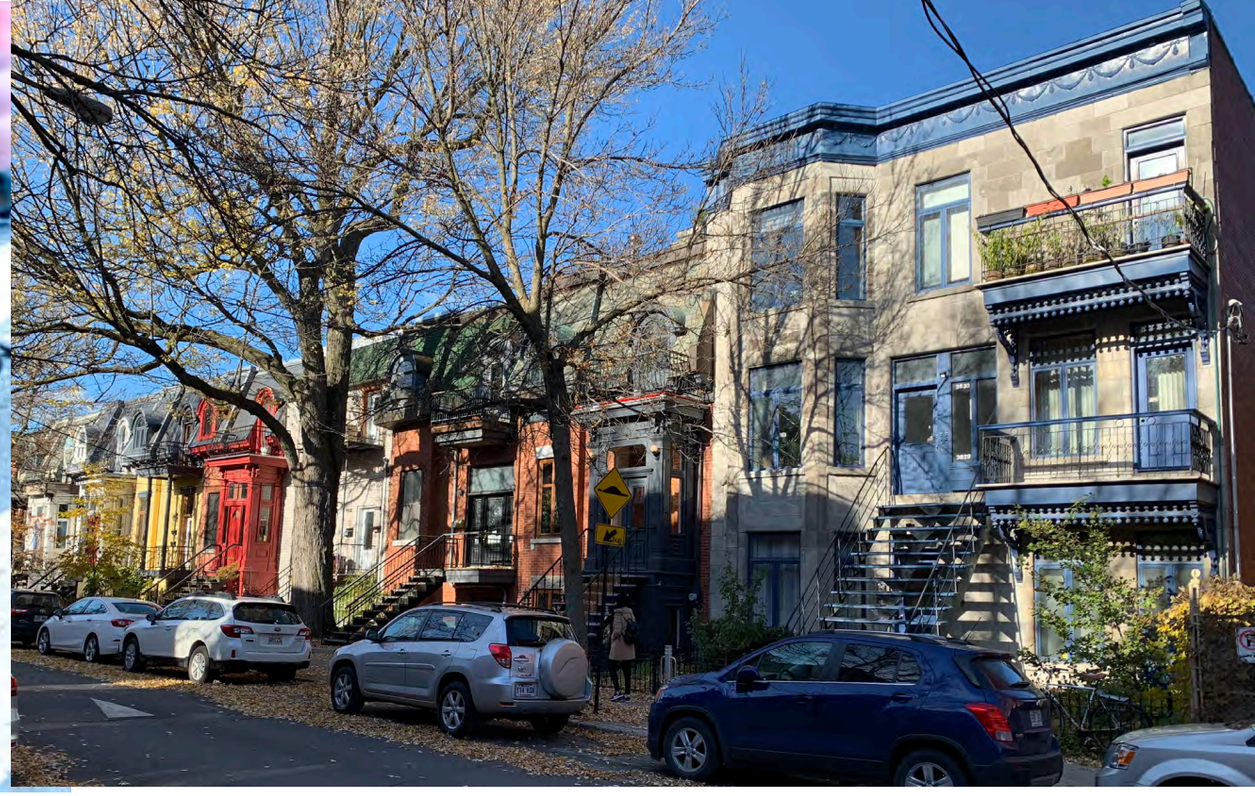

Image Source: NBC Washington



From Vision to Policy

Making urban transformation work

Montreal, November 8, 2018

Marina Khoury, Partner
DPZ CoDesign

REVITALIZATION AND INFILL

NEW TOWNS AND NEIGHBORHOODS

RESORT TOWNS

WHO WE ARE

DPZ CoDESIGN

- **International leaders** in urban design and development.
- **Designers and planners** of over 300 new and existing communities around the world.
- **Innovators** of technology used industry-wide for master planning and coding.
- **Value and place creators** through relief of suburban sprawl.
- **Pioneers** of restoring the core values of good urbanism since 1980.
- **Collaborators** with industry experts to design complete urban neighborhoods, resilient regions and sustainable settlements of high quality.
- **Authors** of numerous international publications that reflect and promote the movement of New Urbanism.

Tonight's Presentation

1. CNU & its 25 Great Ideas
2. Urbanization & our Settlement Patterns
3. Zoning Reform
4. Designing & Coding Sustainable Neighborhoods
   - Know what to regulate
   - A Solution
   - A Challenge

1

CNUs 25 Great Ideas

Building better places

CHARTER OF THE NEW URBANISM / ENGLISH

CARTA DEL NUEVO URBANISMO / ESPAÑOL / SPANISH

LES PRINCIPES DU NOUVEL URBANISME / FRANÇAIS / FRENCH

CHARTA DES NEW URBANISM / DEUTSCH / GERMAN

新都市主义宪章 / 中国 / CHINESE

مجلس التخطيط العمراني الجديد / العربية / ARABIC

YENİ ŞEHİRCİLİK BİLDİRGESİ / TÜRK / TURKISH

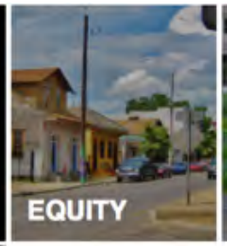
CARTA DO NOVO URBANISMO / PORTUGUÊS / PORTUGUESE

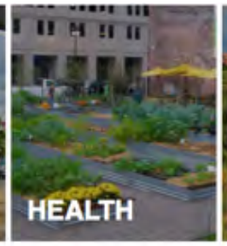
KARTA NOWEJ URBANISTYKI / POLSKI / POLISH

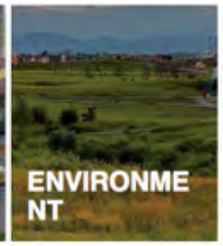
AMERIKANSK CHARTA FÖR ETT NYTT STADSBYGGANDE / SVENSKA / SWEDISH

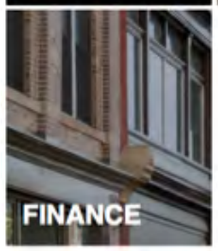
KONGRÈ POU YON NOUVO IBANIS / KREYÒL / CREOLE

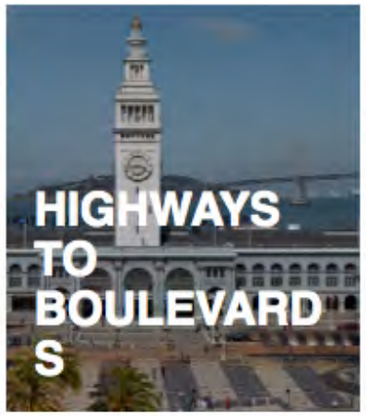
TRANSPORTATION





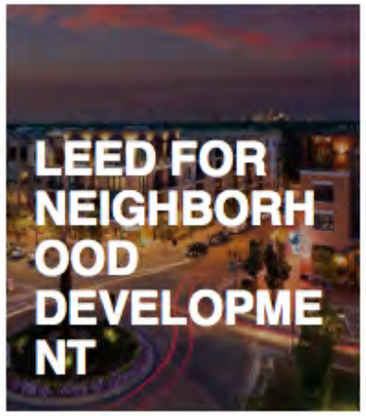




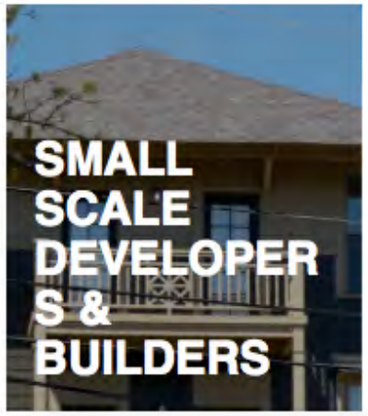


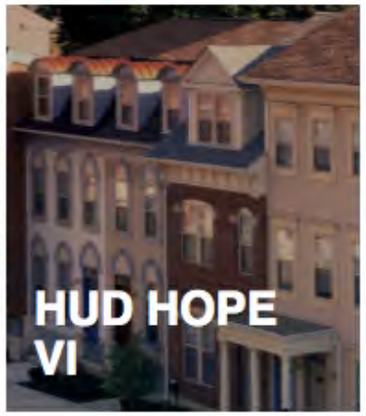
HEALTH DISTRICTS

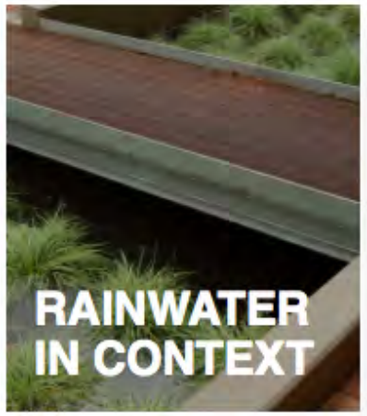
LEAN URBANISM



MISSING MIDDLE HOUSING







CNU ONTARIO

"We stand for the restoration of existing urban centers and towns within coherent metropolitan regions, the reconfiguration of sprawling suburbs into communities of real neighborhoods and diverse districts, the conservation of natural environments, and the preservation of our built legacy."

CNU: est. 1992

25 Great Ideas of New Urbanism

CNU

CONTENTS

Charter of the New Urbanism

The Congress for the New Urbanism views disinvestment in central cities, the spread of placeless sprawl, increasing separation by race and income, environmental deterioration, loss of agricultural lands and wilderness, and the erosion of society's built heritage as one interrelated community-building challenge.

We stand for the restoration of existing urban centers and towns within coherent metropolitan regions, the reconfiguration of sprawling suburbs into communities of real neighborhoods and diverse districts, the conservation of natural environments, and the preservation of our built legacy.

We advocate the restructuring of public policy and development practices to support the following principles: neighborhoods should be diverse in use and population; communities should be designed for the pedestrian and transit as well as the car; cities and towns should be shaped by physically defined and universally accessible public spaces and community institutions; urban places should be framed by architecture and landscape design that celebrate local history, climate, ecology, and building practice.

We recognize that physical solutions by themselves will not solve social and economic problems, but neither can economic vitality, community stability, and environmental health be sustained without a coherent and supportive physical framework.

We represent a broad-based citizenry, composed of public and private sector leaders, community activists, and multidisciplinary professionals. We are committed to reestablishing the relationship between the art of building and the making of community, through citizen-based participatory planning and design.

We dedicate ourselves to reclaiming our homes, blocks, streets, parks, neighborhoods, districts, towns, cities, regions, and environment.

Continued on back...

We assert the following principles to guide public policy, development practice, urban planning, and design:

The region: Metropolis, city, and town

1) Metropolitan regions are finite places with geographic boundaries derived from topography, watersheds, coastlines, farmlands, regional parks, and river basins. The metropolis is made of multiple centers that are cities, towns, and villages, each with its own identifiable center and edges.

2) The metropolitan region is a fundamental economic unit of the contemporary world. Governmental cooperation, public policy, physical planning, and economic strategies must reflect this new reality.

3) The metropolis has a necessary and fragile relationship to its agrarian hinterland and natural landscapes. The relationship is environmental, economic, and cultural. Farmland and nature are as important to the metropolis as the garden is to the house.

4) Development patterns should not blur or eradicate the edges of the metropolis. Infill development within existing urban areas conserves environmental resources, economic investment, and social fabric, while reclaiming marginal and abandoned areas. Metropolitan regions should develop strategies to encourage such infill development over peripheral expansion.

5) Where appropriate, new development contiguous to urban boundaries should be organized as neighborhoods and districts, and be integrated with the existing urban pattern. Noncontiguous development should be organized as towns and villages with their own urban edges, and planned for a jobs/housing balance, not as bedroom suburbs.

6) The development and redevelopment of towns and cities should respect historical patterns, precedents, and boundaries.

7) Cities and towns should bring into proximity a broad spectrum of public and private uses to support a regional economy that benefits people of all incomes. Affordable housing should be distributed throughout the region to match job opportunities and to avoid concentrations of poverty.

8) The physical organization of the region should be supported by a framework of transportation alternatives. Transit, pedestrian, and bicycle systems should maximize access and mobility throughout the region while reducing dependence upon the automobile.

9) Revenues and resources can be shared more cooperatively among the municipalities and centers within regions to avoid destructive competition for tax base and to promote rational coordination of transportation, recreation, public services, housing, and community institutions.

The neighborhood, the district, and the corridor

10) The neighborhood, the district, and the corridor are the essential elements of development and redevelopment in the metropolis. They form identifiable areas that encourage citizens to take responsibility for their maintenance and evolution.

11) Neighborhoods should be compact, pedestrian friendly, and mixed-use. Districts generally emphasize a special single use, and should follow the principles of neighborhood design when possible. Corridors are regional connectors of neighborhoods and districts; they range from boulevards and rail lines to rivers and parkways.

12) Many activities of daily living should occur within walking distance, allowing independence to those who do not drive, especially the elderly and the young. Interconnected networks of streets should be designed to encourage walking, reduce the number and length of automobile trips, and conserve energy.

13) Within neighborhoods, a broad range of housing types and price levels can bring people of diverse ages, races, and incomes into daily interaction, strengthening the personal and civic bonds essential to an authentic community.

14) Transit corridors, when properly planned and coordinated, can help organize metropolitan structure and revitalize urban centers. In contrast, highway corridors should not displace investment from existing centers.

15) Appropriate building densities and land uses should be within walking distance of transit stops, permitting public transit to become a viable alternative to the automobile.

16) Concentrations of civic, institutional, and commercial activity should be embedded in neighborhoods and districts, not isolated in remote, single-use complexes. Schools should be sized and located to enable children to walk or bicycle to them.

17) The economic health and harmonious evolution of neighborhoods, districts, and corridors can be improved through graphic urban design codes that serve as predictable guides for change.

18) A range of parks, from tot-lots and village greens to ballfields and community gardens, should be distributed within neighborhoods. Conservation areas and open lands should be used to define and connect different neighborhoods and districts.

The block, the street, and the building

19) A primary task of all urban architecture and landscape design is the physical definition of streets and public spaces as places of shared use.

20) Individual architectural projects should be seamlessly linked to their surroundings. This issue transcends style.

21) The revitalization of urban places depends on safety and security. The design of streets and buildings should reinforce safe environments, but not at the expense of accessibility and openness.

22) In the contemporary metropolis, development must adequately accommodate automobiles. It should do so in ways that respect the pedestrian and the form of public space.

23) Streets and squares should be safe, comfortable, and interesting to the pedestrian. Properly configured, they encourage walking and enable neighbors to know each other and protect their communities.

24) Architecture and landscape design should grow from local climate, topography, history, and building practice.

25) Civic buildings and public gathering places require important sites to reinforce community identity and the culture of democracy. They deserve distinctive form, because their role is different from that of other buildings and places that constitute the fabric of the city.

26) All buildings should provide their inhabitants with a clear sense of location, weather and time. Natural methods of heating and cooling can be more resource-efficient than mechanical systems.

27) Preservation and renewal of historic buildings, districts, and landscapes affirm the continuity and evolution of urban society.

Congress for the New Urbanism

cnu.org

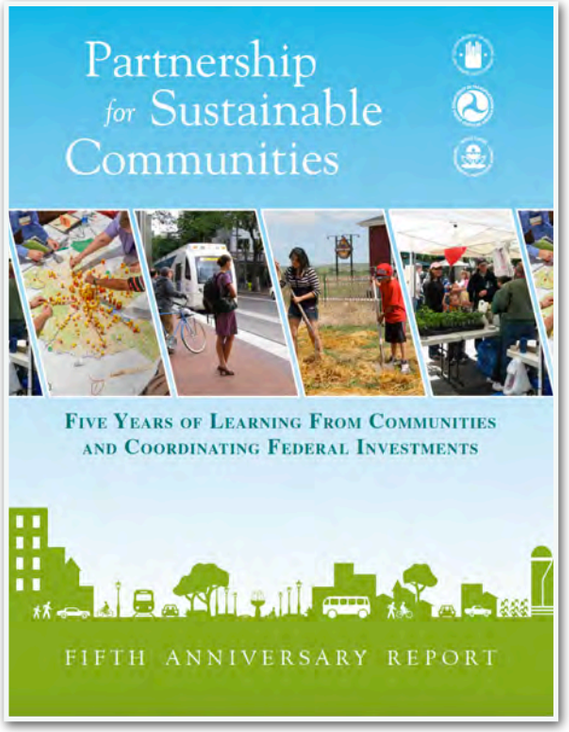
DPZ CoDESIGN

The Charter (17)

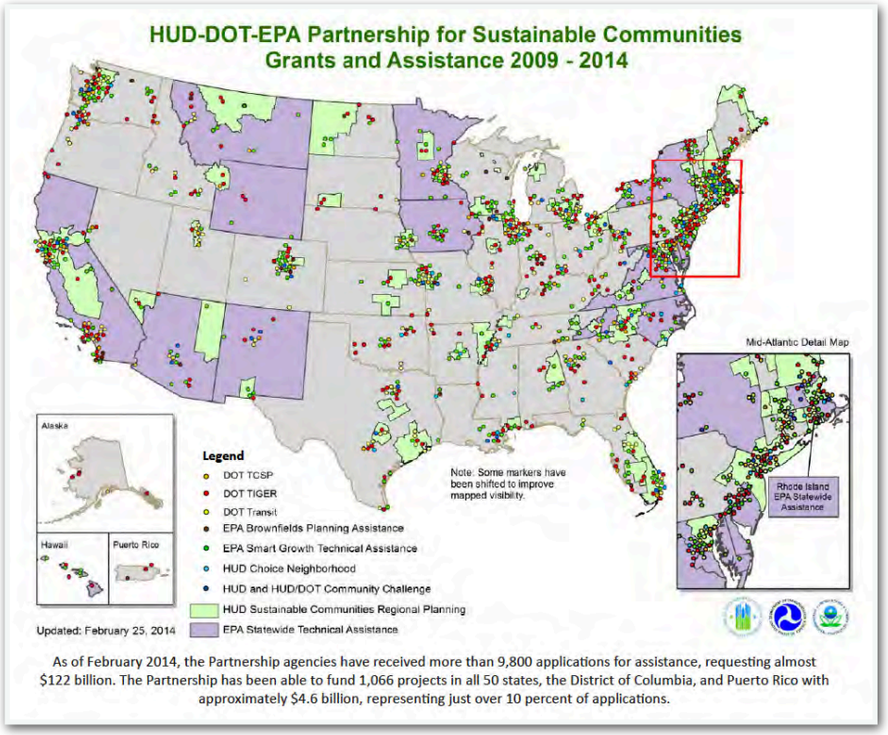
WHAT IS SMART GROWTH?

Smart growth is an approach to development that encourages a mix of building types and uses, diverse housing and transportation options, development within existing neighborhoods, and community engagement. The 10 principles below are considered the foundation of a smart growth approach — click on each principle to learn more.

