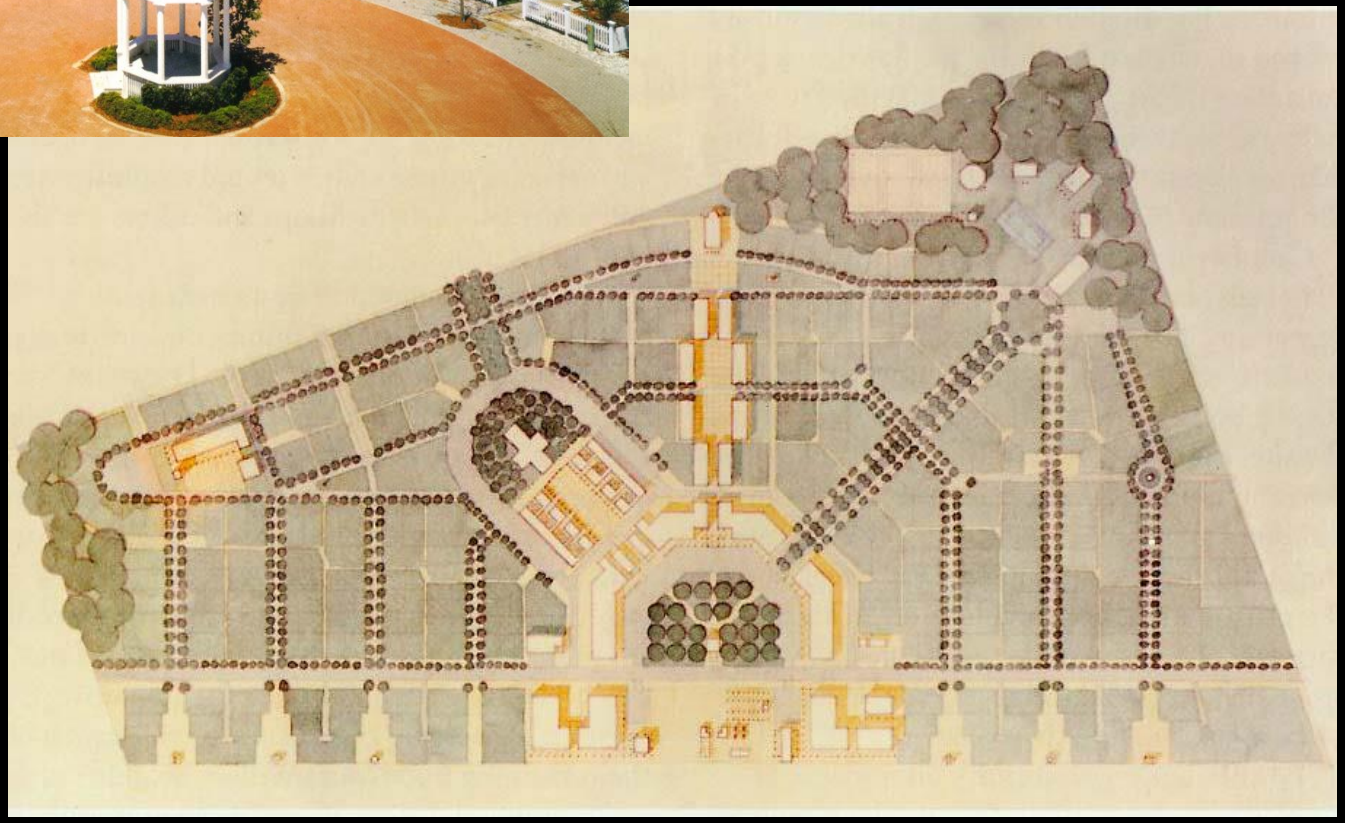
• *Contextualismo (Europa)*
• *Neo-Vernacular (Europa y US)*
• *Urbanismo de princípios do século (US)*

Traditional Neighborhood Development (TND)