1. Mix land uses
2. Take advantage of compact design
3. Create a range of housing opportunities and choices
4. Create walkable neighborhoods
5. Foster distinctive, attractive communities with a strong sense of place
6. Preserve open space, farmland, natural beauty, and critical environmental areas
7. Direct development towards existing communities
8. Provide a variety of transportation choices
9. Make development decisions predictable, fair, and cost effective
10. Encourage community and stakeholder collaboration in development decisions



Funded +1,000 projects, in 50 states, for over $4.6 billion



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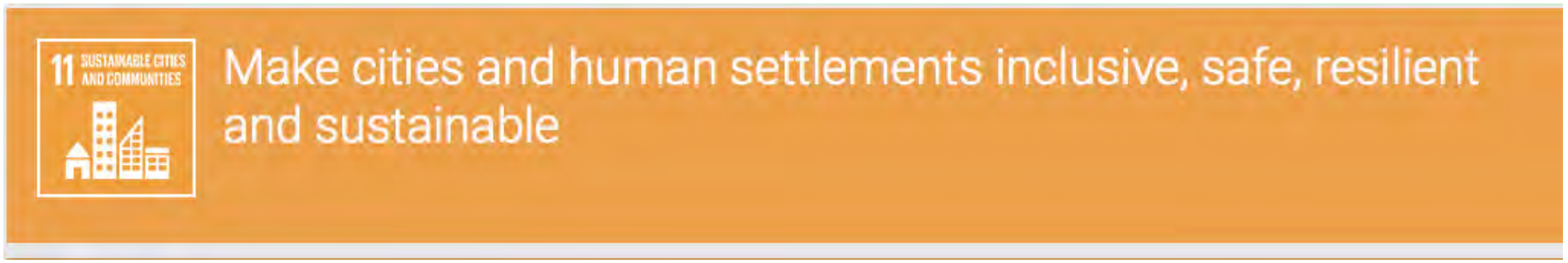
Smart Growth & Partnerships: 2000s



DPZ CODESIGN

United Nations: SDGs

2
Urbanization & our Settlement Patterns

How regions and cities grow

Complete Community:
Walkable Urbanism (up to 1940s)

Fragmented Development:
Drivable Sprawl (since 1940s)

+600 new cities, of 10 million each estimated to be built over next century to accommodate new urban dwellers.

- Effective city building greatest challenge to growth of our cities.
- Need to legalize the making of great places. Level the playing field!

2 Patterns of Development

- Areas dominated by single-use
- Excessive automotive traffic
- Lack of transportation alternatives
- Lack of useable open space
- Excessive land consumption
- Degradation of natural habitats
- Increased air pollution
- Increased burden on municipal infrastructure
- Diminished quality of life

There is a direct connection between our sprawling, unsustainable development patterns and our existing regulatory tools

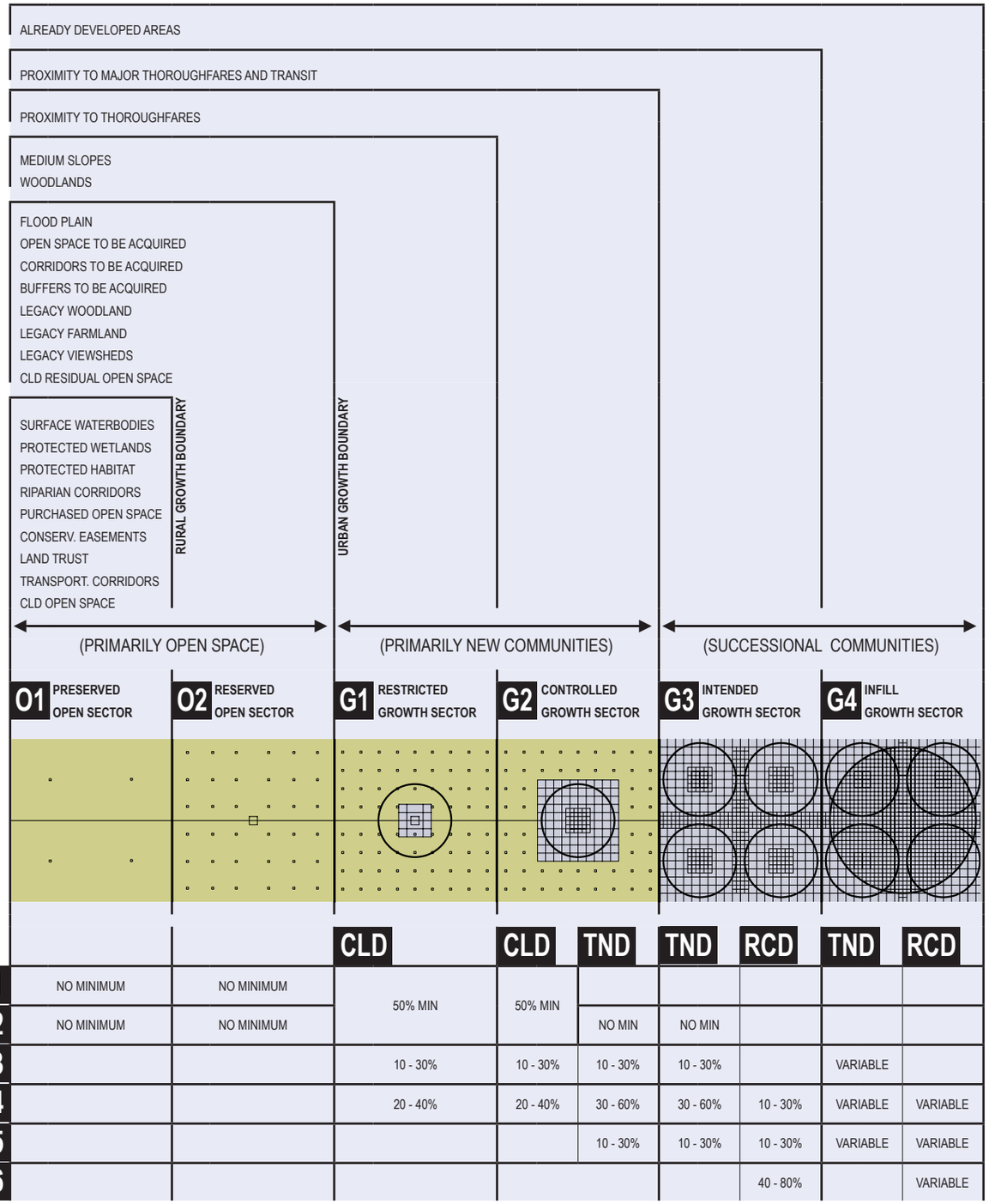
Epidemics of Sprawl Development Patterns

- More walking, less driving is better for our health.
- Smart Growth development can generate 10 x more tax revenue per ha than sprawl.
- More disposable income for households
- Less infrastructure costs & maintenance for municipalities
- People feel happier, safer, live longer and have greater upwards mobility.

Need better regulatory tools to legalize creating great places

Benefits of Sustainable Urban Patterns

TABLE 2: Sector/Community Allocation. Table 2 defines the geography, including both natural and infrastructure elements, determining areas that are or are not suitable for development. Specific Community types of various intensities are allowable in specific Sectors. This table also allocates the proportions of Transect Zones within each Community Type.



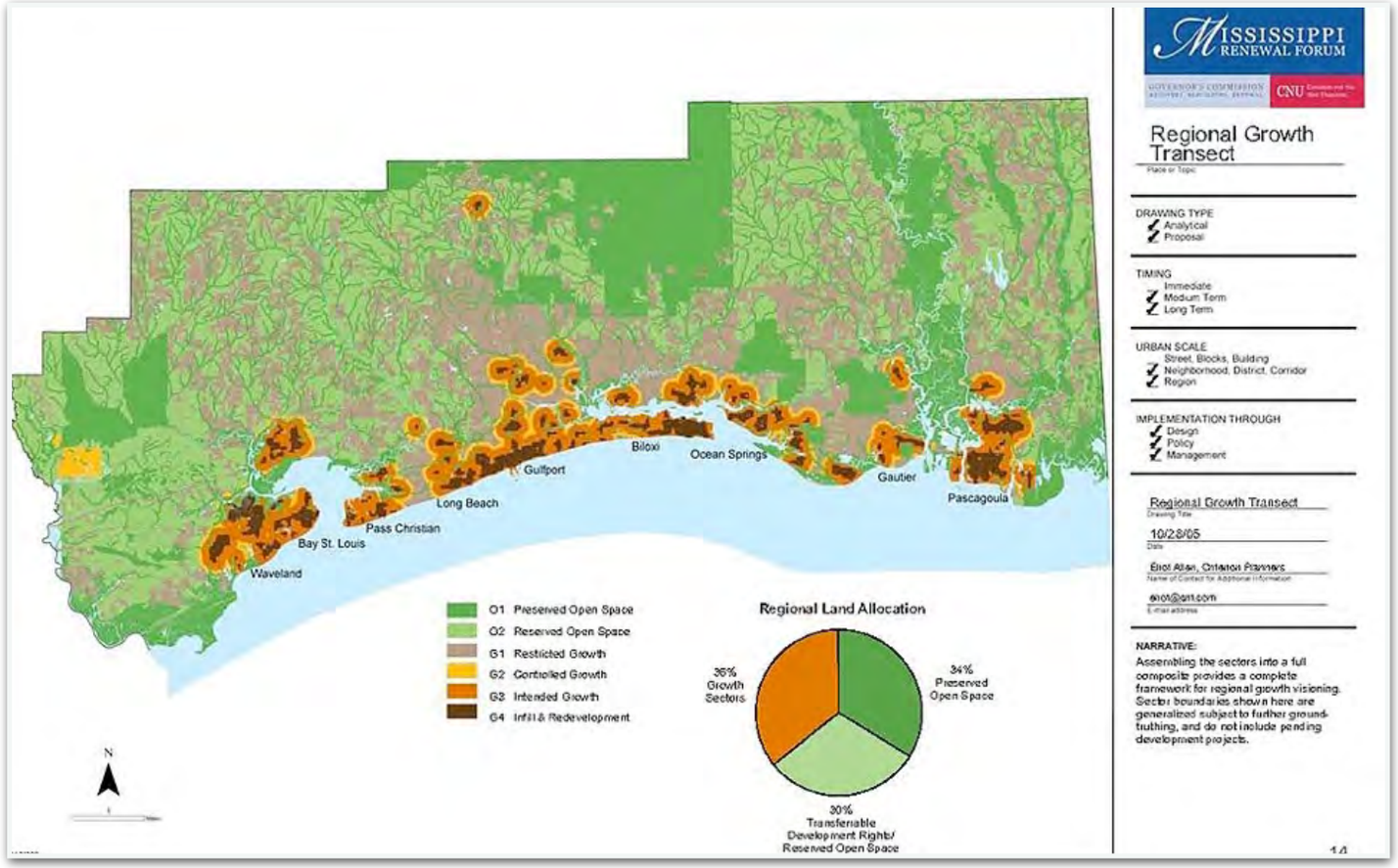
			CLD	CLD	TND	TND	RCD	TND	RCD
T1	NO MINIMUM	NO MINIMUM	50% MIN	50% MIN					
T2	NO MINIMUM	NO MINIMUM			NO MIN	NO MIN			
T3			10 - 30%	10 - 30%	10 - 30%	10 - 30%		VARIABLE	
T4			20 - 40%	20 - 40%	30 - 60%	30 - 60%	10 - 30%	VARIABLE	VARIABLE
T5					10 - 30%	10 - 30%	10 - 30%	VARIABLE	VARIABLE
T6							40 - 80%		VARIABLE

Growth Priorities:

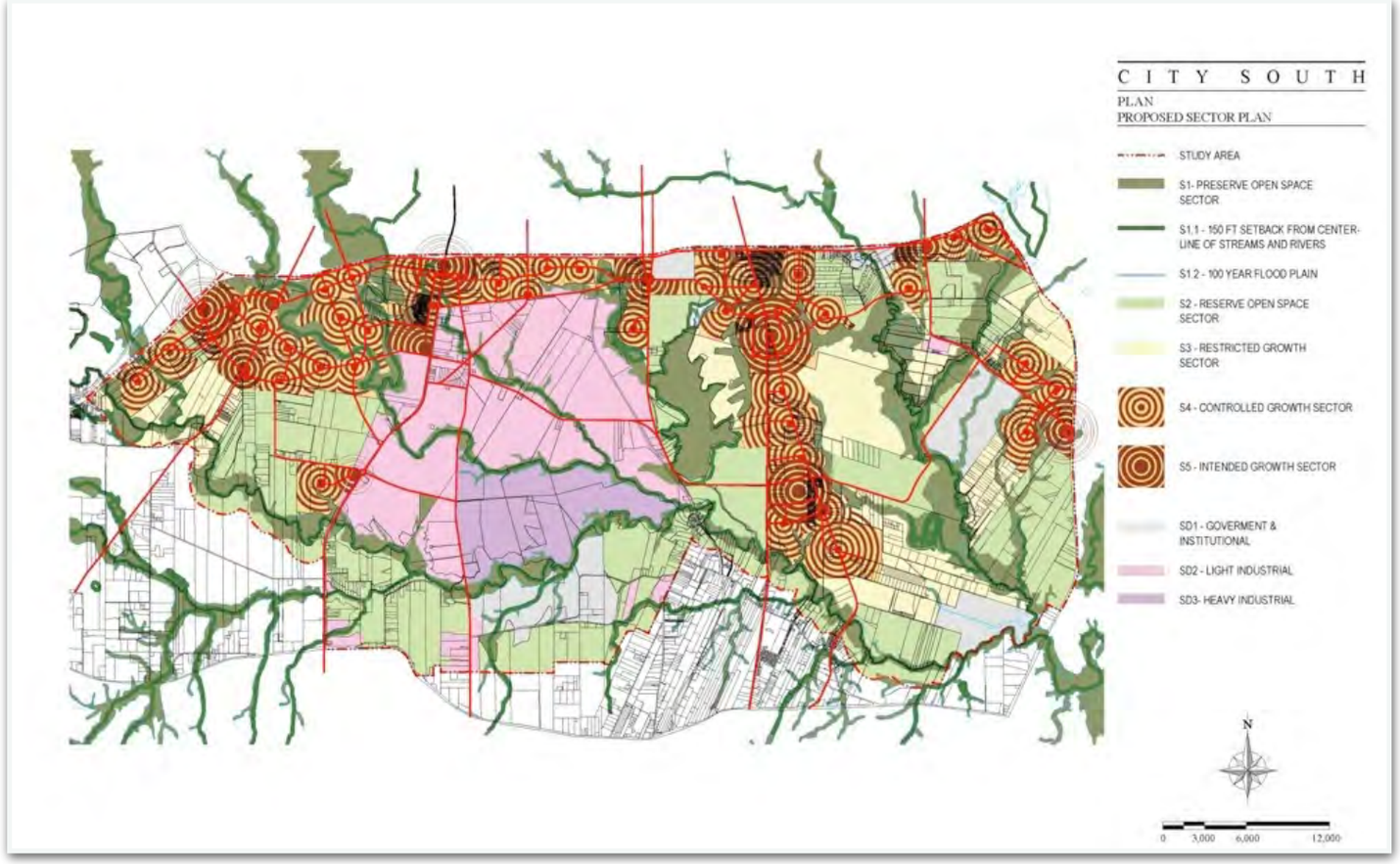
Direct investment to smart growth priority areas:

- Urban revitalization
- Urban Infill
- Suburban Retrofit
- Suburban Extension
- New neighborhood on existing infrastructure
- New neighborhood requiring new infrastructure
- ~~New neighborhood in environmentally sensitive lands~~

Regional Scale of Towns & Cities



City Scale of Districts & Neighborhoods



Planning at the Regional Scale

1
CONTINUING EXISTING TRENDS

Growth continues at its existing rate and pattern, with the housing primarily on smaller sites wherever found.

This scenario advocates the status quo, proposing that the County continue with its current approach, developing plots of all kinds as opportunity arises.

2
BROWNFIELD & GREYFIELD SITES

Some of the housing is placed on large previously developed or underutilised sites.

This scenario advocates the development of both industrial brownfield sites, and commercial car parking sites, or 'greyfields.'

3
TRANSIT ORIENTED DEVELOPMENT

Some of the housing is placed along transportation nodes.

This scenario proposes the development of housing within walking distance to existing rail and bus stations. This will require the radical intensification of existing areas.

4
SETTLEMENT EXTENSIONS

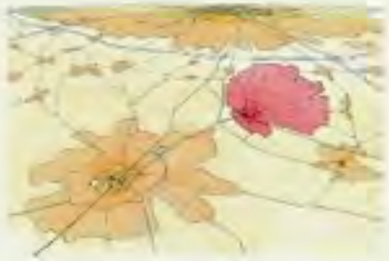
Some of the housing is attached to the edges of existing settlements on greenbelt land.

This scenario proposes the distribution of new housing on the boundaries of existing settlements of all sizes, including towns, villages and hamlets.

5
SATELLITE (GARDEN) VILLAGES

Some of the housing is assigned to new villages in proximity to existing settlements.

This scenario envisions the development of new settlements of a small scale, some of which would provide an opportunity for farming and agriculture.



6
STAND-ALONE GARDEN CITY

The majority of the housing is assigned to a new Garden City on the existing rail network.

This scenario proposes the development of one major new settlement to accommodate most of the new housing, along with the jobs, infrastructure and amenities to support them.

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Scenario Planning: Regional Scale

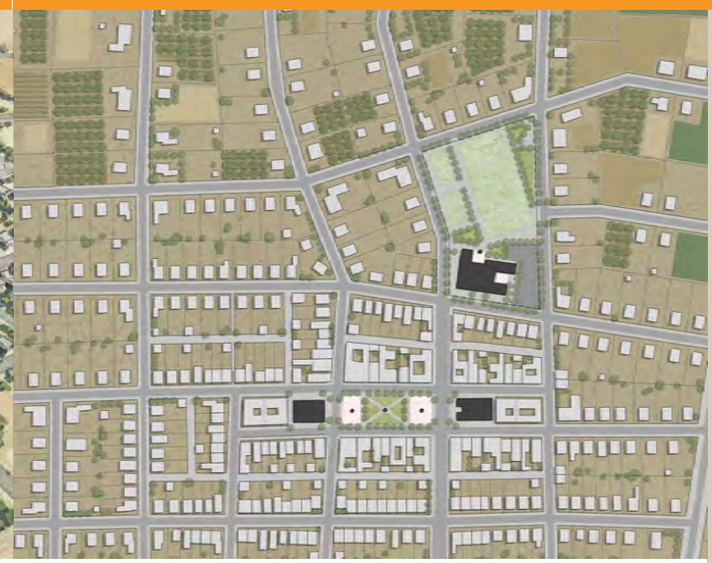
Overview of Place Types

PT

City Centers	The most intense Place Type, City Centers include housing, public services, commerce and workplaces. They are supported by neighborhoods and form the center of regions. Cities provide the greatest access to transportation, education, and employment.
City Neighborhoods	City Centers are supported by City Neighborhoods, principally residential areas, compact in form and diverse in terms of culture, housing and affordability. Due to their location, City Neighborhoods have easy access to transportation, jobs, and daily needs.
Towns	Towns balance elements of City living with access to agrarian lands and heritage. They consist of a main street centered on a plaza, supported by low density neighborhoods that blend into the surrounding countryside.
Villages	Villages provide support for agrarian areas as centers of community activity. They provide access to daily needs and transportation within close proximity of farms and rangeland. Villages typically organize around a church and/or a plaza and include a limited diversity of uses.
Small Villages	Small Villages support agrarian areas in a way similar to Villages but at a smaller scale. They are often organized around schools, agricultural warehousing, and similar services. Small Villages are the smallest scale of organized settlement.
Rural Subdivisions	Rural Subdivisions are typically the result of land policies in rural areas allowing lots sized at a few acres and larger. Informal centers form around intersections of primary roadways, and often supportive community services, such as schools, are located in Rural Subdivisions.
Additional Types	The Place Types above represent settlements that are most traditional to the region, and those encouraged by regional policy. Additional types include open space, rangelands, industrial and warehousing areas, suburban development and informal or unplanned development.

Towns

PT



Towns

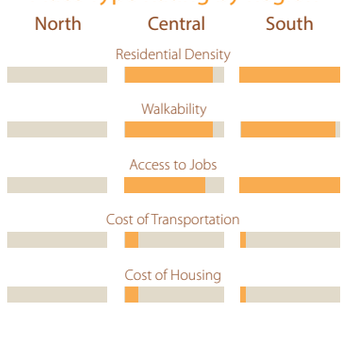
Still rural in character, Towns provide a center of commerce and culture in rural areas.

Towns in Doña Ana County have historically developed adjacent to trade routes or natural resources. Mesilla was a camping and foraging spot long before its founding in 1848. It was on the Chihuahua Trail and supported Fort Fillmore. Anthony developed on both the Butterfield Trail and the Camino Real. The activity associated with the trading traffic assured both Towns would grow.

Towns developed with either a plaza or a main street as the center of economic activity. Mesilla long served as the social center of the region with activities centered on the plaza. Housing diversity is moderate in Towns, including small apartments, courtyard houses, duplexes, single family homes and compounds. Towns maintain a strong connection to the surrounding farmland and provide services to the more rural residents.

As mentioned earlier, this type is not referring to the level of incorporation but to the character of the community. Therefore, while Anthony is a City by incorporation, it has the character and intensity of a Town.

Place Type Rating by Region



Transportation Choice

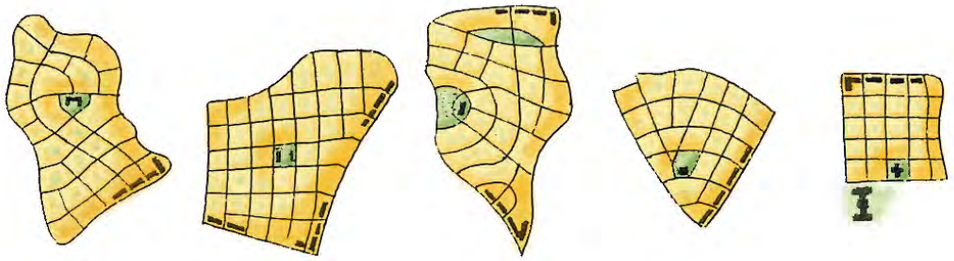
Community Affordability

Economic Opportunity

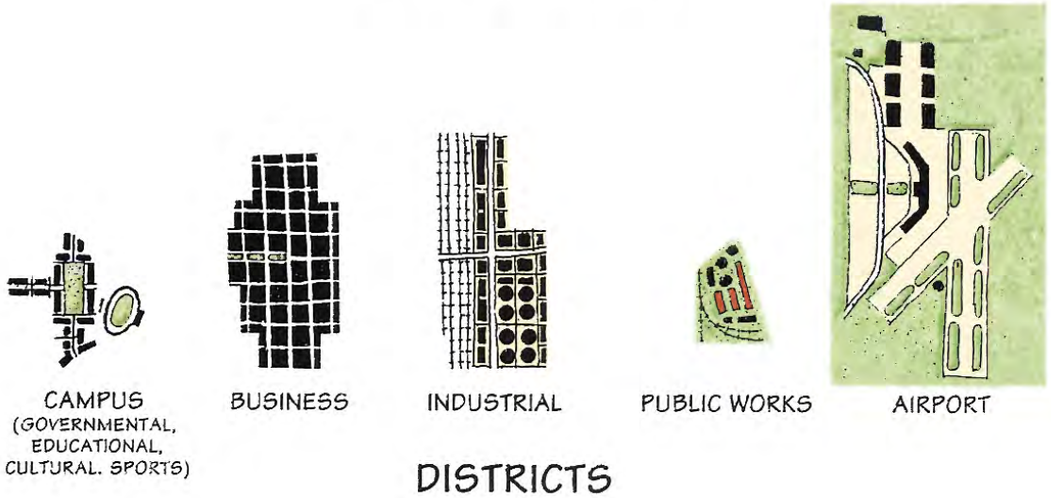
Preserving Heritage

Policy & Investment

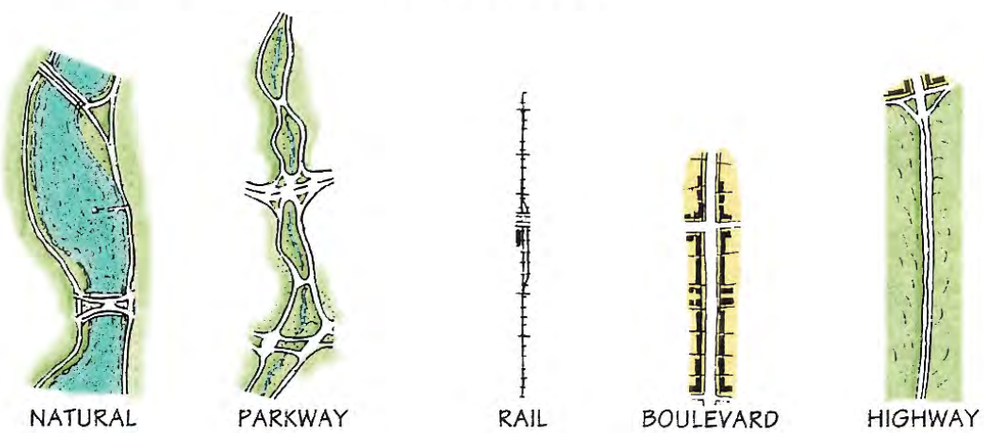
Communities & Neighborhoods



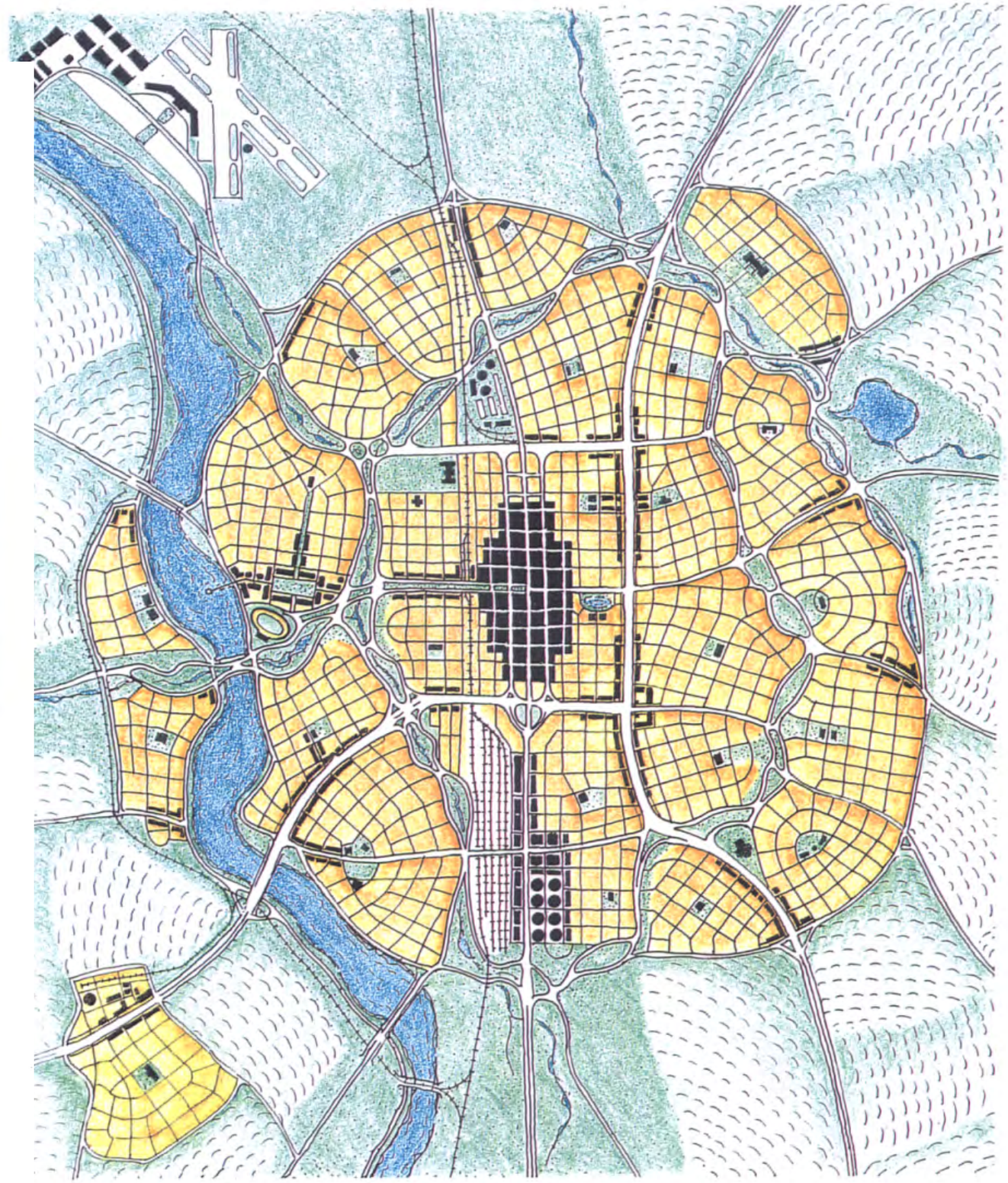
NEIGHBORHOODS



DISTRICTS



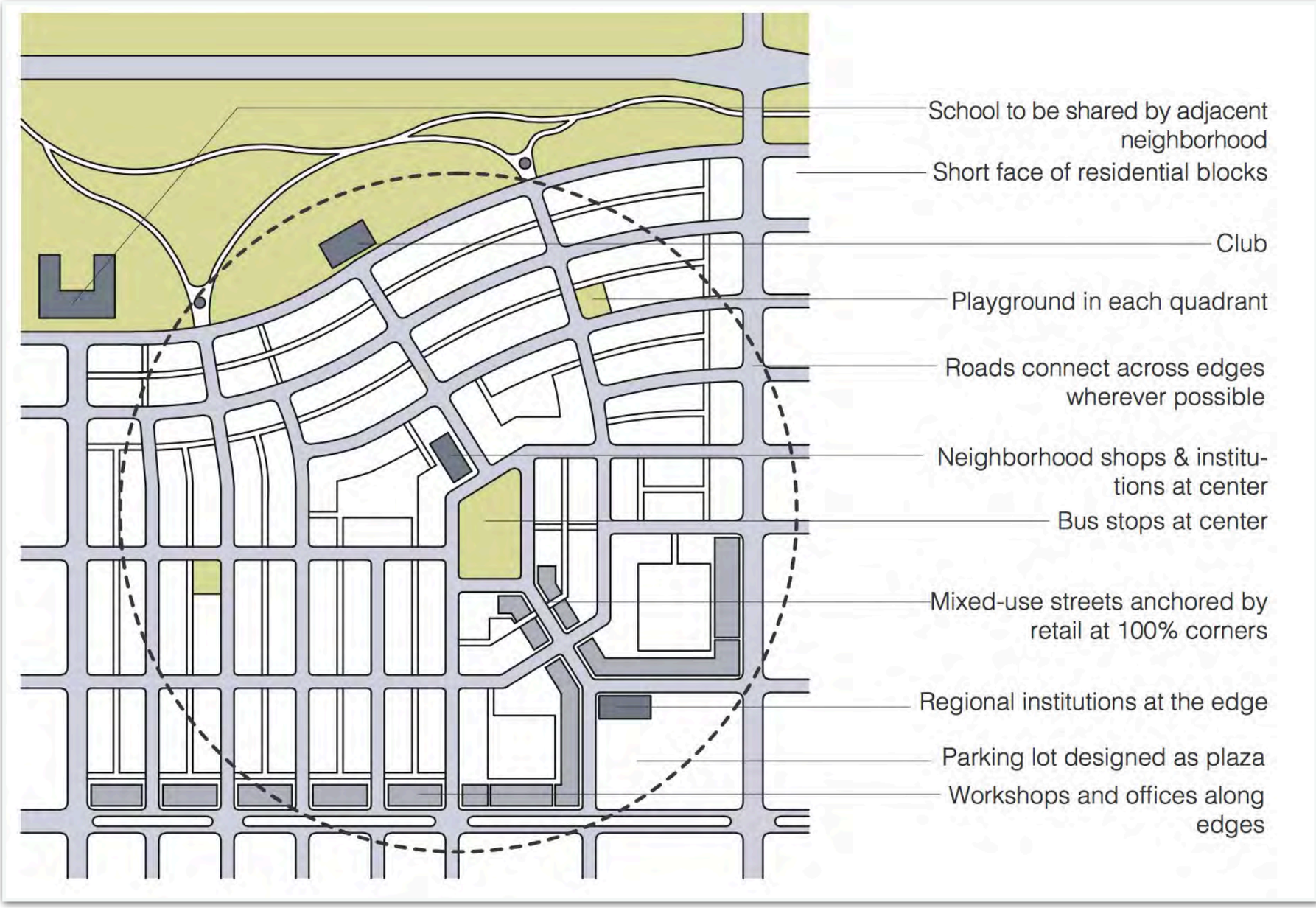
CORRIDORS



THE CITY OF
NEIGHBORHOODS, DISTRICTS, AND CORRIDORS

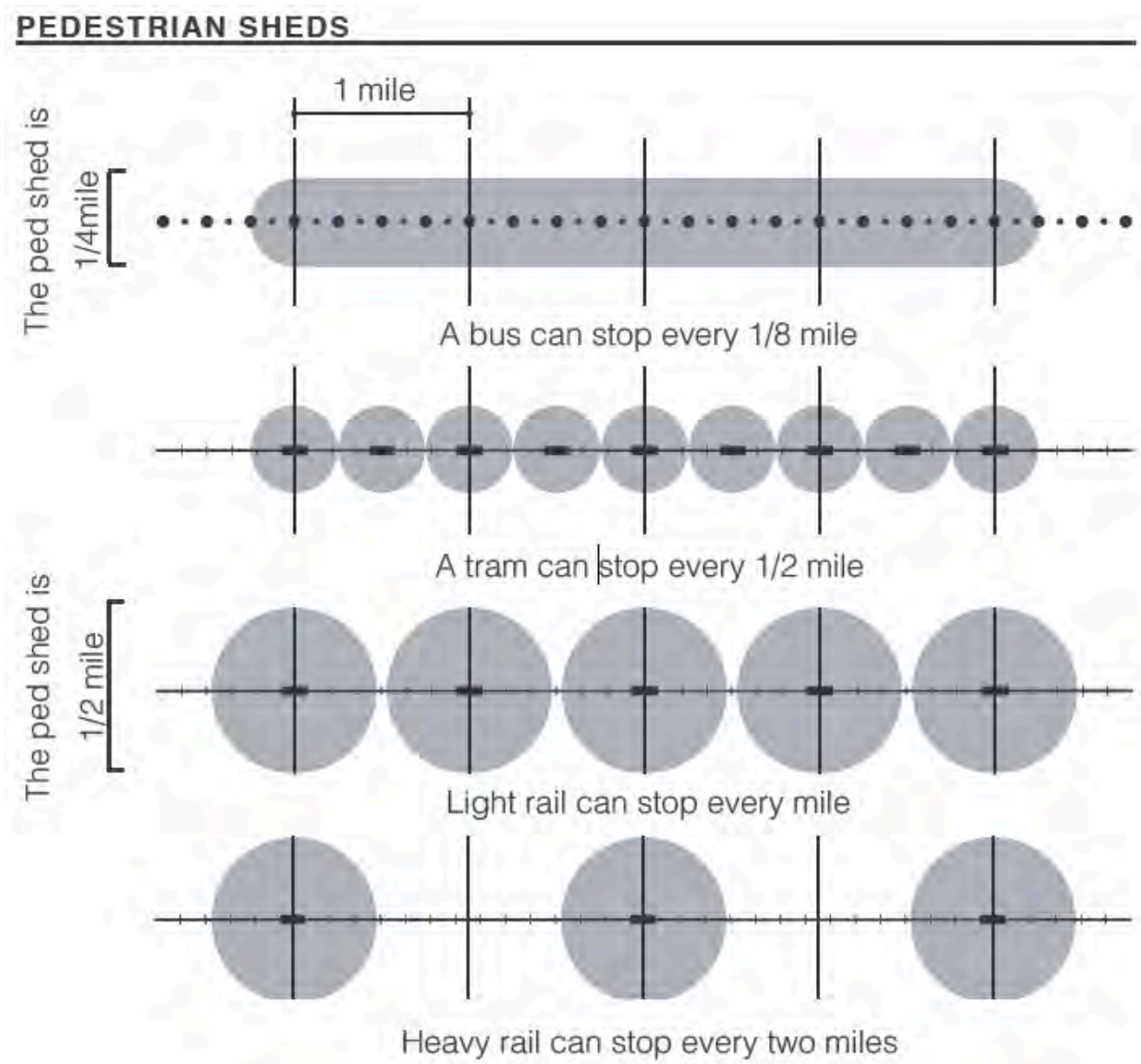
Planning and design in neighborhood increments with mixed-uses, Compact building designs and connected street networks (5-min walk)

Perry(1929)



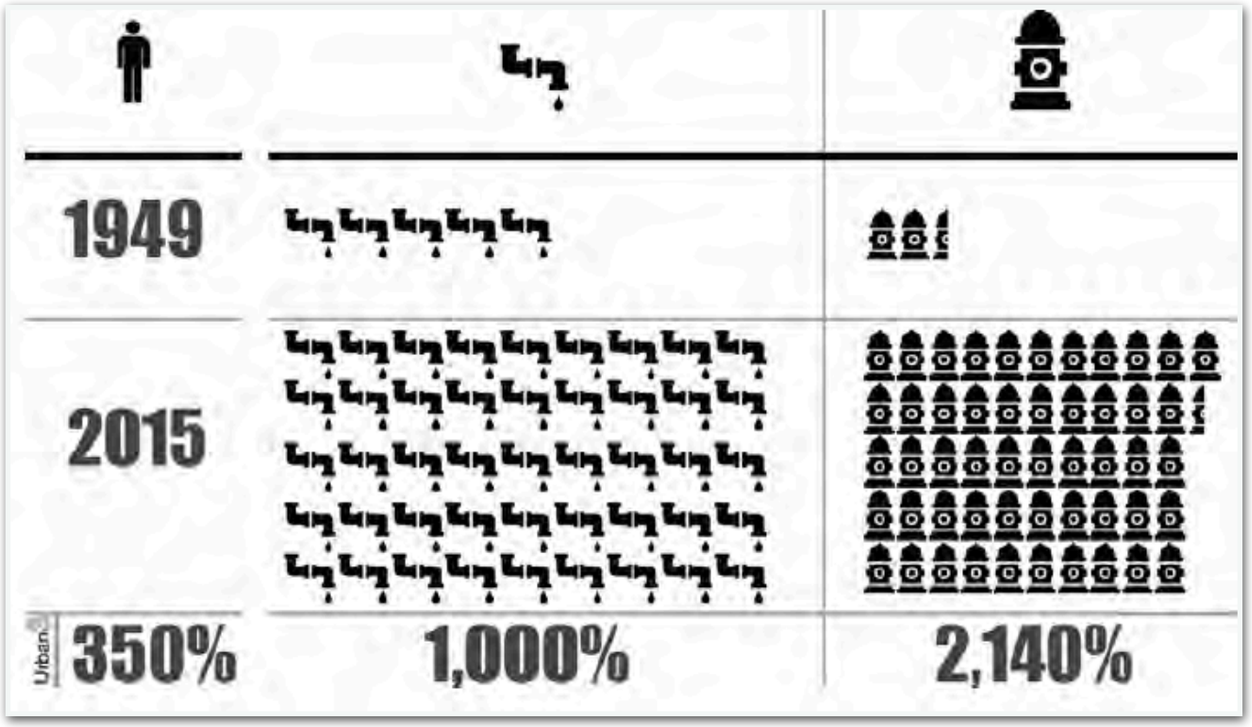
DPZ: The Sustainable Neighborhood (1990)