Seaside

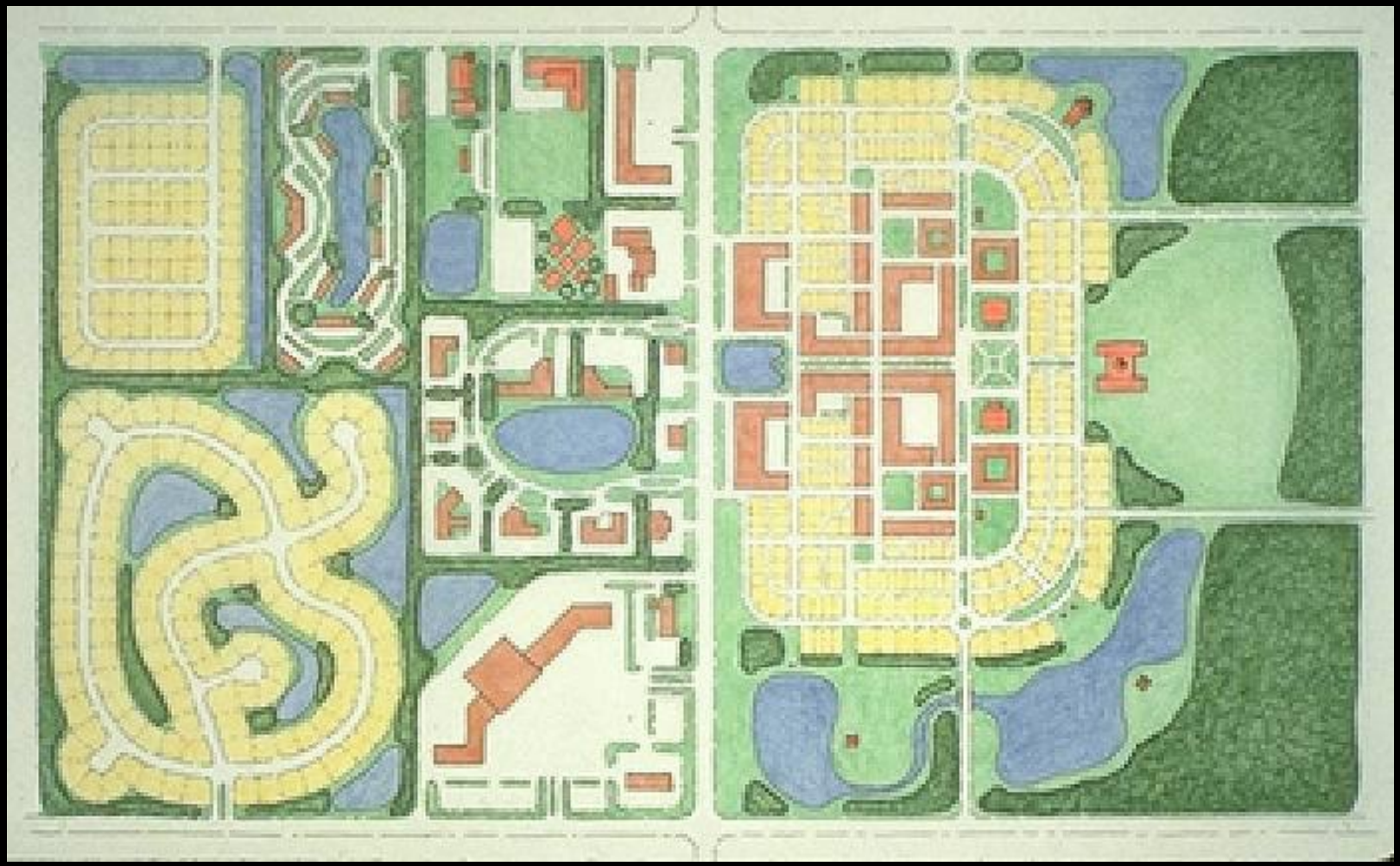
Florida 1981

DPZ

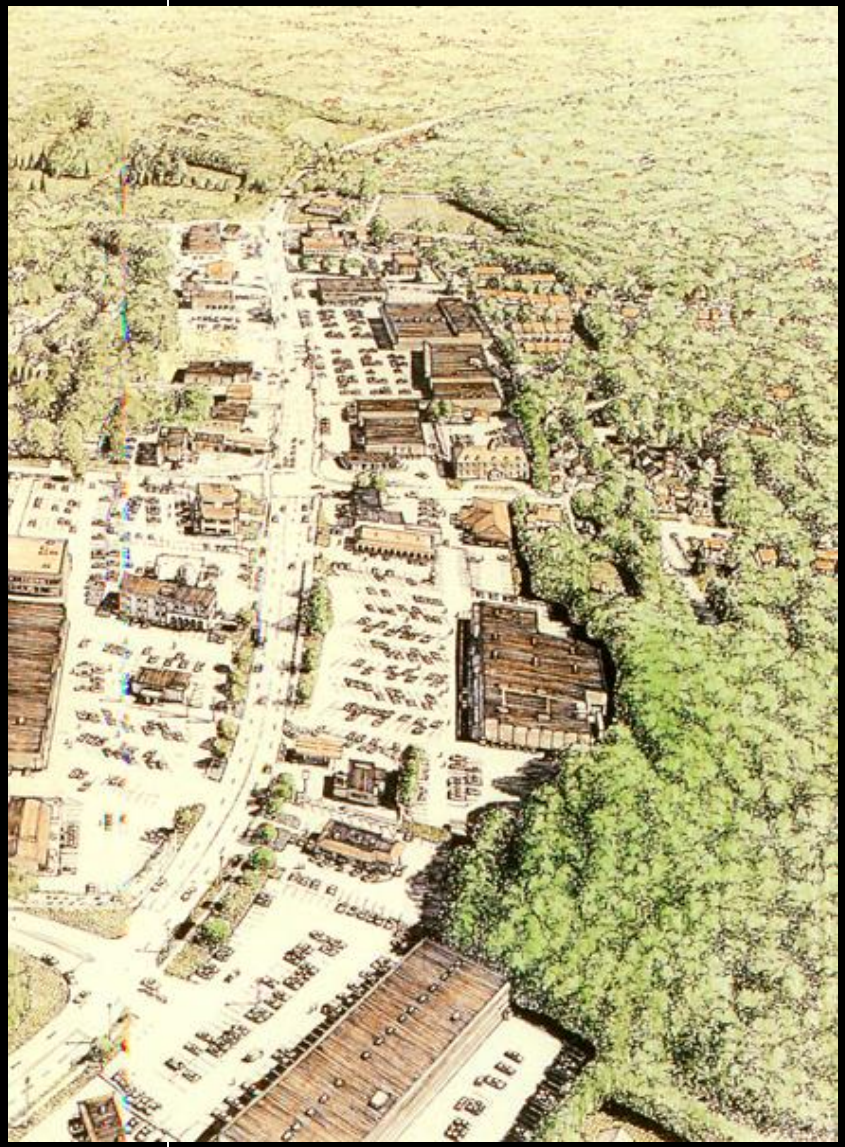


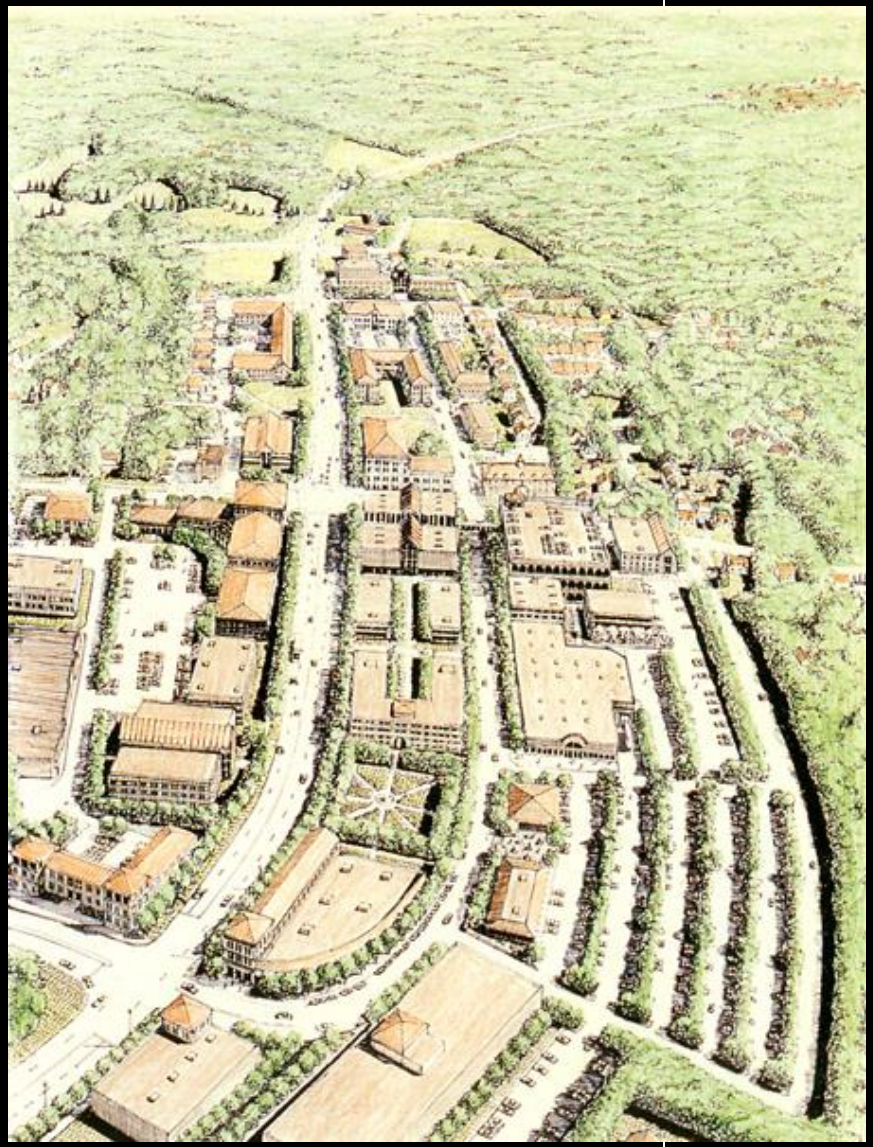
Tradicional

Neo-Traditional / New Urbanist

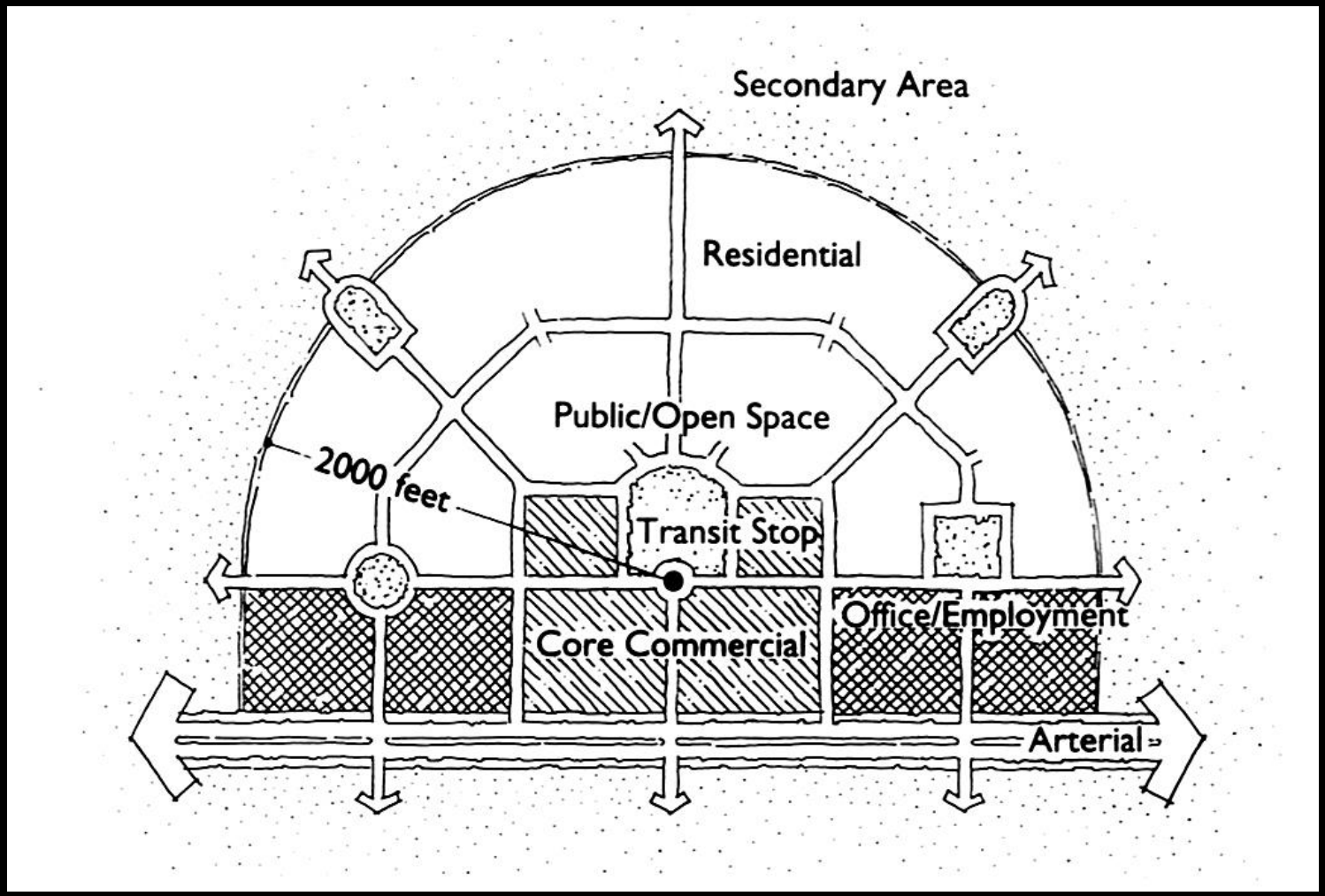


Estudio del Regional Planning Association, Nueva York 1990





Transit Oriented Development *(TOD)*



Peter Calthorpe

New Jersey State Development and Redevelopment Plan, 1992

Congress for the New Urbanism *(1993)*

Carta do Novo Urbanismo *(1996)*

Objetivos:

- sensibilidade ambiental
- responsabilidade social
- sustentabilidade econômica

27 princípios:

Escala 1
Region: Metropolis, Cidade

Escala 2
Bairro, Distrito, Corredor

Escala 3
Quadra, Rua, Edificação

Smart Growth Principles *(2001)*

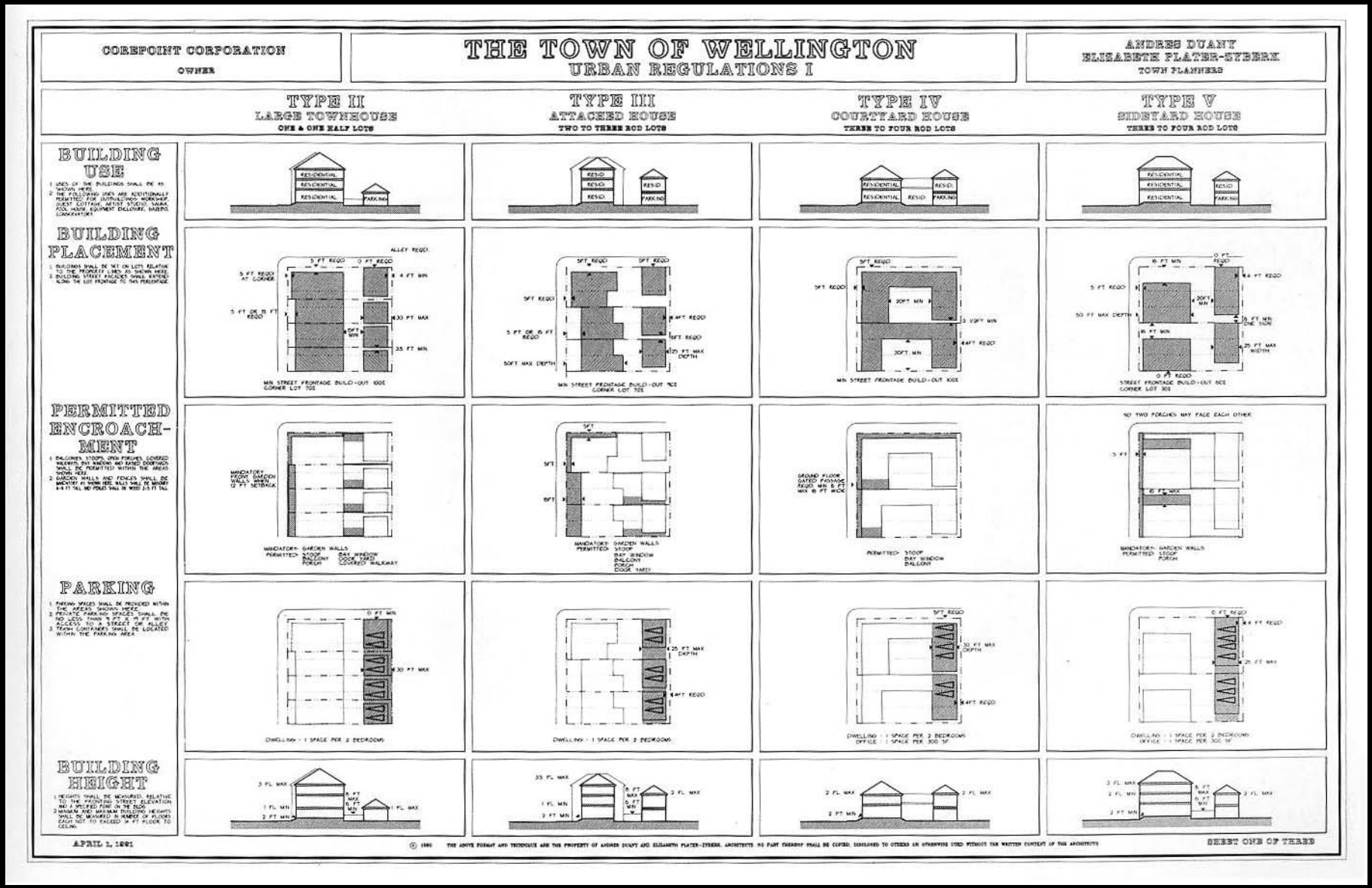
EPA – Environmental Protection Agency (EPA)

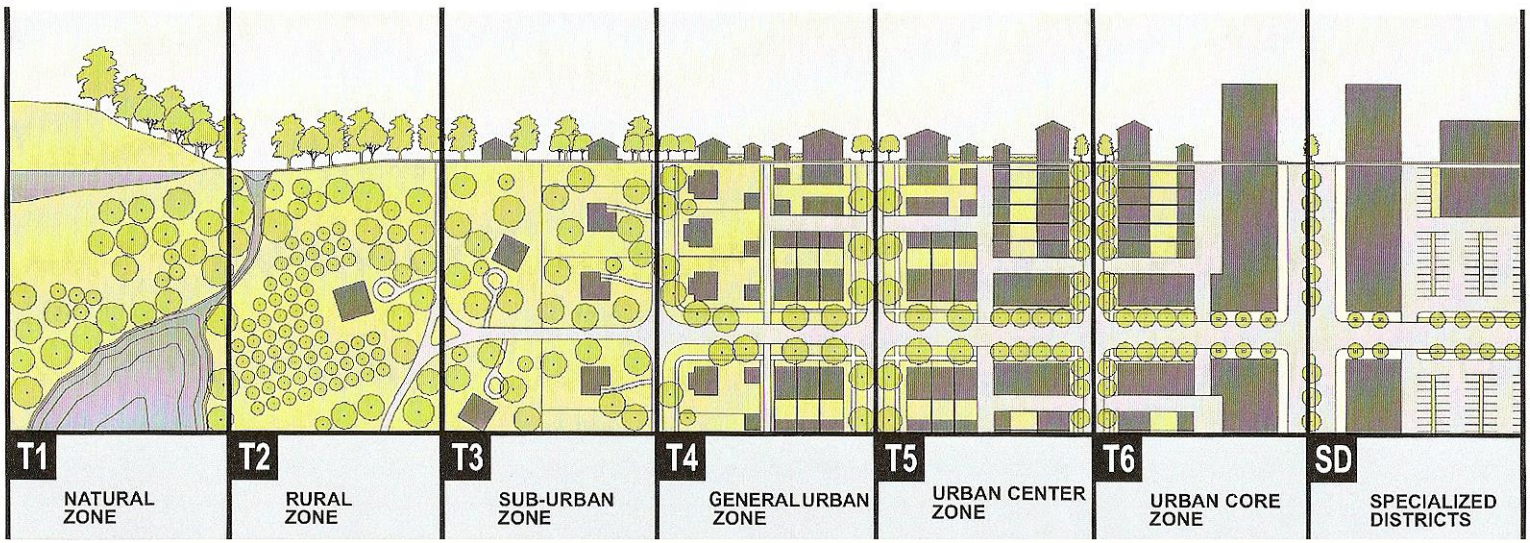
International City/County Management Association (ICMA)