Pedestrian Shed & the 5-Min Walk (1)



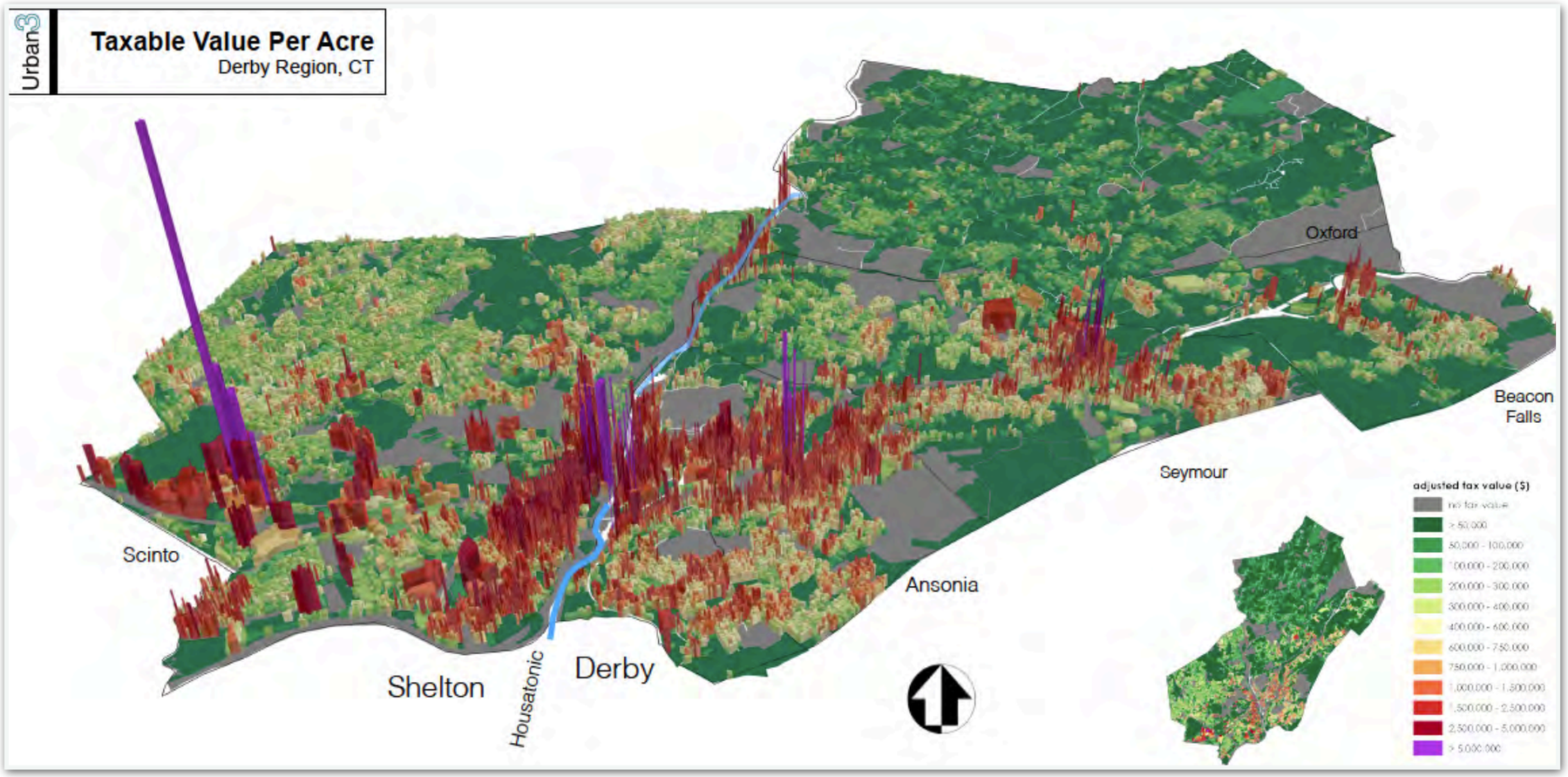
DPZ CODESIGN

Pedestrian Sheds



Urban3

	Asheville Walmart	Downtown
Land Consumed (Acres):	34.0	00.2
Total Property Taxes/Acre:	$ 6,500	$634,000
City Retail Taxes/Acre:	$ 47,500	$ 83,600
Residents per Acre:	0.0	90.0
Jobs per Acre:	5.9	73.7



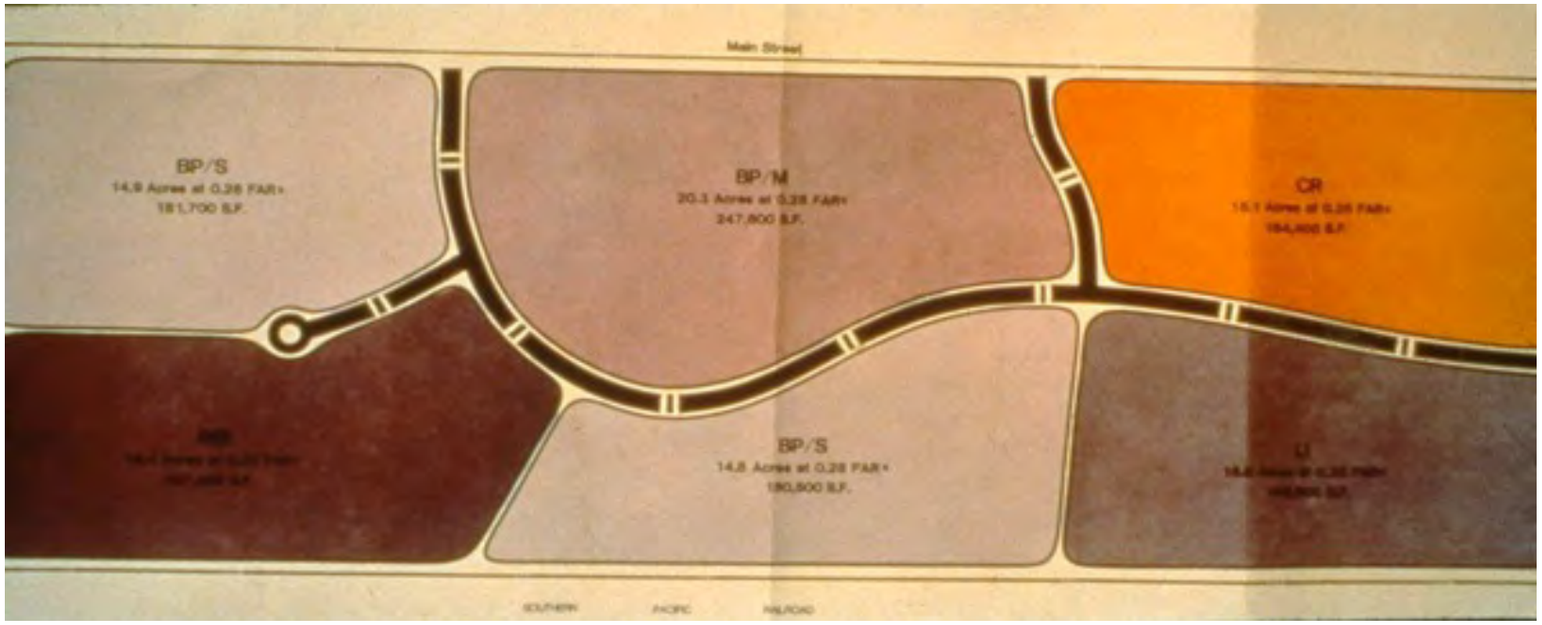
Doing the Math for Cities and Towns (11)

3

Zoning Reform

Conventional Codes vs/ Form-Based Codes (FBC)

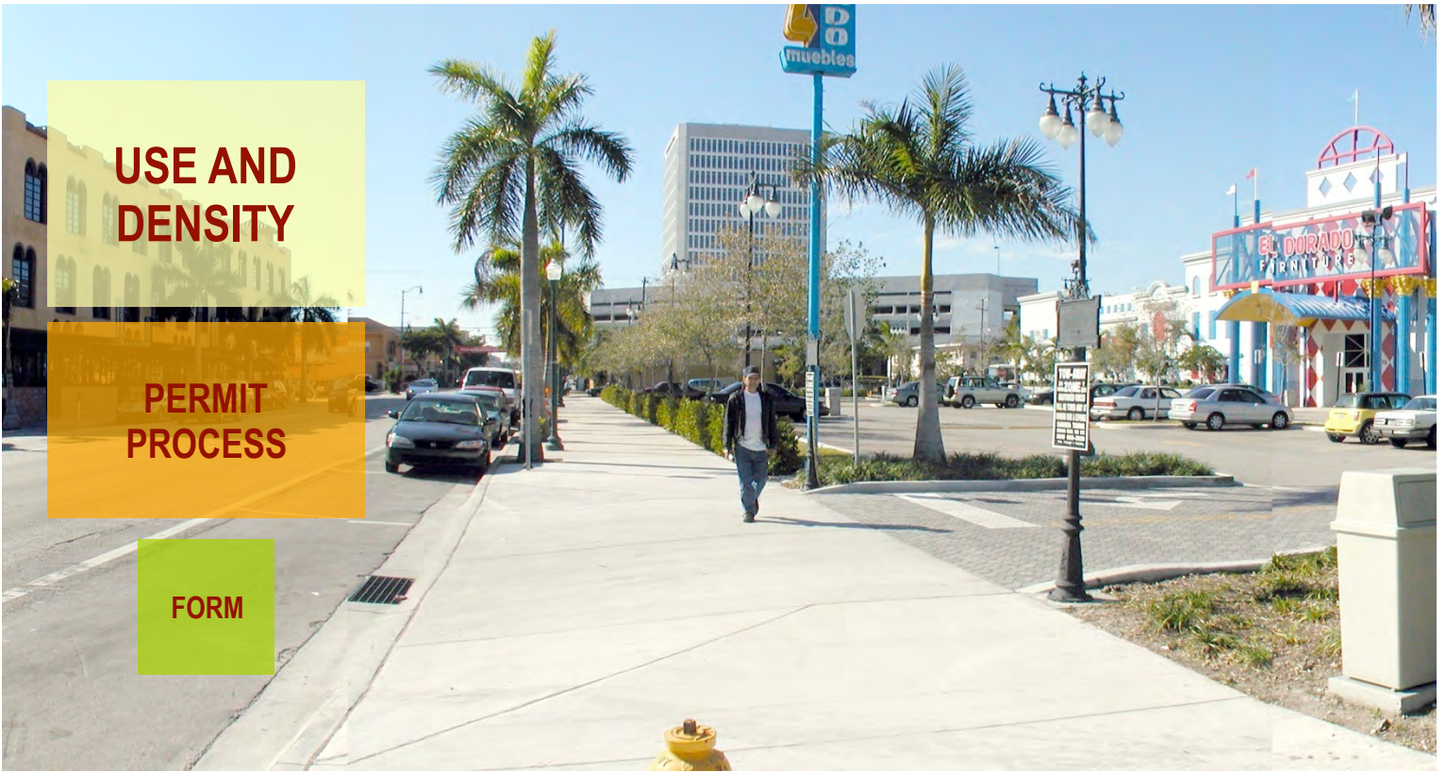
FBC: Code of Hammurabi
(ca. 1754 BC)



Conventional Zoning: Mixing Uses to Separating uses
(20th century on)

Need for new system that is organized around
form and character, rather than land use

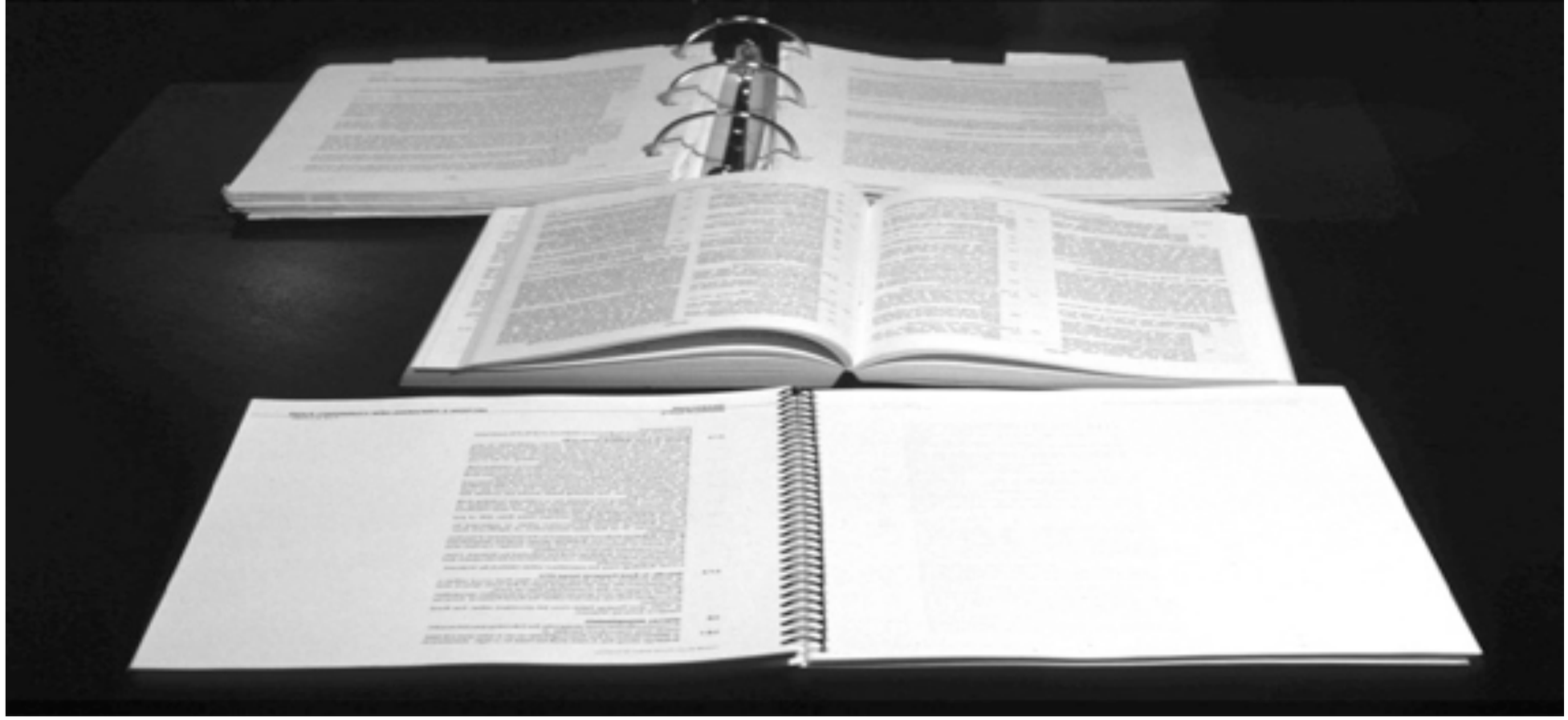
Historical Zoning



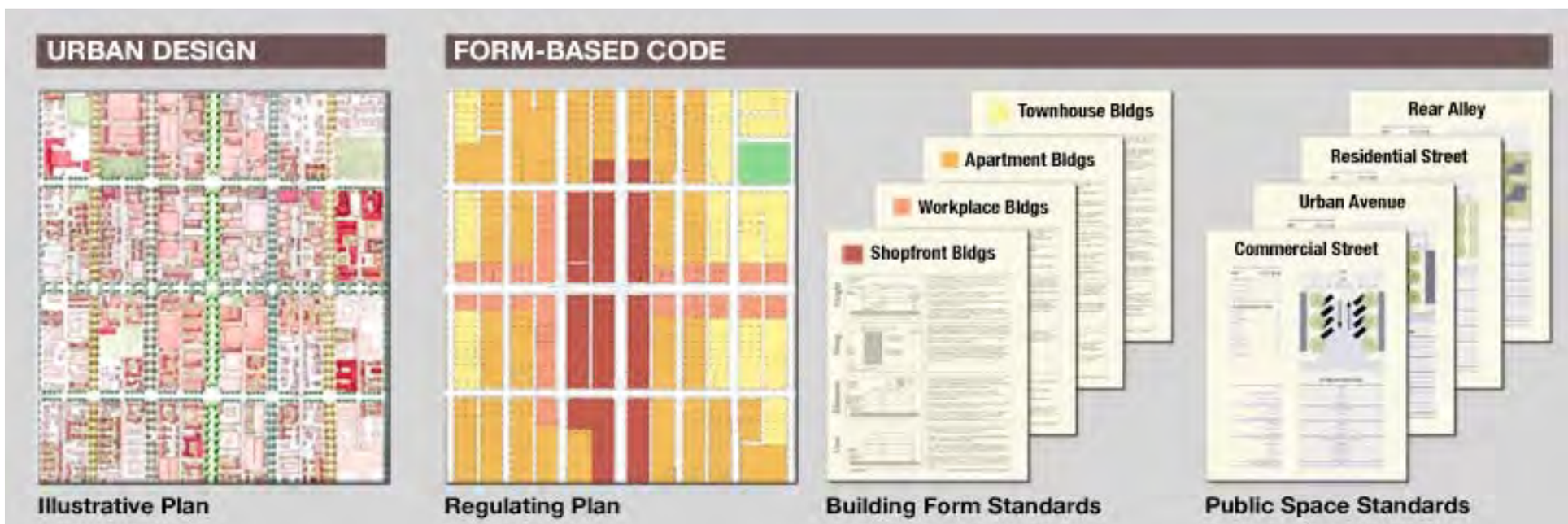
A form-based code is a land development regulation that fosters predictable built results and a high-quality public realm by using physical form (rather than separation of uses) as the organizing principle for the code.