Smart Growth Network (32 organizações)

1. **Mescla de usos do solo**
2. **Projetos arquitetônicos compactos**
3. **Amplas alternativas e possibilidades habitacionais**
4. **Bairros “walkable” (que possam ser percorridos a pé)**
5. **Comunidades distintas e atrativas, com forte sentido do lugar**
6. **Espaços livres, terra agriculturável, belezas naturais, e areas ambientais críticas**
7. **Fortalecer e direcionar o desenvolvimento para as comunidades existentes**
8. **Variedade de alternativas de transporte**
9. **Decisões de desenvolvimento previsíveis, justas, e econômicamente custo eficientes**
10. **Colaboração da comunidade e das partes afetadas no processo decisório**

DESIGN GUIDELINES: Códigos urbanísticos





LESS DENSITY	MORE DENSITY
PRIMARILY RESIDENTIAL USE	PRIMARILY FLEXIBLE USE
SMALLER BUILDINGS	LARGER BUILDINGS
MOST BUILDINGS DETACHED	MOST BUILDINGS ATTACHED
ROTATED FRONTAGES	ALIGNED FRONTAGES
ARTICULATED MASSING	SIMPLE MASSING
WOODEN BUILDINGS	MASONRY BUILDINGS
PITCHED ROOFS	FLAT ROOFS
OVERHANGING EAVES	TAUT CORNICES
DEEP SETBACKS	SHALLOW SETBACKS
FENCES	STREET WALLS
LOCAL GATHERING PLACES	REGIONAL INSTITUTIONS
ROAD & LANE SECTIONS	STREET & ALLEY SECTIONS
PATHS & TRAILS	CROSS-BLOCK PASSAGES
NARROW MOVING LANES	WIDE MOVING LANES
CURVILINEAR TRAJECTORIES	RECTILINEAR TRAJECTORIES
THREE-WAY INTERSECTIONS	FOUR-WAY INTERSECTIONS
OPPORTUNISTIC PARKING	DEDICATED PARKING
LARGER CURB RADIUS	SMALLER CURB RADIUS
NARROW SIDEWALKS	WIDE SIDEWALKS
OPEN SWALES	RAISED CURBS
SPORADIC TASK LIGHTING	EVEN STREET LIGHTING
PICTURESQUE LANDSCAPING	ALLEE PLANTING
MIXED TREE CLUSTERS	SINGLE TREE SPECIES
PARKS & MEADOWS	PLAZAS & SQUARES

Before Streetscape

After Streetscape

Street improvement with curbs, gutters, sidewalks and crosswalk

Proposed brick fence defines clear boundary and creates neatness

URBAN DESIGN

The neighborhood, the district, and the corridor

CHARTER AWARDS 2005

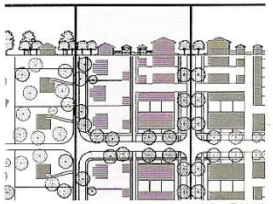
CONGRESS FOR THE NEW URBANISM

SMARTCODE

TABLE 16 BUILDING SCALE CODE

T3

TABLE X SPECIFICATIONS



(see Table 1)

X.F LOT OCCUPATION	
a. Lot Area	5,000 sq. ft. avg.
b. Lot Coverage	60% max

X.H BUILDING DISPOSITION (see Table 9)	
a. Edgeyard	permitted
b. Sideyard	prohibited
c. Rearyard	prohibited
d. Courtyard	prohibited

X.J BUILDING HEIGHT (see Table 8)	
a. Principal Building	2 stories max.
b. Outbuilding	2 stories max.*

X.G BUILDING SETBACK	
a. Front	24 ft. min.
b. Side	6 ft. min.
c. Rear	12 ft. min.**
d. Frontage at Setback	50% min.

X.G OUTBUILDING SETBACK	
a. Front	20 ft. min.
b. Side	3 ft. min.**
c. Rear	3 ft.** or 23 ft.

X.I PRIVATE FRONTAGES (see Table 7)	
a. Common Lawn	permitted
b. Porch & Fence	permitted
c.Terrace or L.C.	prohibited
d. Forecourt	prohibited
e. Stoop	prohibited
f. Shopfront & Awning	prohibited
g. Gallery	prohibited
h. Arcade	prohibited

X.G ENCROACHMENTS	
a. At Bldg. Frontage	12 ft. max.
b. At Bldg. Side	3 ft. max.
b. At Bldg. Rear	0 ft.

X.K BUILDING FUNCTION (see Tables 10 & 11)	
a. Residential	restricted use
b. Lodging	restricted use
c. Office	restricted use
d. Retail	restricted use

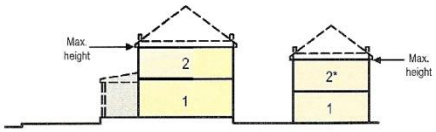
* Minimum at corner lots

** Maximum at corner lots

GRAPHIC SPECIFICATIONS

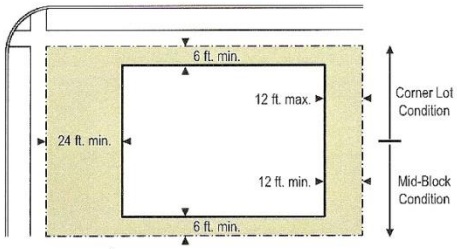
BUILDING HEIGHT

1. Building height shall be measured in number of stories, not including a raised basement, or inhabited attic.
2. Each story shall not exceed 14 ft. clear.
3. Maximum height shall be measured to the eave or roof deck.



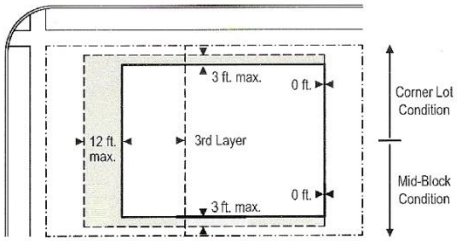
BUILDING DISPOSITION

1. The facades and elevations of a building shall be distanced from the frontage and lot lines as shown.
2. Buildings shall have facades along frontage lines and elevations along lot lines (see Table 16.e).



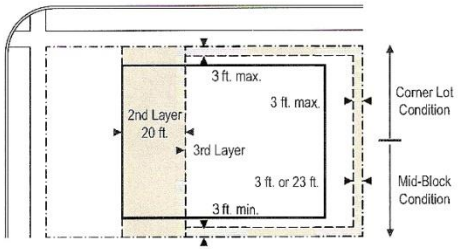
ELEMENT ENCROACHMENTS

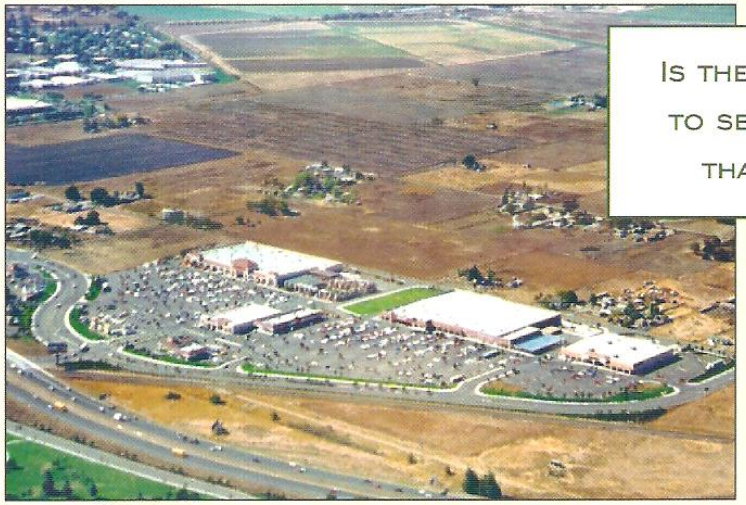
1. Stoops, bay windows, open porches and balconies may be located within the setbacks as shown in the diagram.
2. Utility connections, A/C units and direct-vent fireplaces shall only be located within the 3rd Layer along elevations or in the alley (see Tables 16.d and 16.e).



OUTBUILDING PLACEMENT

1. Uncovered parking spaces may be provided within the 2nd and 3rd Layer as shown in the diagram (see Table 16.d).
2. Covered parking shall be provided within the 3rd Layer as shown in the diagram (see Table 16.d).
3. Trash containers shall be stored within the 3rd Layer as shown in the diagram (see Table 16.d).





Conventional zoning delivers this sprawl.

Is there any reason to settle for less than the best?

A SmartCode delivers this vision.

Adopt a SmartCode. Get the Best Community.

Conventional zoning codes of the last 50 years have given us placeless, auto-oriented sprawl, threatening the vitality of our communities and the health of our environment. The SmartCode is different. When communities adopt a SmartCode, they get a form-based plan

SmartCodes streamline the coding process.

Unlike other form-based codes, which

heights. By using the SmartCode, cities save time and money, and establish a new common zoning language that all citizens, builders and investors can understand.

The clarity, simplicity and strong vision of the SmartCode improves the quality of

LEED-ND *(2007-?)*

Leadership in Energy and Environmental Design for Neighborhood Development

United States Building Council (USBG)
(15.000 entidades da construção civil)