(FBCI)

Form Based Codes (12)



Conventional Zoning Code



FBC: Codes a Vision: Illustrated, easy to understand, transparent

DPZ CODESIGN

Conventional vs/ FBC

CONVENTIONAL CODE: (METRICS)

Separate use pods

Sprawl

Monocultures

Deep setbacks

Formless "open space"

Blank frontages

Traffic flow prioritized

Lack of transit, bikes, pedestrians

Unpredictable development

FORM-BASED CODE: (CHARACTER)

Mixed use neighborhoods

Compact

Diversity of housing

Street as "outdoor room"

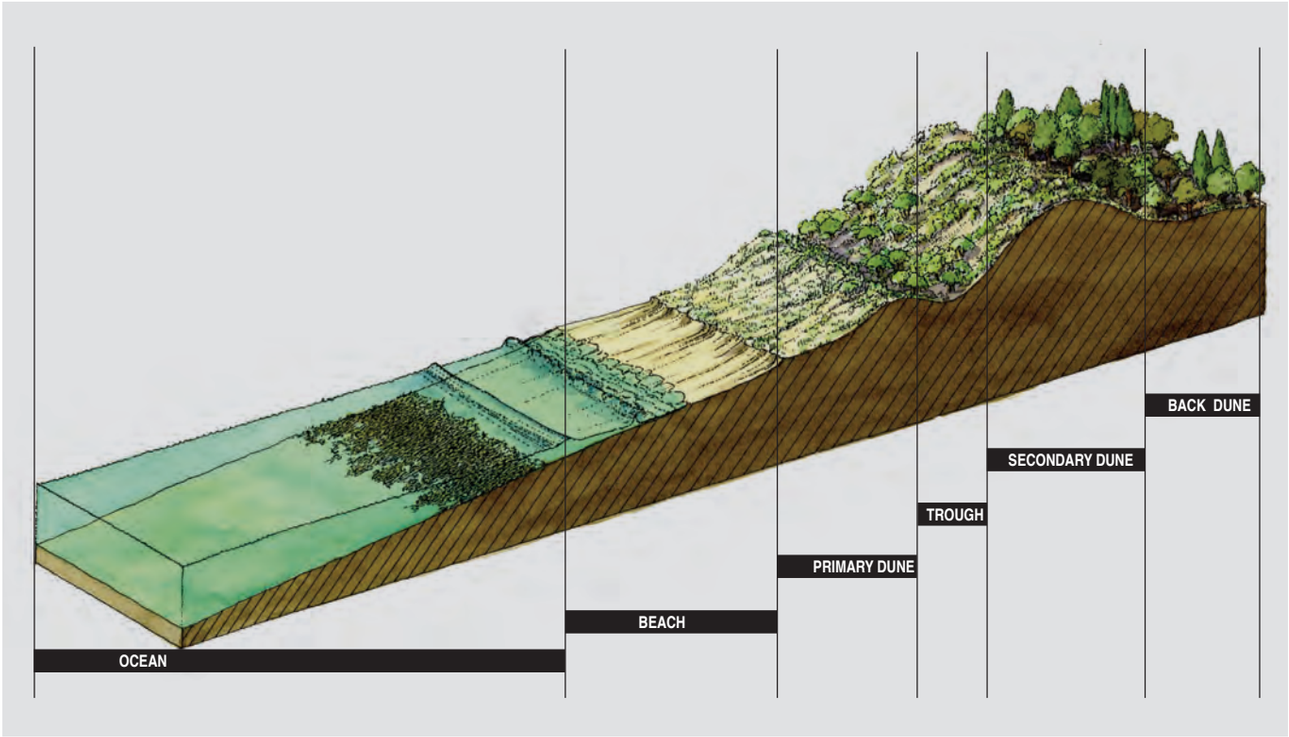
Formed civic space

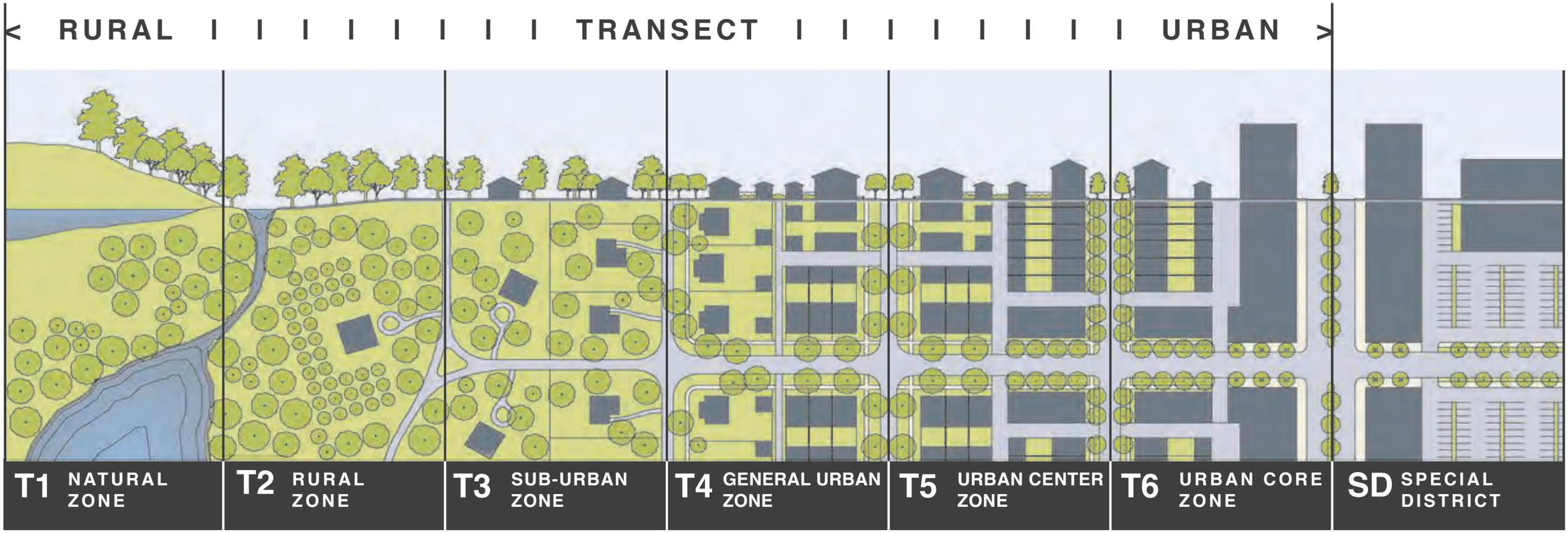
Eyes on the street

Safe walkable streets

Mobility options

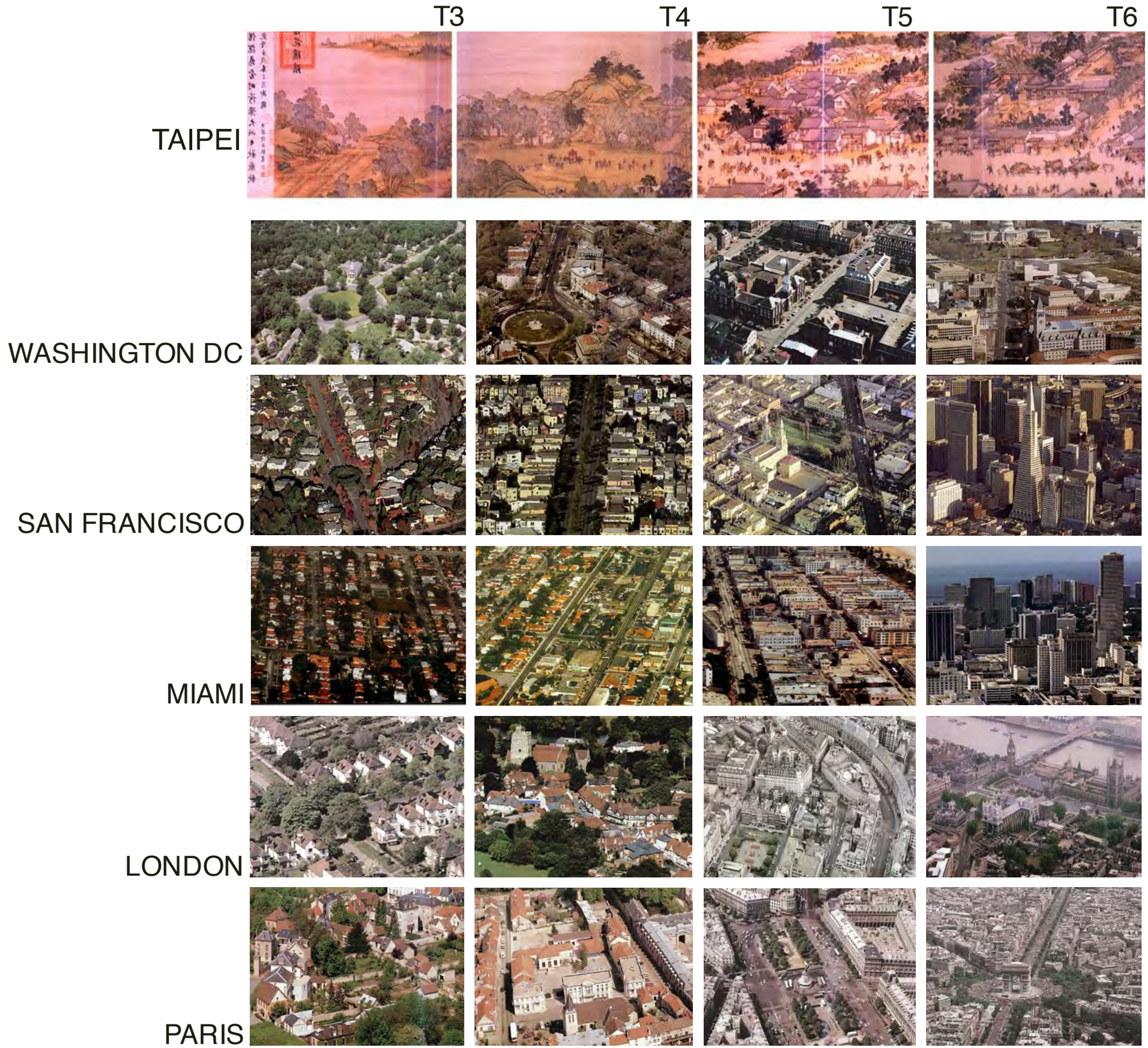
Predictable development





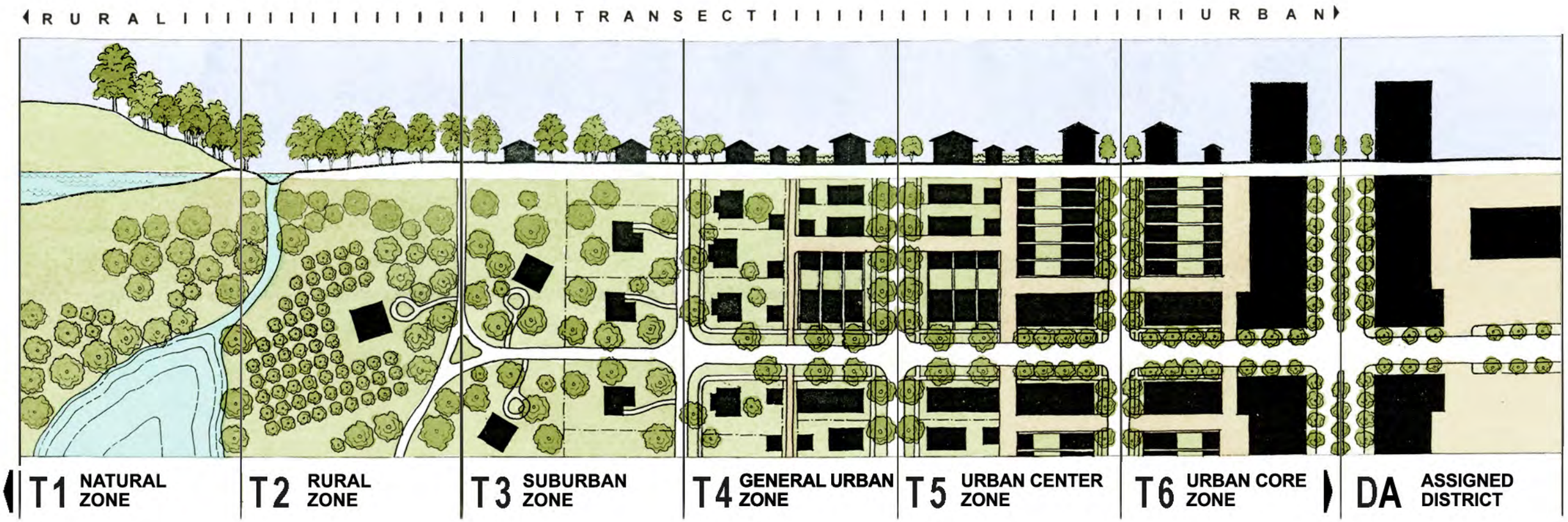
DPZ CODESIGN

Rural to Urban Transect (3)



DPZ CODESIGN

International Transects



Source: L'Atelier Urbain

DPZ CODESIGN

Laval Transect

T1

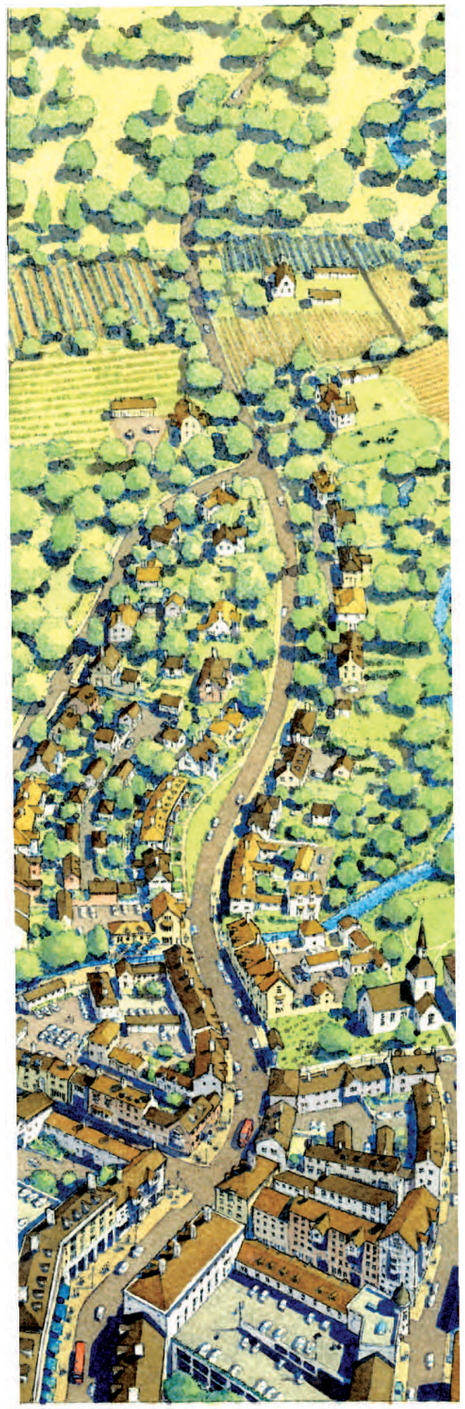
T2

T3

T4

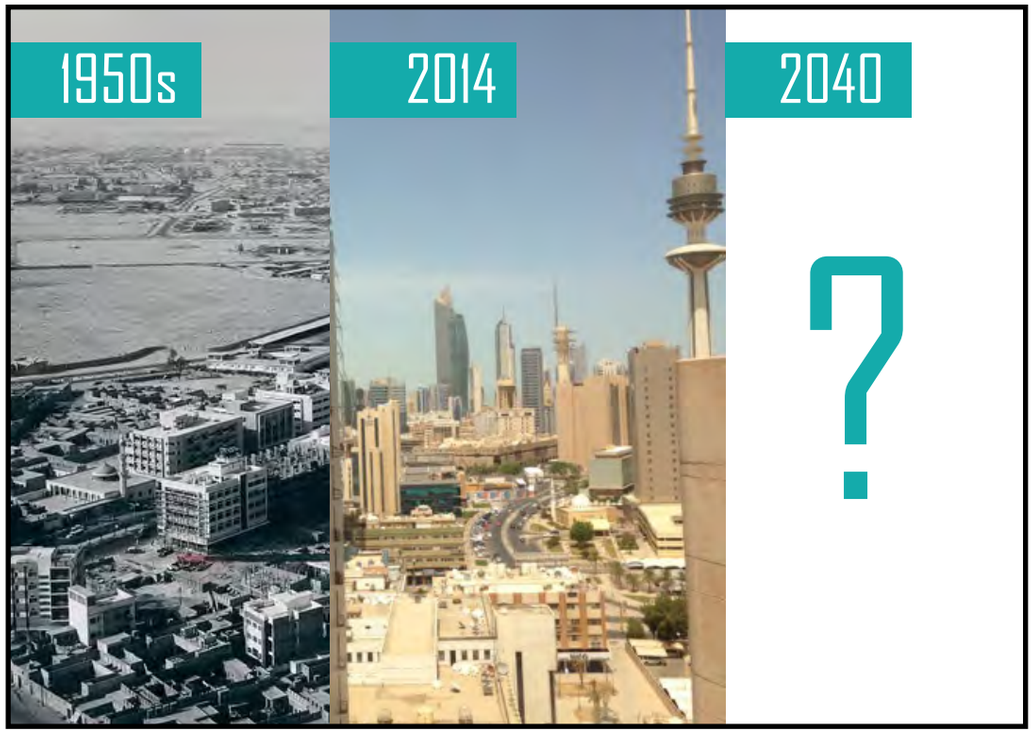
T5

T6



DPZ CODESIGN

Calibration of Character



DPZ CODESIGN

Your City's Character

Quadrat

Average Block Face	700'
Average Units/Acre	
Average Lot Size	25'x150'
Average Parked Cars	15
Average # of Trees	20

Dissect

Public Frontage

Public Frontage Type	Commercial Street
Spatial Width	
Moving Lanes	1 lane each way
Parking Lanes	2 parallel parking
Pavement Width	86'
Curb Type	Raised
Curb Radius	15'
Median Width	30' (light rail)
Sidewalk Width	13'
Planter Type	Tree well/raised tree boxes
Planter Width	8'
Planting Pattern	30' o.c.
Tree Type	Green Ash/Crabapples in boxes

Private Frontage

Private Frontage Type	Shopfront
Building Height	12 storeys
Outbuilding Height	None
Floor Above Grade	None
Building Type	Specialized and rearyard
Lot Width	22'-100'
Lot Depth	150'
Buildout at Setback	100%
Front Setback	0
Side Setback	0
Front Encroachment	None
Ground Level Function	Office/Retail
Upper Level Function	Office

TABLE 1: Transect Zone Descriptions. This table provides descriptions of the character of each T-zone.

T1

T-1 NATURAL

T-1 Natural Zone consists of lands approximating or reverting to a wilderness condition, including lands unsuitable for settlement due to topography, hydrology or vegetation.

General Character:	Natural landscape with some agricultural use
Building Placement:	Not applicable
Frontage Types:	Not applicable
Typical Building Height:	Not applicable
Type of Civic Space:	Parks, Greenways

T2

T-2 RURAL

T-2 Rural Zone consists of sparsely settled lands in open or cultivated states. These include woodland, agricultural land, grassland, and irrigable desert. Typical buildings are farmhouses, agricultural buildings, cabins, and villas.

General Character:	Primarily agricultural with woodland & wetland and scattered buildings
Building Placement:	Variable Setbacks
Frontage Types:	Not applicable
Typical Building Height:	1- to 2-Story
Type of Civic Space:	Parks, Greenways

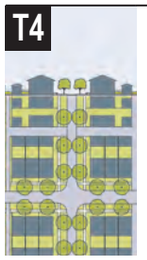
T3

T-3 SUB-URBAN

T-3 Sub-Urban Zone consists of low density residential areas, adjacent to higher zones that some mixed use. Home occupations and outbuildings are allowed. Planting is naturalistic and setbacks are relatively deep. Blocks may be large and the roads irregular to accommodate natural conditions.

General Character:	Lawns, and landscaped yards surrounding detached single-family houses; pedestrians occasionally
Building Placement:	Large and variable front and side yard Setbacks
Frontage Types:	Porches, fences, naturalistic tree planting
Typical Building Height:	1- to 2-Story with some 3-Story
Type of Civic Space:	Parks, Greenways

T4

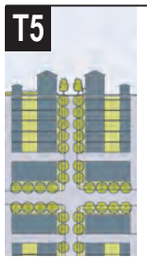


T-4 GENERAL URBAN

T-4 General Urban Zone consists of a mixed use but primarily residential urban fabric. It may have a wide range of building types: single, sideyard, and rowhouses. Setbacks and landscaping are variable. Streets with curbs and sidewalks define medium-sized blocks.

General Character:	Mix of Houses, Townhouses & small Apartment buildings, with scattered Commercial activity; balance between landscape and buildings; presence of pedestrians
Building Placement:	Shallow to medium front and side yard Setbacks
Frontage Types:	Porches, fences, Dooryards
Typical Building Height:	2- to 3-Story with a few taller Mixed Use buildings
Type of Civic Space:	Squares, Greens

T5

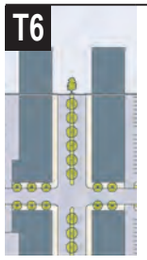


T-5 URBAN CENTER

T-5 Urban Center Zone consists of higher density mixed use building that accommodate etail, offices, rowhouses and apartments. It has a tight network of streets, with wide sidewalks, steady street tree planting and buildings set close to the sidewalks.

General Character:	Shops mixed with Townhouses, larger Apartment houses, Offices, workplace, and Civic buildings; predominantly attached buildings; trees within the public right-of-way; substantial pedestrian activit
Building Placement:	Shallow Setbacks or none; buildings oriented to street defining a street wall
Frontage Types:	Stoops, Shopfronts, Galleries
Typical Building Height:	3- to 5-Story with some variation
Type of Civic Space:	Parks, Plazas and Squares, median landscaping

T6



T-6 URBAN CORE

T-6 Urban Core Zone consists of the highest density and height, with the greatest variety of uses, and civic buildings of regional importance. It may have larger blocks; streets have steady street tree planting and buildings are set close to wide sidewalks. Typically only large towns and cities have an Urban Core Zone.

General Character:	Medium to high-Density Mixed Use buildings, entertainment, Civic and cultural uses. Attached buildings forming a continuous street wall; trees within the public right-of-way; highest pedestrian and transit activity
Building Placement:	Shallow Setbacks or none; buildings oriented to street, defining a street wall
Frontage Types:	Stoops, Dooryards, Forecourts, Shopfronts, Galleries, and Arcades
Typical Building Height:	4-plus Story with a few shorter buildings
Type of Civic Space:	Parks, Plazas and Squares; median landscaping

Effecting change of an aspirational quality, requires the vision of an urban plan to drive the text regulations.

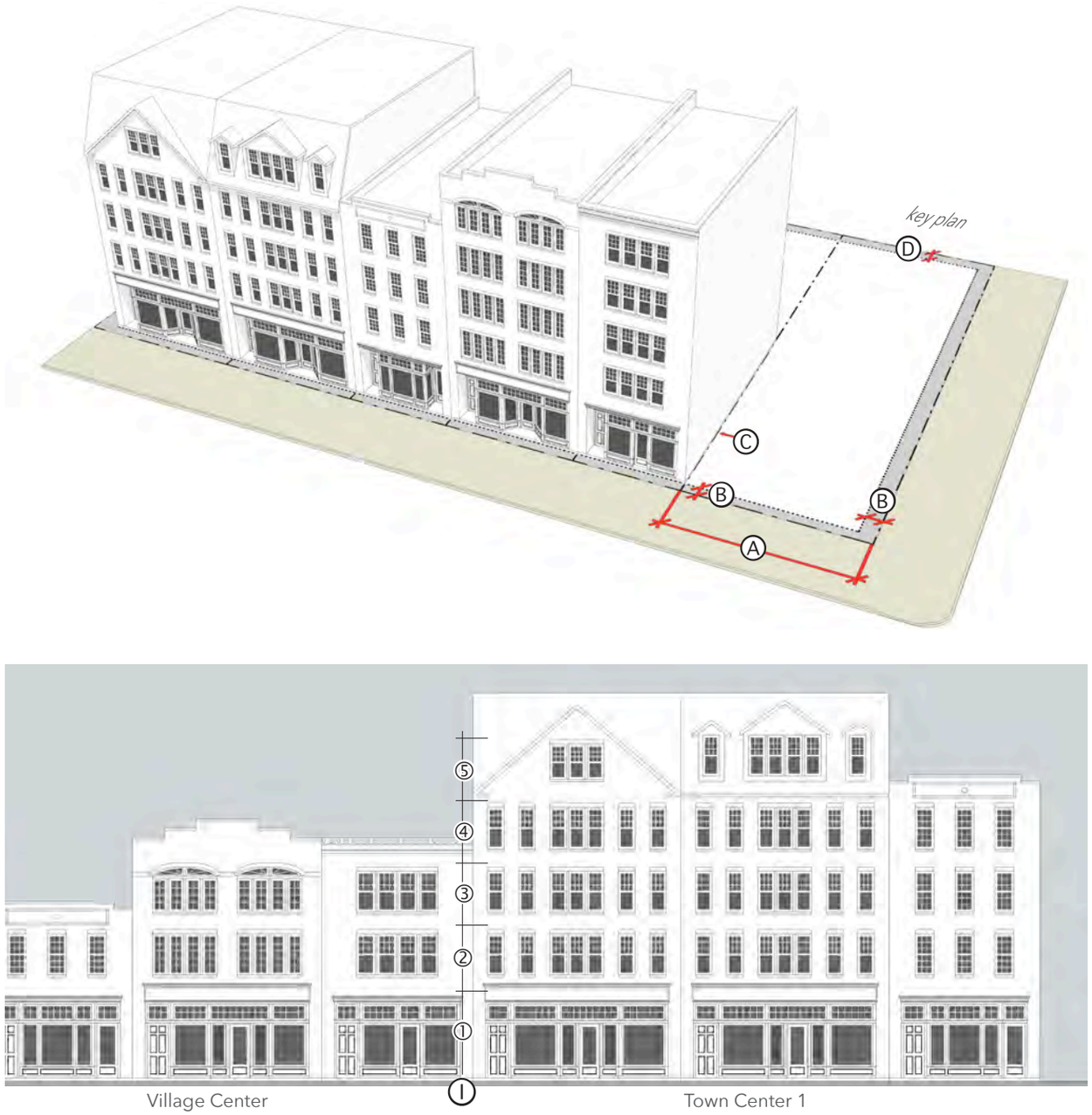
Test Code to Community Vision Plan

TABLE 4.3.2 TC1 DIMENSIONAL STANDARDS

Lot Occupation *(see section "155-3.4 Lot Occupation")*		
A	Lot Width	16 ft. min.
	Lot Area	1,600 sq.ft min.
	Impervious Coverage	80%
	Primary Frontage	90% min.
Setbacks *(see section "155-3.5 Frontages")* (1) (2)		
Principal Building (feet)		
B	Front	0 ft. min. / 6 ft. max. (3)
C	Side	0 or 5 ft. min. (4)
D	Rear	none
Accessory Building and Structure (feet)		
E	Front (measured from rear of PB)	20 ft. min.
F	Front Corner	6 ft. min.
G	Side	0 or 5 ft. min.
H	Rear	none
Frontage Yard Types *(see section "155-3.5 Frontages")*		
	Common Yard	Not Permitted
	Fenced Yard	Not Permitted
	Cottage Court	Not Permitted
	Shallow Yard	Permitted
	Urban Yard	Permitted
	Pedestrian Forecourt	Permitted
	Vehicular Forecourt	Permitted
Facade Types *(see section "155-3.5 Frontages")*		
	Porch	Not Permitted
	Stoop	Not Permitted
	Common Entry	Permitted
	Arcade / Colonnade	Permitted
	Gallery	Permitted
	Storefront	Permitted
Building Height (max.) *(see section "155-3.3 Building Height")*		
I	Principal Building	5 stories
	Accessory Building	n/a
	Accessory Structure	1 story up to 15 ft.
Parking *(see "Article 8: Parking Standards")*		

Notes	
1	Where a Lot Abuts a property of lower district, the side setback for the lot shall be that required of the abutting lot's district. Where a Lot Abuts a property zoned LDR at the side or the rear, the VC or TC Lot shall include a Buffer of 20 feet in width. Where a Lot Abuts a railroad right-of-way at the side or rear with a LDR district on the opposite side of the railroad, the VC or TC Lot shall include a Buffer of 15 feet in width.
2	Garage location shall be according to section "155-8.3 Parking Location"
3	When there is a predominant setback established the setback shall be greater than or equal to the predominant setback.
4	Or equal to the abutting zone, whichever is greater.
PB	Principal Building

FIGURE 4.3.2 TC1 FORM ILLUSTRATION



Source: DPZ

PLACE TYPES AND ZONING BY TRANSECT

DPZ CoDESIGN | ORANGE CODE

SEPTEMBER 2018

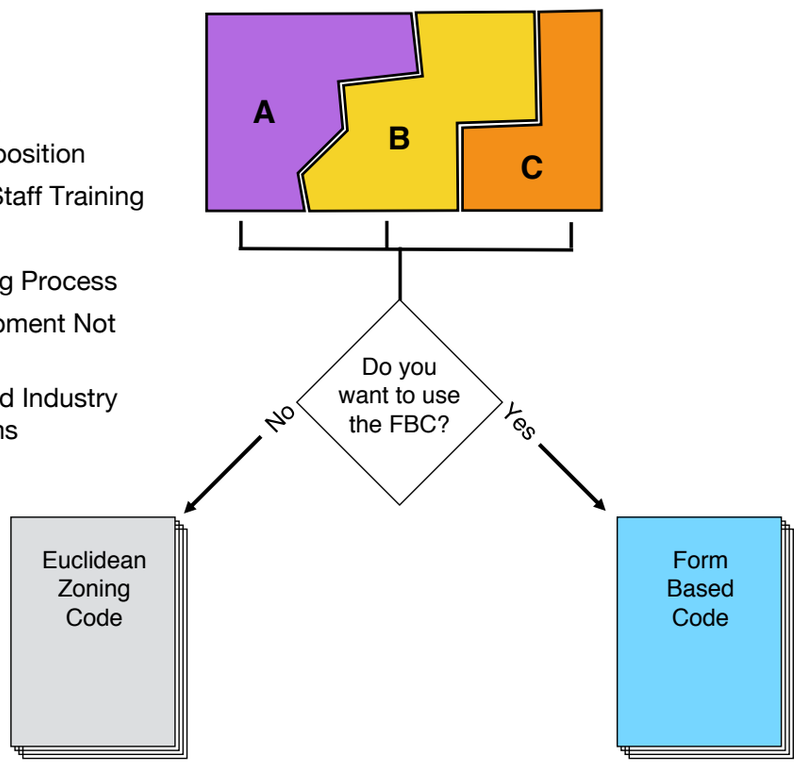
Integrating a Form-Based Code: Floating Zone

PROS

- Permits Desirable Development
- Little Political Opposition
- Allows Time For Staff Training

CONS

- Requires Rezoning Process
- Desirable Development Not Required
- Staff, Officials, and Industry Have Two Systems



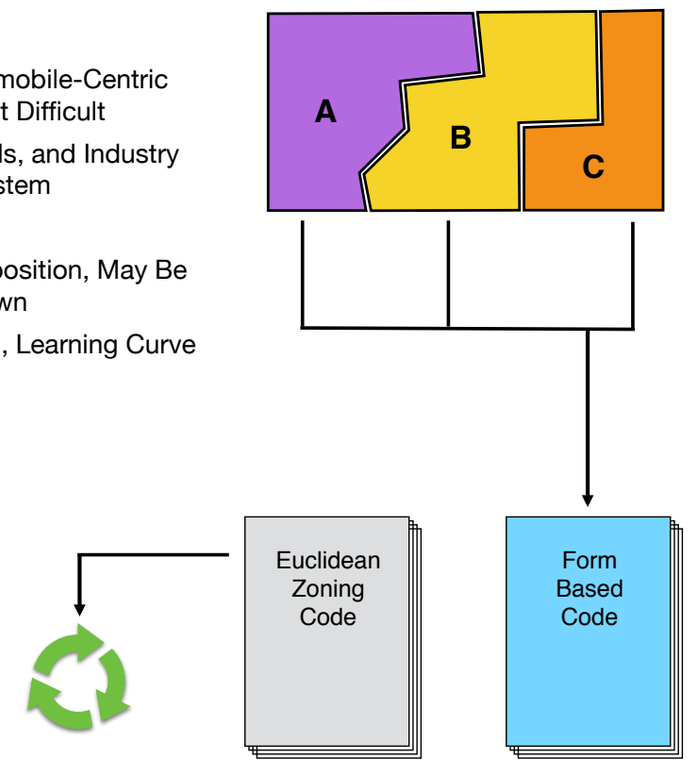
Integrating a Form-Based Code: Replacement

PROS

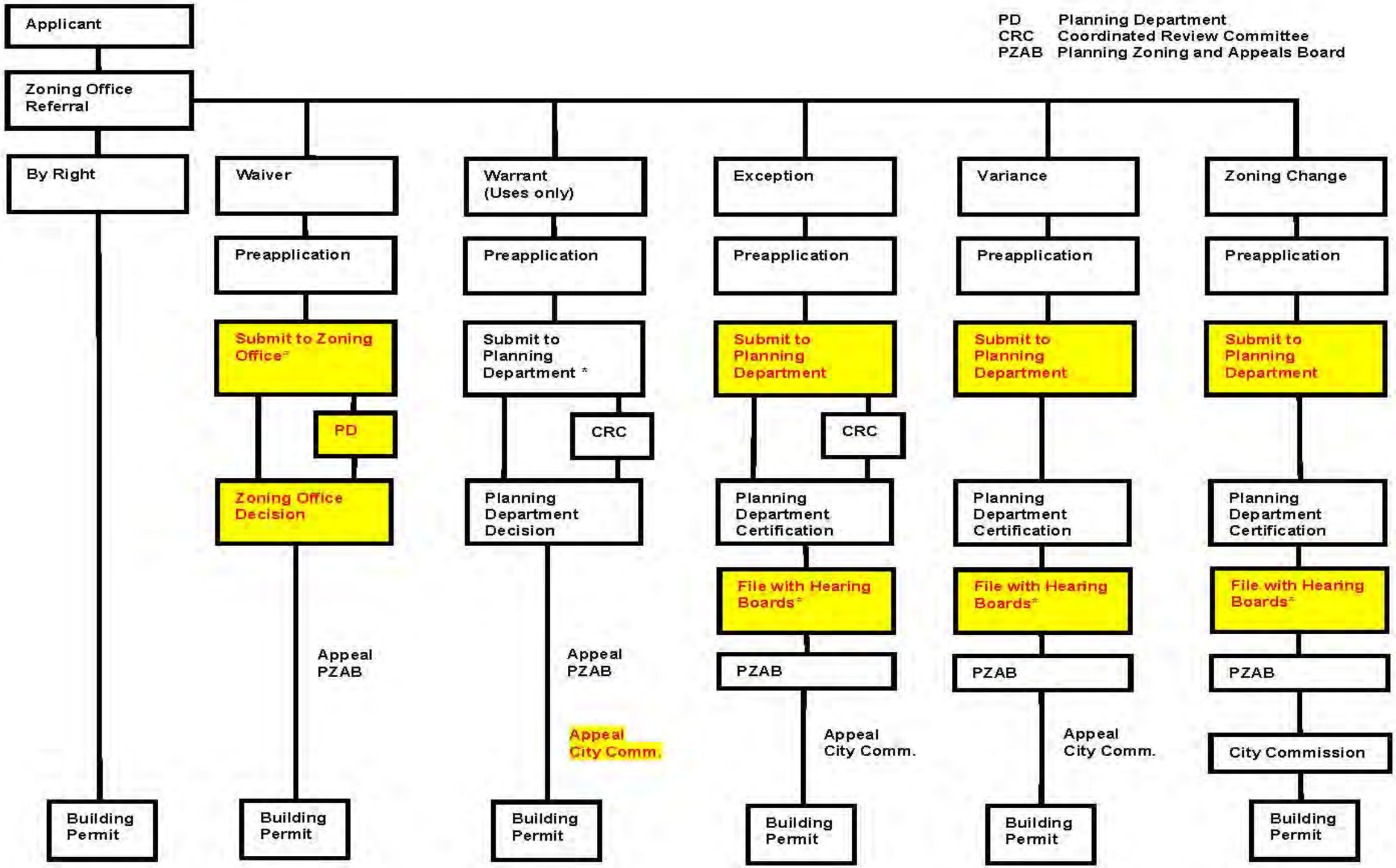
- Makes Automobile-Centric Development Difficult
- Staff, Officials, and Industry Use One System