1. Localização e integração

6 prerequisites, 11 itens – total 30 pontos

2. Padrão de vizinhança e de projeto

2 prerequisites, 16 itens – total 39 pontos

3. Constructor Verde e Tecnologia

1 pre-requisito, 20 itens – total 31 pontos

4. Inovação e Processo de Projeto

2 itens – total 6 pontos

Certificado: 40 a 49 pontos

Certificado Silver: 50 a 59 pontos

Certificado Gold: 60 a 79 pontos

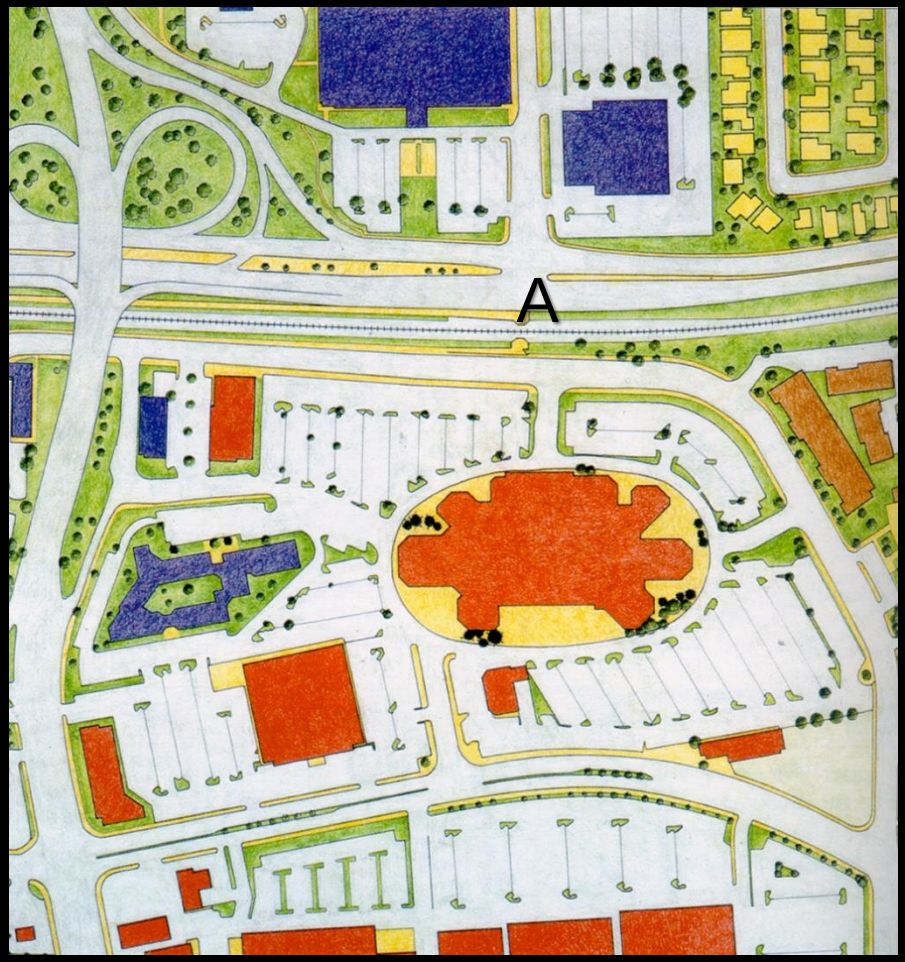
Certificado Platinum: 80 a 106 pontos

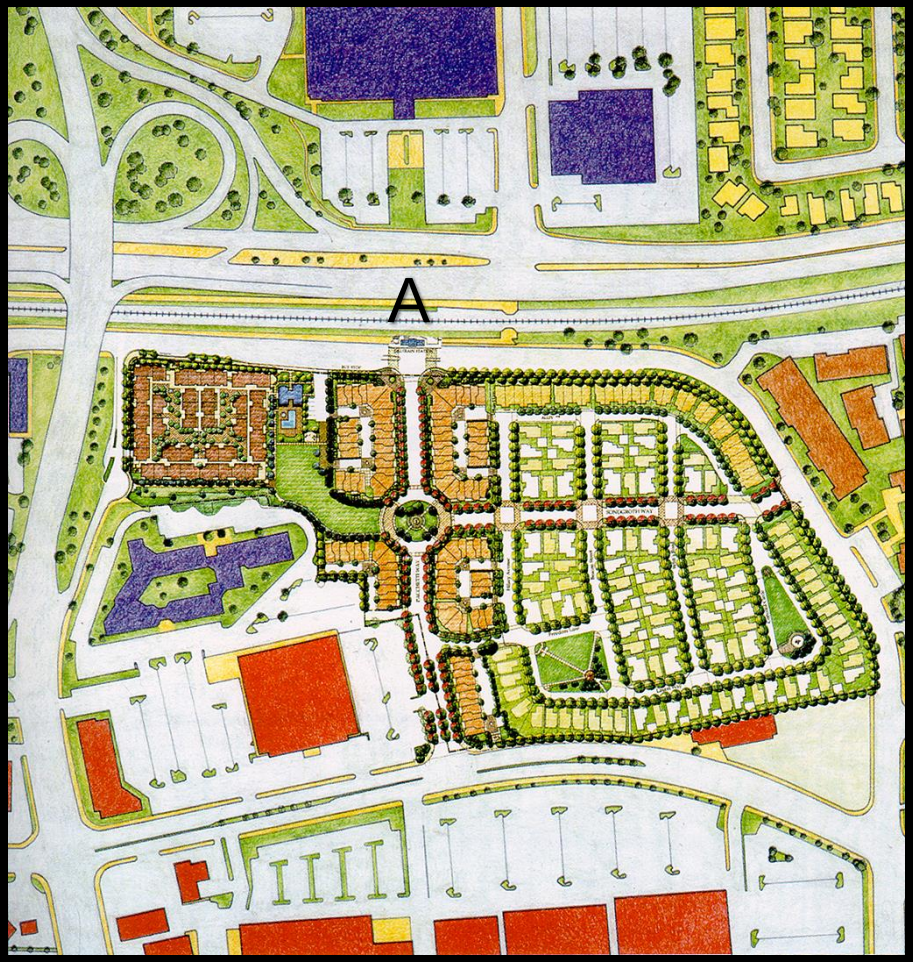
	SMART LOCATION & LINKAGE	[30 POSSIBLE POINTS]
Prereq 1	Smart Location	Required
Prereq 2	Proximity to Water and Wastewater Infrastructure	Required
Prereq 3	Imperiled Species anEcological Communities	Required
Prereq 4	Wetland and Water Body Conservation	Required
Prereq 5	Agricultural Land Conservation	Required
Prereq 6	Floodplain Avoidance	Required
Credit 1	Brownfield Redevelopment	2
Credit 2	High Priority Brownfields Redevelopment	1
Credit 3	Preferred Locations	2-10
Credit 4	Reduced Automobile Dependence	1-8
Credit 5	Bicycle Network	1
Credit 6	Housing and Jobs Proximity	3
Credit 7	School Proximity	1
Credit 8	Steep Slope Protection	1
Credit 9	Site Design for Habitat or Wetlands Conservation	1
Credit 10	Restoration of Habitat or Wetlands	1
Credit 11	Conservation Management of Habitat or Wetlands	1
	NEIGHBORHOOD PATTERN & DESIGN	[39 POSSIBLE POINTS]
Prereq 1	Open Community	Required
Prereq 2	Compact Development	Required
Credit 1	Compact Development	1-7
Credit 2	Diversity of Uses	1-4
Credit 3	Diversity of Housing Types	1-3
Credit 4	Affordable Rental Housing	1-2
Credit 5	Affordable For-Sale Housing	1-2
Credit 6	Reduced Parking Footprint	2
Credit 7	Walkable Streets	4-8
Credit 8	Street Network	1-2
Credit 9	Transit Facilities	1
Credit 10	Transportation Demand Management	2
Credit 11	Access to Surrounding Vicinity	1
Credit 12	Access to Public Spaces	1
Credit 13	Access to Active Public Spaces	1
Credit 14	Universal Accessibility	1
Credit 15	Community Outreach and Involvement	1
Credit 16	Local Food Production	1
	GREEN CONSTRUCTION & TECHNOLOGY	[31 POSSIBLE POINTS]
Prereq 1	Construction Activity Pollution Prevention	Required
Credit 1	Certified Green Buildings	1-3
Credit 2	Energy Efficiency in Buildings	1-3
Credit 3	Reduced Water Use	1-3
Credit 4	Building Reuse and Adaptive Reuse	1-2
Credit 5	Reuse of Historic Buildings	1
Credit 6	Minimize Site Disturbance through Site Design	1
Credit 7	Minimize Site Disturbance during Construction	1
Credit 8	Contaminant Reduction in Brownfields Remediation	1-5
Credit 9	Stormwater Management	1-5
Credit 10	Heat Island Reduction	1
Credit 11	Solar Orientation	1
Credit 12	On-Site Energy Generation	1
Credit 13	On-Site Renewable Energy Sources	1
Credit 14	District Heating and Cooling	1
Credit 15	Infrastructure Energy Efficiency	1
Credit 16	Wastewater Management	1
Credit 17	Recycled Content in Infrastructure	1
Credit 18	Construction Waste Management	1
Credit 19	Comprehensive Waste Management	1
Credit 20	Light Pollution Reduction	1
	INNOVATION & DESIGN PROCESS	[6 POSSIBLE POINTS]
Credit 1	Innovation in Design	1-5
Credit 2	LEED Accredited Professional	1

Estudo de Caso 1: The Crossings, Mountain View, Calif.