CONS

- Political Opposition, May Be Watered Down
- New System, Learning Curve



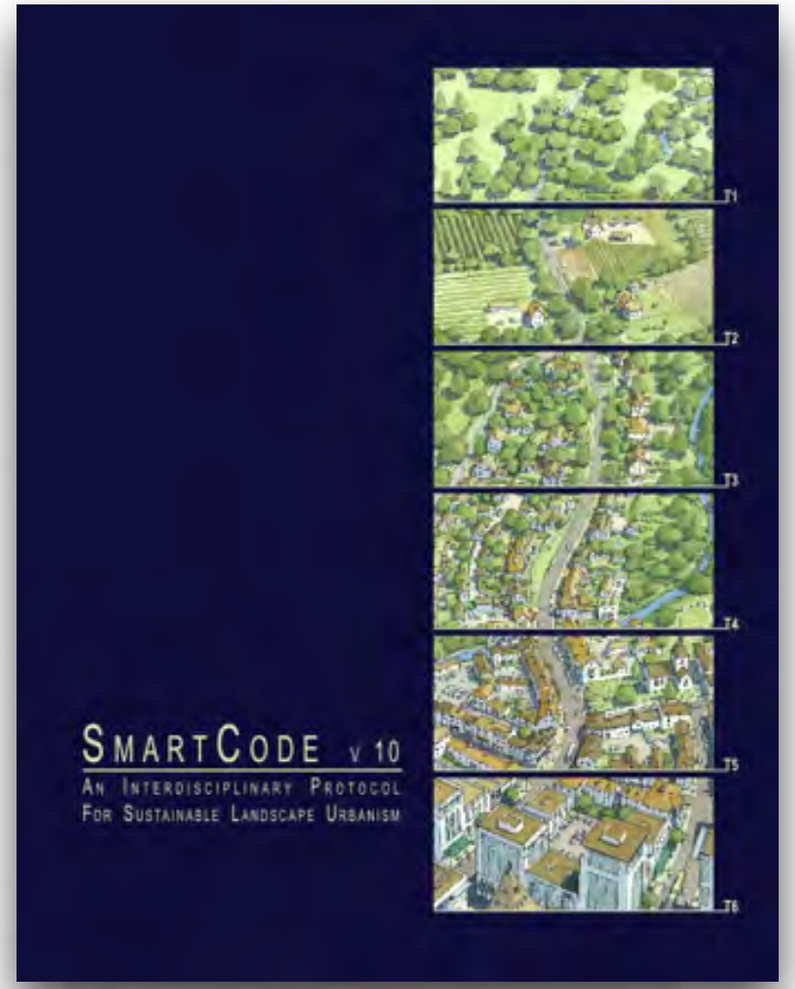
Implementation Options



Source: Miami21: DPZ

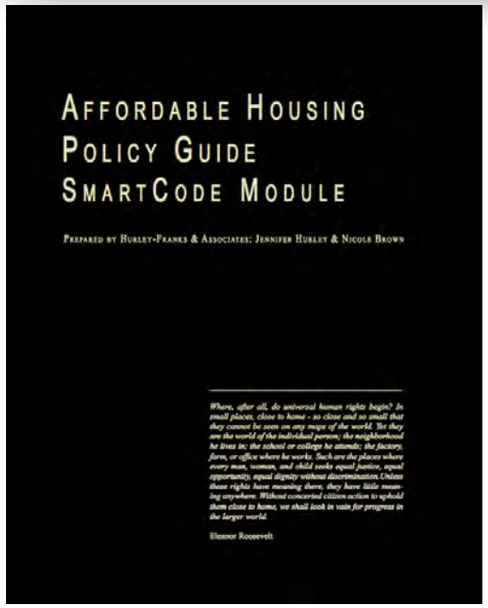
DPZ CODESIGN

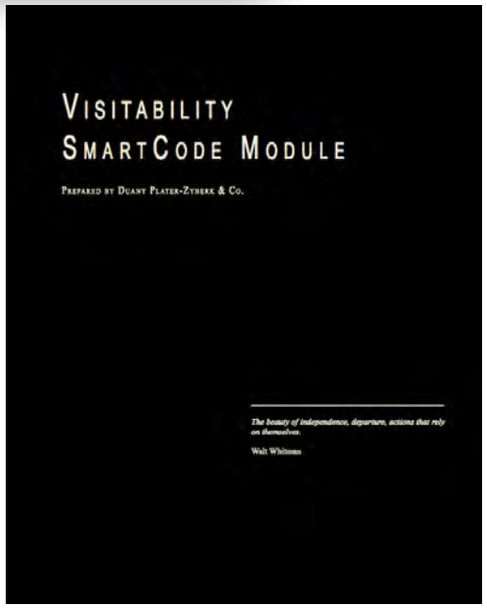
Streamlining Process

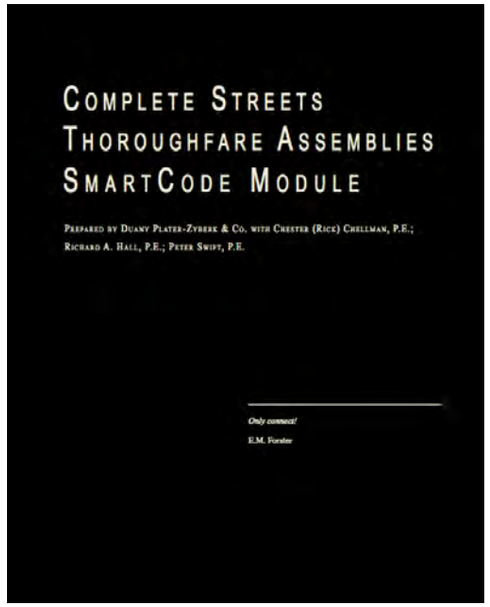


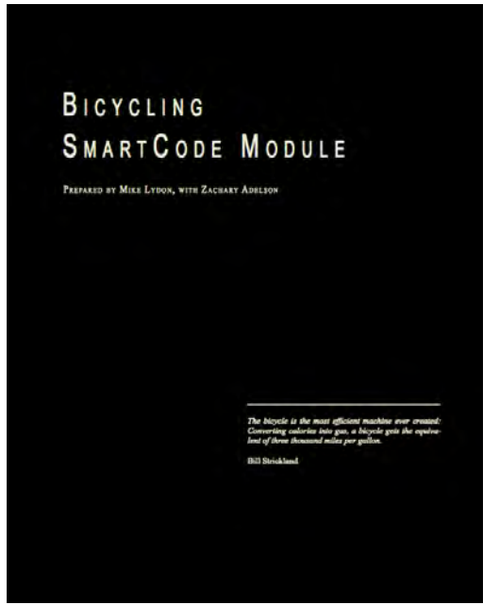
SmartCode + Modules:

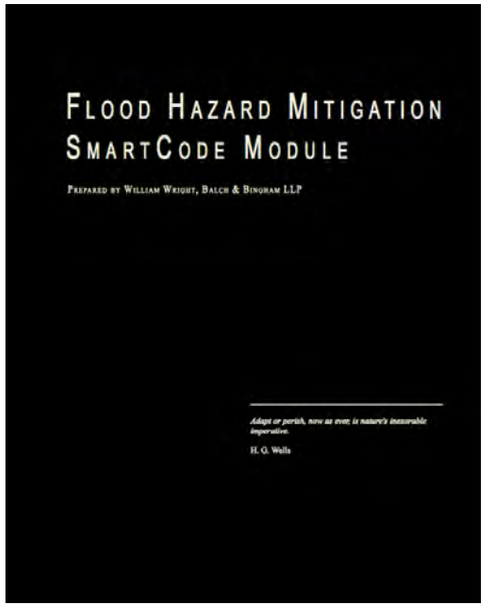
- Standards & Regulations
- Performance-based goals
- Guidelines & Policy



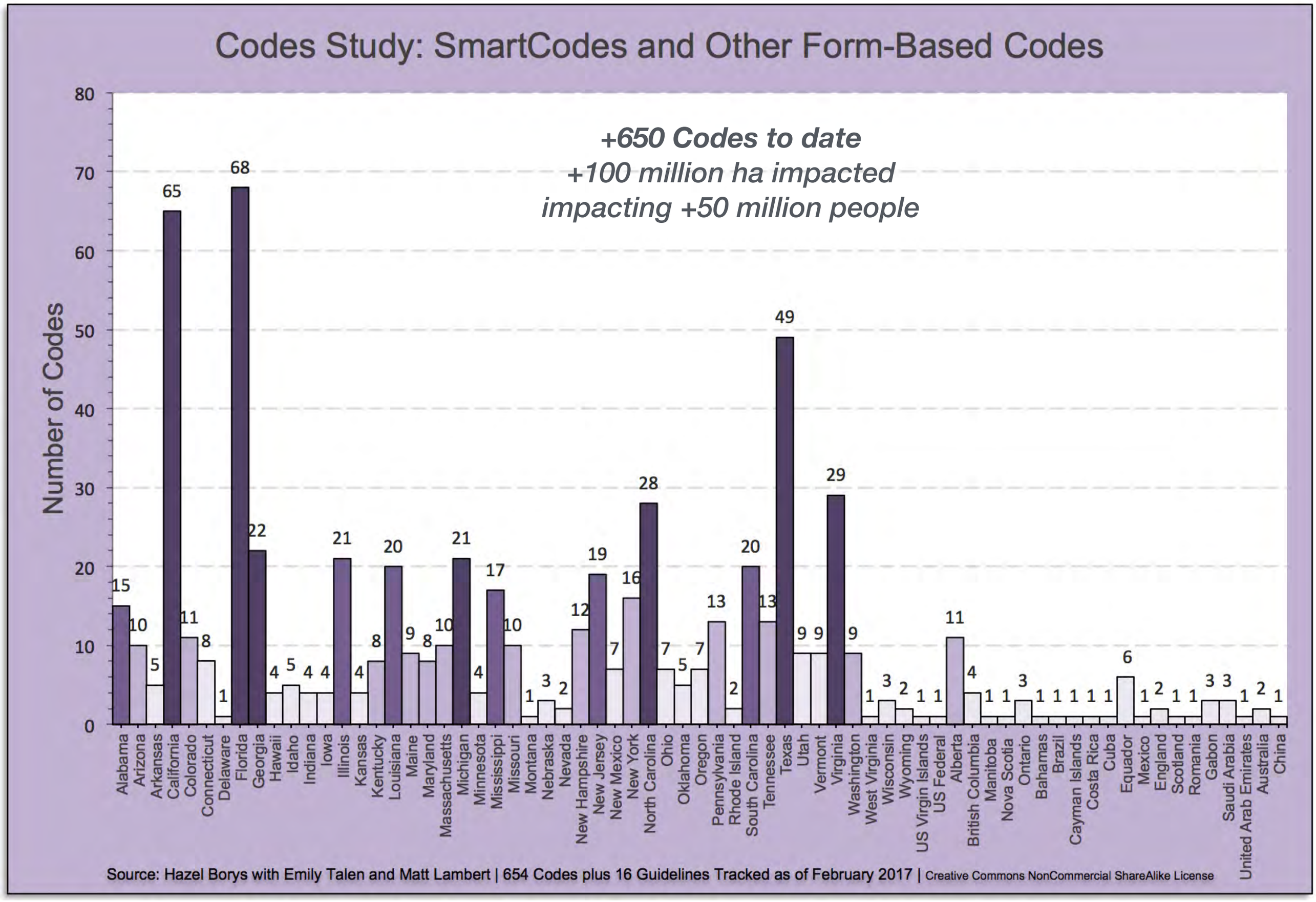








Code Apps



DPZ CODESIGN

Codes Study

4
Design & Coding for Sustainable neighborhoods


Aqua, FL (DPZ)

CONNECTED	Walkable | Bikeable | Transit-Ready | Permeable | Proximate
COMPACT	As dense as the market will bear
COMPLETE	Balance of Jobs | Housing | Retail | School | Programmed open space
COMPLEX	Housing for a diversity of Age | Income | Transect preference
CONVIVIAL	Public spaces that are Safe | Engaging | Accessible | Comfortable
CONSERVING	Buildings that are Resource-Efficient | Healthy | Durable | Flexible
COST-EFFECTIVE	Structures that are appropriate-tech | Resilient | Repairable

Sustainable & Equitable Communities

Design neighborhoods that are:

COMPLETE

Know what to regulate:

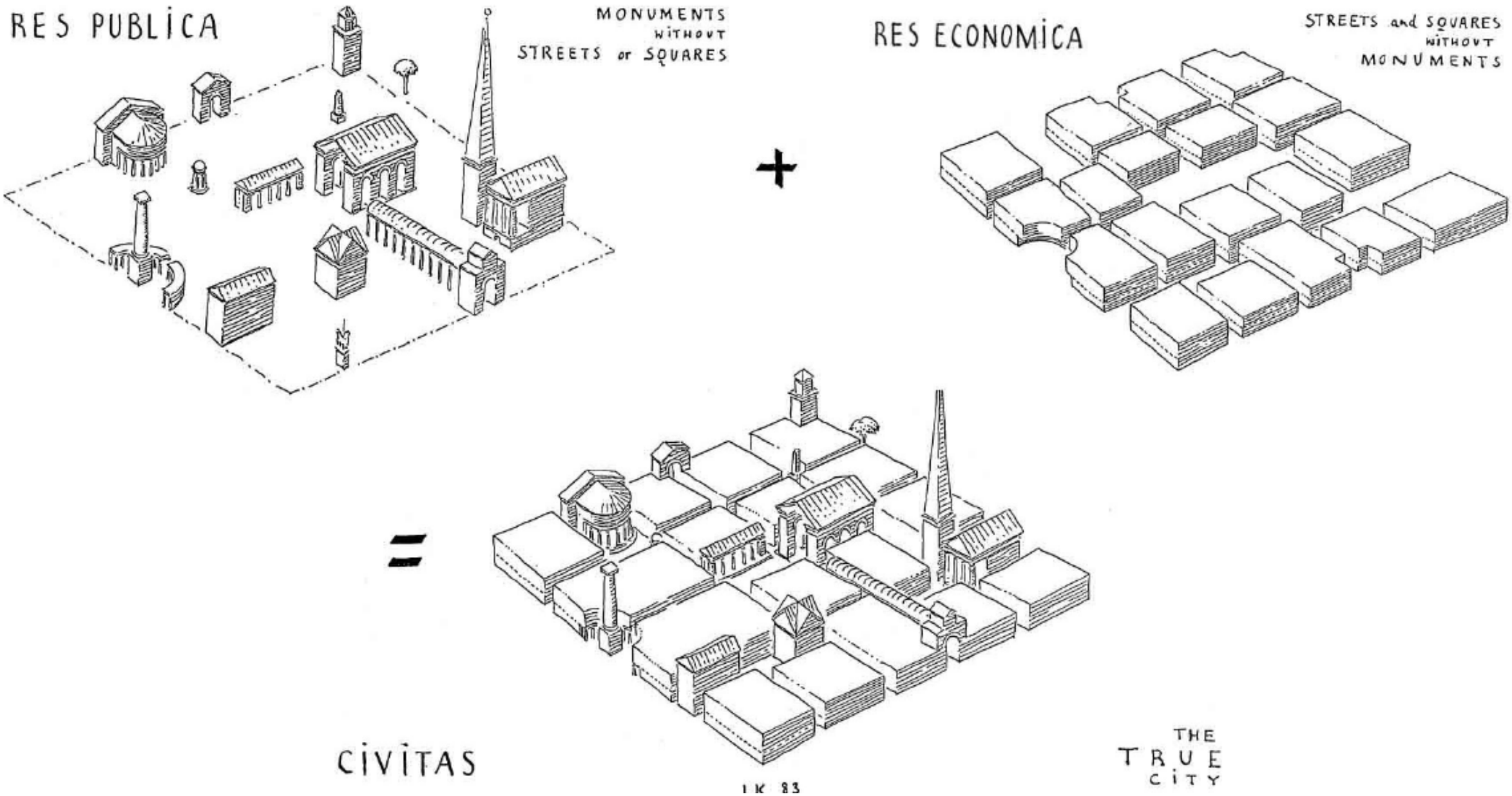
- Identify neighborhoods and centers;
- Know your market & demographics;
- Support existing retailers, before attracting new ones;
- Incentivize adaptive reuse;
- Diversify housing supply to address affordability;
- Facilitate compatible infill;
- Integrate placemaking.

Useful Mix of Building Types, Uses & People

New Town St Charles, MO (DPZ)

DPZ CODESIGN

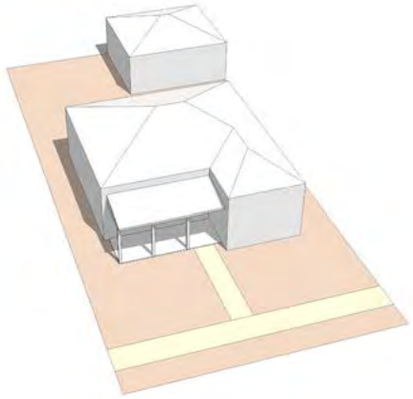
Architecture that puts the City First (15)



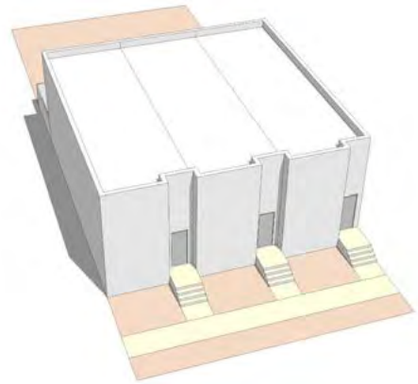
The Public Realm (16)

- Introduce additional building types that cater to broader range of incomes and that have the ability to evolve;
- Encourage the right building types in the right location for better job access.
- Code type, not density.

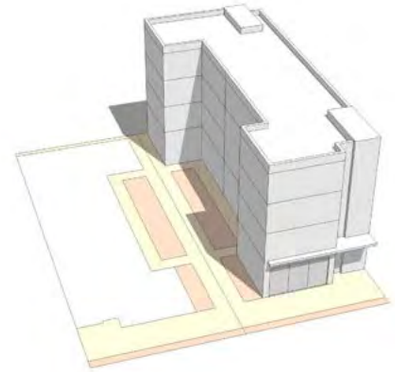
Missing Middle Housing (18)



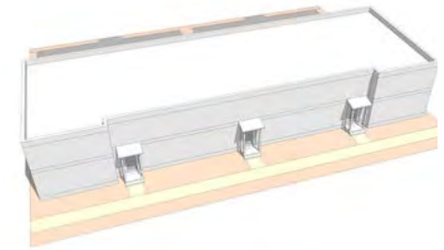
SFH on 50'wx120'd lot
Parking at rear from alley
Net density = 7 du/acre (14 with ADU)
Gross density = 5 du/acre (10 with ADU)



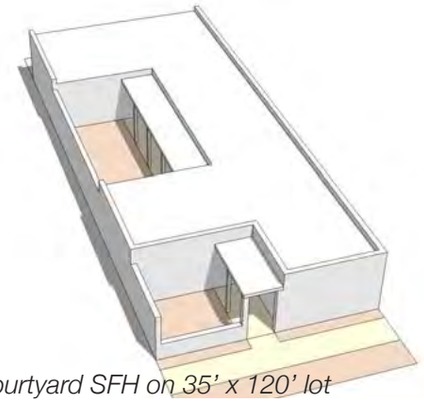
3 Townhouse/Flex units on 50'w x 120'd lot Parking at rear from alley
Net density = 20 du/acre
Gross density = 15 du/acre



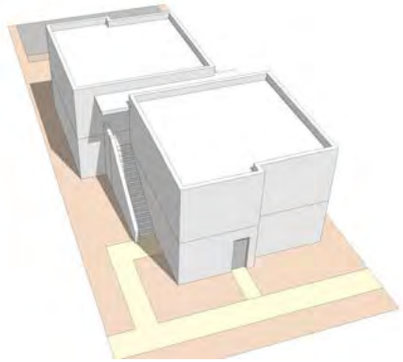
4-story Apartment - 50'w x 120'd
4 units/floor - relies on shared parking
Net density = 80 du/acre
Gross density = 60 du/acre



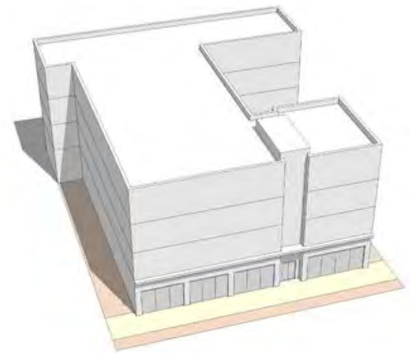
2-story apt building on 104'x144' lot with street-side entrances
Surface parking at rear (1.5 sp/u / 1 sp/u)
Net density = 32du/acre / 48du/acre
Gross density = 22 du/acre / 33 du/acre



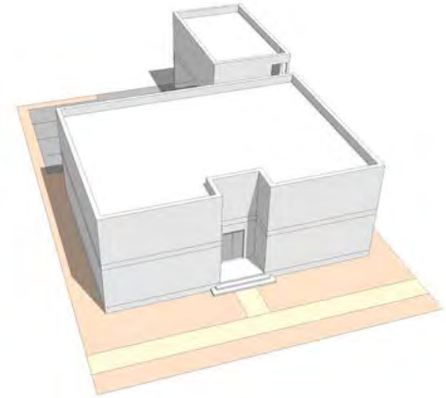
Courtyard SFH on 35' x 120' lot
Parking at rear from alley
Net density = 13 du/acre (26 with ADU)
Gross density = 9 du/acre (18 with ADU)