TOD (Transit Oriented Development)

Peter Calthorpe, 1992





• **Prefeitura & TPG Development Corporation**

• **Junto de estação de trem ligeiro**

• **9 hectares**

• **718 unidades habitacionais**

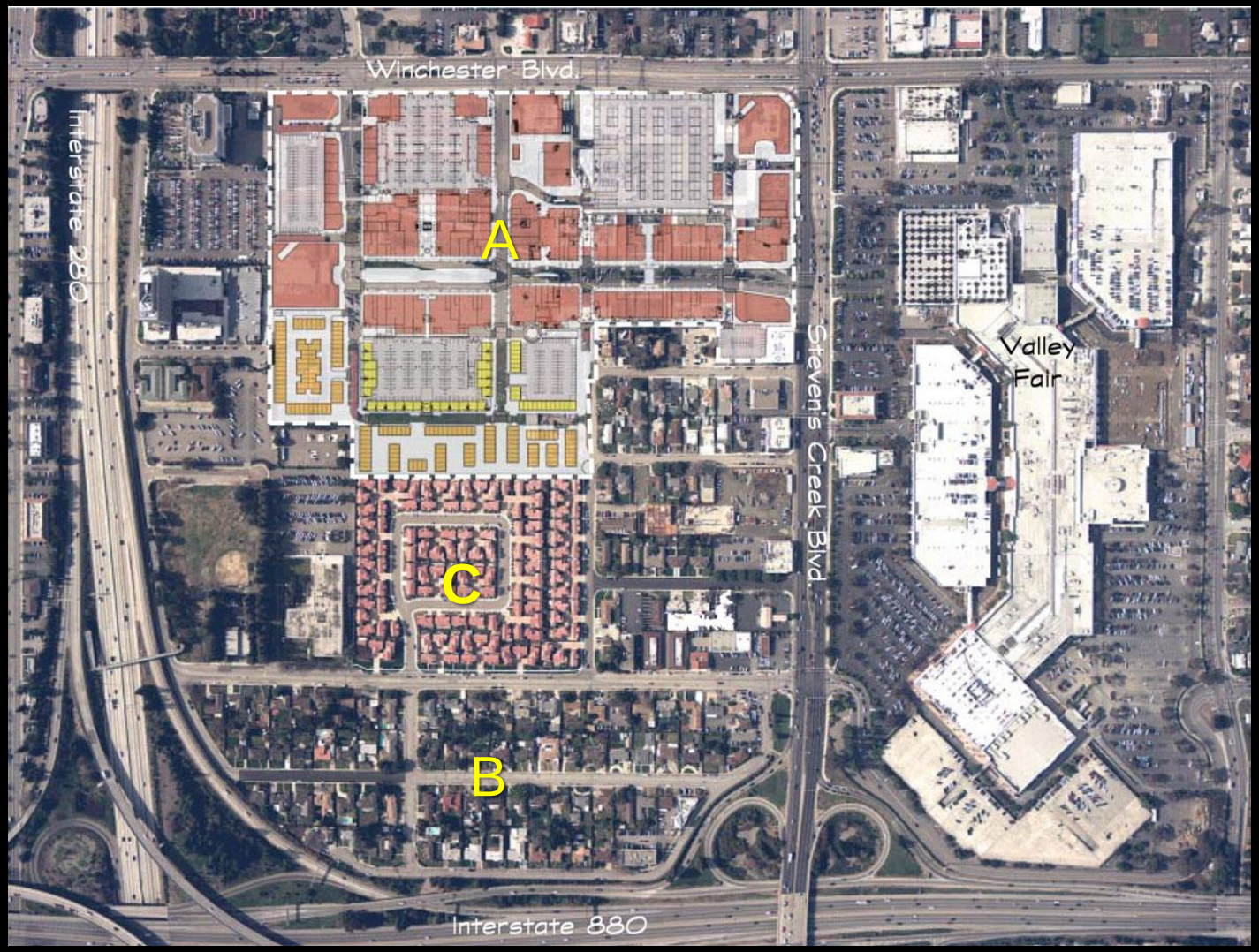
(395 apartamentos, 231 casas, 128 townhouses)

• **Comércio, centro comunitário, piscina, creche**

• **Três pequenas praças**

Estudo de Caso 2: Santana Row, San Jose, Calif.

Greyfield redevelopment, 1997



SB Architects, BAR Architects, and Steinberg Architects, SWA Group

• **Federal Realty Investment Fund**

• **No subúrbio, junto a outros shopping centers regionais**

• **17 hectares**

• **1.201 unidades habitacionais** (211 hab/ha)

• **61.200 m2 de uso comercial e escritórios**

• **Hotel (212 quartos), 33 restaurantes, 30 lojas, 11 spas/salões**

• **Quarto Shopping Center em vendas na California**


STRAITS


BORDERS


DEFOREST


333


Crate


PARK
EXIT
ENTER
ENTER
ecco


cielo

Conclusões dos Estudos de Caso

NU & Smart Growth

Ambos incorporam os atributos

LEED-ND

Localização e Integração

Padrão de vizinhança e Projeto

The Crossings: 21 pontos

Santana Row: 30 pontos

Risco:

“ilhas de desenvolvimento”

Considerações Finais

- Constructor de comunidade

- Homogeinização das arquiteturas

- Atração de “iguais”

- Distorções do mercado imobiliário / marketing

- LEED-ND: falta de variáveis socio-culturais

- Dimensão temporal / incorporação de mudanças

- Incorporação de diferentes “geografias”