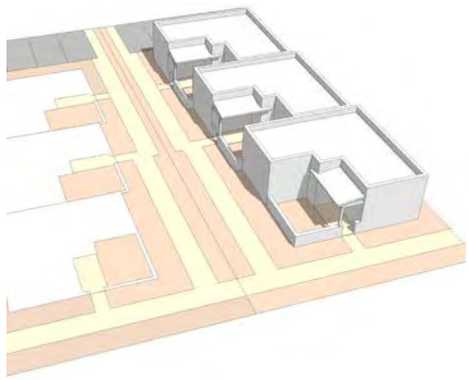
"4-pack" on 50'w x 120'd lot
Parking at rear from alley
Net density = 27 du/acre
Gross density = 19 du/acre



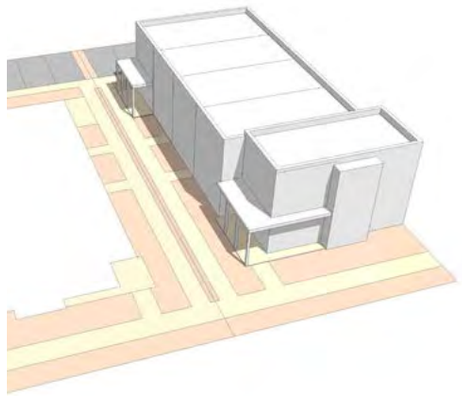
4-story apartment - 100'w x 120'd lot
8 units/floor relies on shared parking structure
Net density = 80 du/acre
Gross density = 60 du/acre



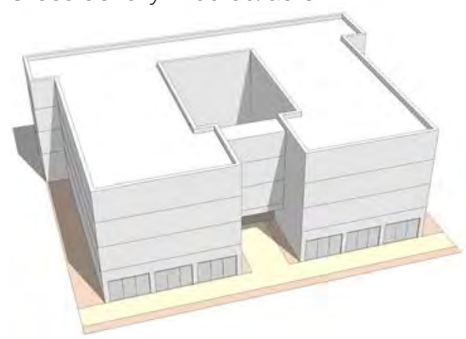
2-3 story apt. on 72'x100-120' lot
Parking at rear from alley
Net density = 25 du/acre
Gross density = 17 du/acre



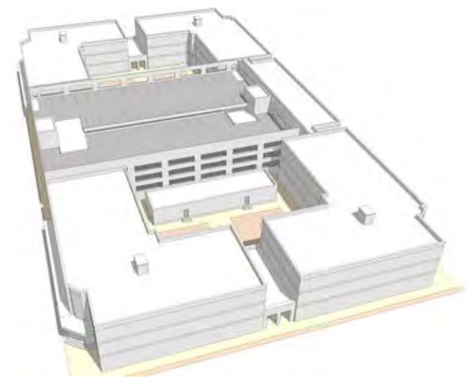
Senior Patio Home - 3 units on 50'w x 120'd lot - Parking at rear from alley
Net density = 20 du/acre
Gross density = 15 du/acre



Side Court Townhouse - 5 units on 50'w x 120'd - parking at rear from alley
Net density = 33 du/acre
Gross density = 24 du/acre



4-story Apartment - 150'w x 120'd lot
Relies on shared parking structure
Net density = 80 du/acre
Gross density = 60 du/acre



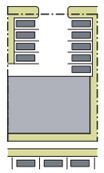
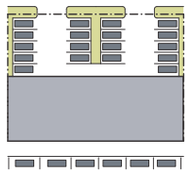
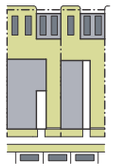
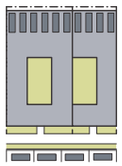
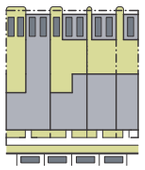
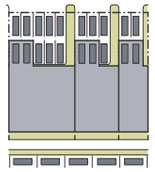
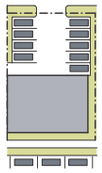
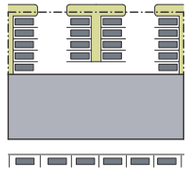
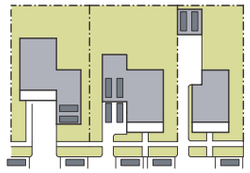
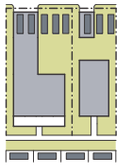
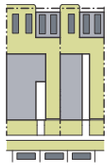
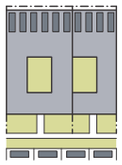
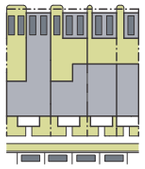
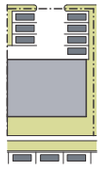
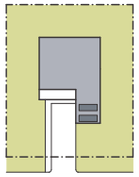
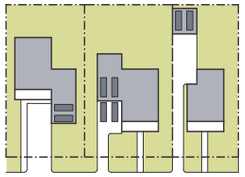
3-5 story apartment, lot varies - on-site parking structure (3story / 5 story)
Net density = 53 du/acre / 88 du/acre
Gross density = 39 du/acre / 65 du/acre

1301-EL-ID-3-MixedIncomeHousingJuly16,201411:07AM

DPZ CODESIGN

Identify Desired Housing Typologies

< RURAL | | | | | | | | | | TRANSECT | | | | | | | | | URBAN >

VILLA	HOUSE	COTTAGE	SIDEYARD HOUSE	PATIO HOUSE	ROWHOUSE	FLEXHOUSE	APARTMENT	COMMERCIAL BUILDING	
									T6
									T5
									T4
									T3

Country House: an edgeyard building type. A single-family dwelling on a very large lot of rural character, shared by one or more ancillary buildings. Syn.: **Villa**

House: an edgeyard building type. A single-family dwelling on a large lot, shared with an ancillary building in the rear yard.

Cottage: an edgeyard building type. A single-family dwelling, on a regular lot, shared with ancillary building in the rear yard.

Sideyard House: a sideyard building type. A single-family dwelling which occupies one side of the lot, with the primary yard to the other side, shared with ancillary building in the rear yard. Variant: **double house**

Patio House: a courtyard building type which surrounds one or more private yards. This is a functionally flexible type as it is able to shield the private open space from a public realm of great intensity. Syn.: **courtyard house**

Rowhouse: a rearyard building type. A single-family dwelling with common walls on the side lot lines, the facades forming a continuous frontage line. Rowhouses are the highest density type able to provide private yards.Syn.: **townhouse, terrace house**

Flexhouse / Live-Work: a rearyard, fully mixed-use building type with one dwelling above or behind a commercial space. Syn.: **corner store, shopfront**

Apartment Building: a rearyard residential building type accommodating multiple dwellings disposed above and beside each other, sharing a common entry. Variant: **loft building**

Mixed-Use Building: a rearyard, flexible commercial building type. Commercial buildings have floorplates deeper than residential ones. Syn.: **warehouse, flex Building, office building.**

Density with or Without Amenities

DPZ CODESIGN

Code for Complete Communities

TABLE 2.1.B: T4 STANDARDS
TABLE 2.1 BUILDING REGULATIONS BY TRANSECT ZONE

Sample illustrated building elevations

BUILDING TYPES ALLOWED

- Sideyard (SY)
- Duplex (DUP)
- Townhouse (TH)
- Small Multi-Family (SMF)
- Small Mixed-Use (SMU)

BUILDING HEIGHT

- Building height shall be measured in number of Stories, excluding Attics and raised basements.
- Height shall be measured to the eave or roof deck as specified in Section 2.14.

WITHIN FABRIC TYPES

See "Table 1.2: Regulations By Fabric Type"

F1: Low Intensity Fabric (25%)

F2: Medium Intensity Fabric (50%)

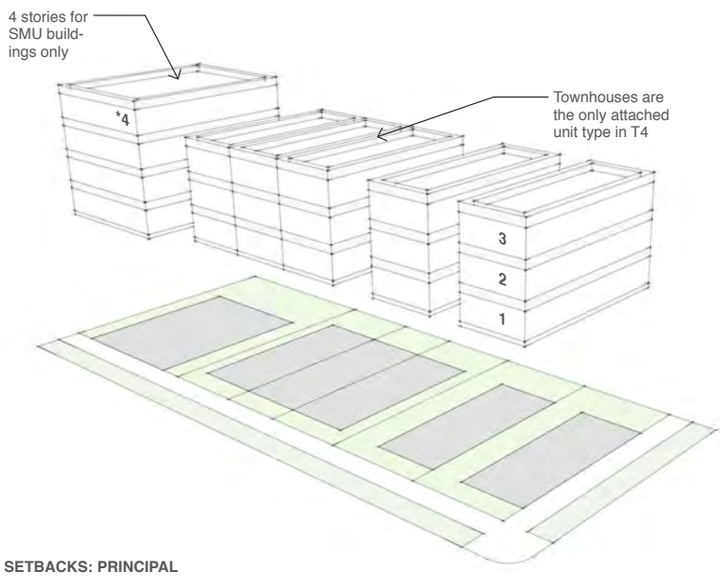
F3: High Intensity Fabric (92%)

C1: Low Intensity Center (50%)

C2: Medium Intensity Center (50%)

C3: High Intensity Center (30%)

A. BUILDING HEIGHT	
Principal Building	SMU: 4 stories max.
	All others: 3 stories max.
Accessory Structure	1 story max.
B. LOT OCCUPATION	
Lot Width / Depth	TH: 8m min. / 30m min.
	SY: 12m min.
	All Others: 22m min.
Lot Area	240m min.
Lot Coverage	70% max
F.A.R (max.)	SMU: 2.2
	SMF: 1.8
	All Others: 1.5
C. SETBACKS	
PRINCIPAL BUILDING	
1. Front	3m min. / SMU: 0m min.
2. Side (corner)	2m min.
3. Side (mid-block)	SMU: 3m min.
	SY, DUP, TH: 0m min.
	All Others: 2m min.
4. Rear	6m min.
Frontage Buildout	50% min.
ACCESSORY STRUCTURE	
Front	0m min.
Side (corner)	0m min.
Rear	1m min.
D. PROJECTIONS (See Section 2.18.6)	
E. BUILDING USE & INTENSITY (See "Table 2.2 & 2.3)	

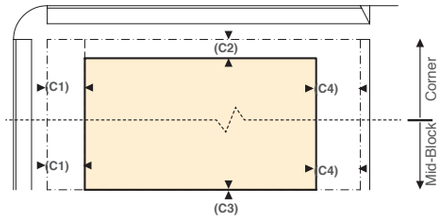


SETBACKS: PRINCIPAL

- The Facades and Elevations of Principal Buildings shall be distanced from the Lot lines as shown.
- Facades shall be built along the Principal Frontage to the minimum specified width in the table.

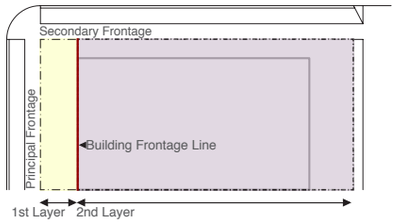
PARKING PLACEMENT

- Uncovered parking should be provided within the second layer parking zone.
- If parking provided within the first layer, it shall meet the standards of Section 2.16.4.
- Covered parking shall meet all setback requirements.



Note:
Main courtyard shall be a minimum of 10% of the lot area and/or 3m min for each side (for single-family dwelling) or 5m min for each side (for multi-family building)., whichever is greater. Additional courtyards may be smaller.

Parking Zone
Conditional Parking Zone
Principal Building



Source: DPZ

How do you create the widest possible range of housing, in walkable urbanism, at affordable prices, for young Canadian families?

DPZ CODESIGN

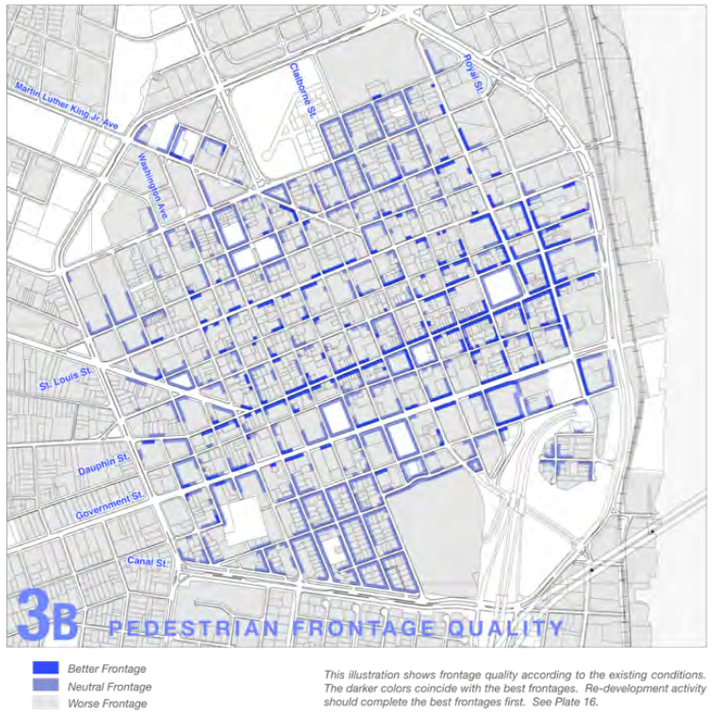
Challenge 1: Attainable Housing

Design neighborhoods that are:

CONNECTED

Know what to regulate:

- Triage drivable v/ walkable streets;
- Correlate land uses and street types;
- Align public and private realms;
- Prioritize mobility options and public improvements;

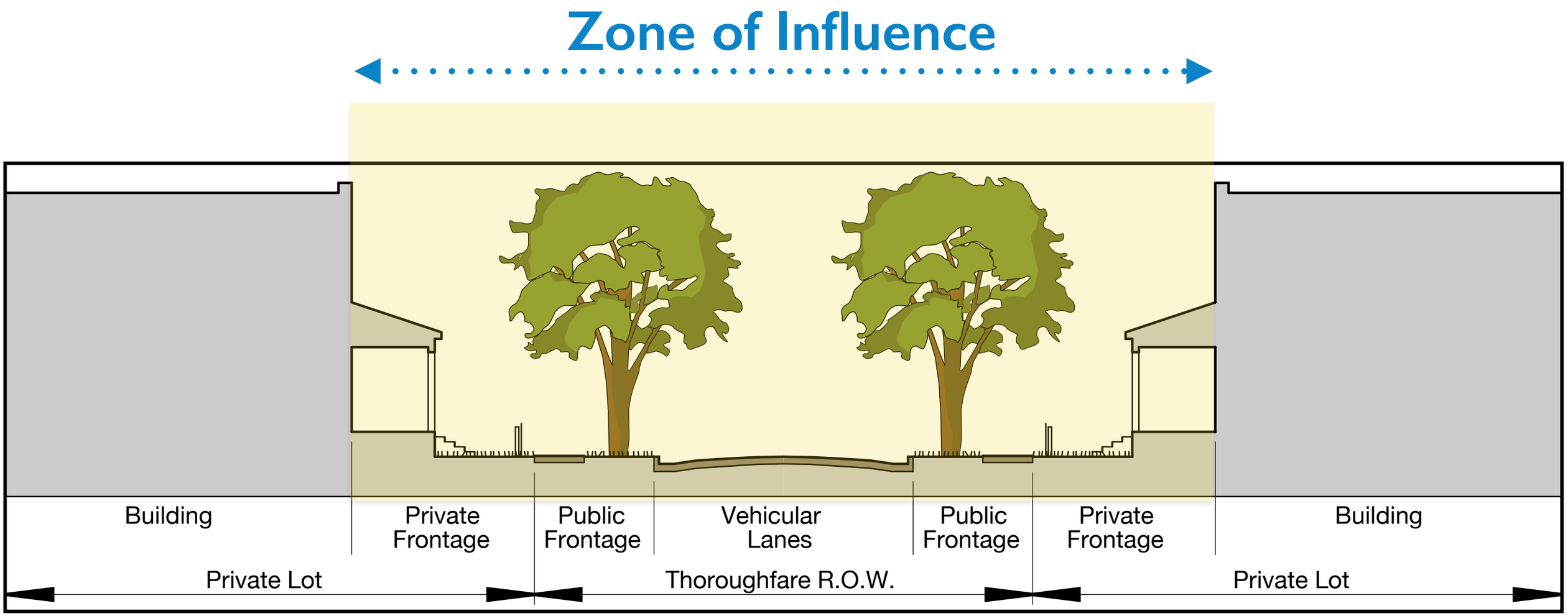


Better Frontage
Neutral Frontage
Worse Frontage

This illustration shows frontage quality according to the existing conditions. The darker colors coincide with the best frontages. Re-development activity should complete the best frontages first. See Plate 16.

DPZ CODESIGN

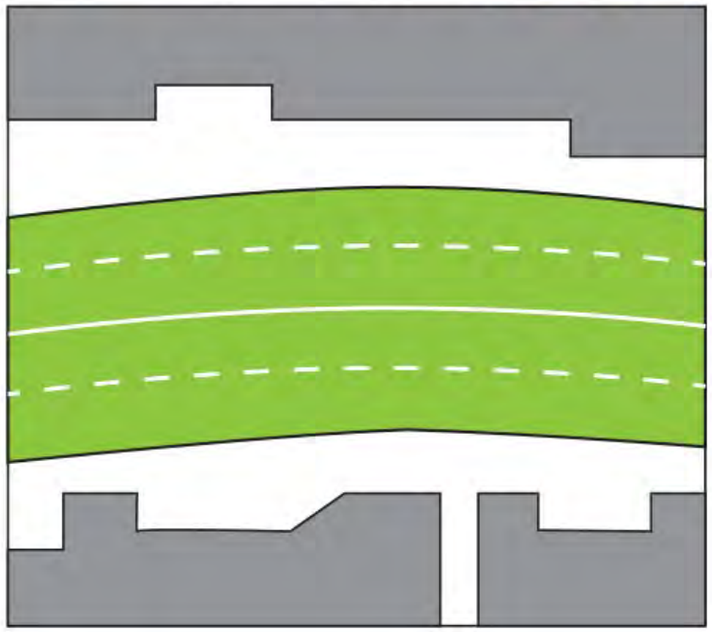
Public & Private Frontages

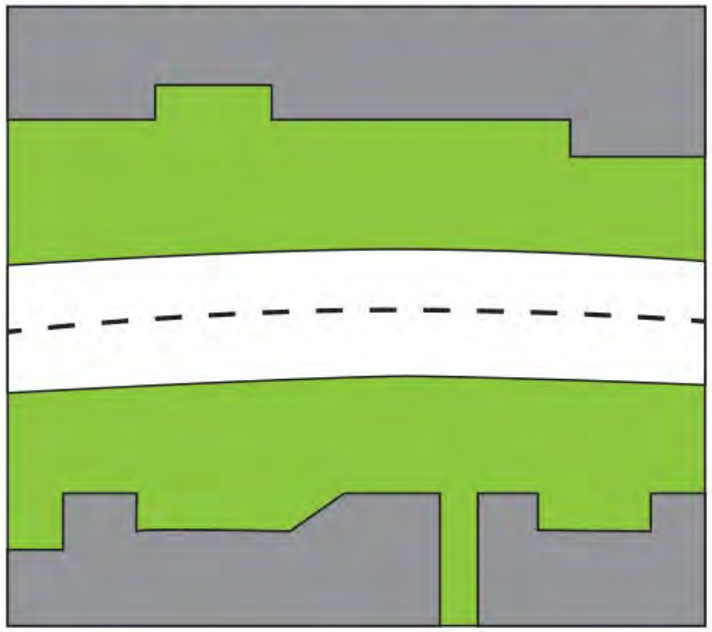


Public & Private Frontages

LINK:
STREET AS
MOVEMENT
CORRIDOR

DESIGN
PRIORITY:
SAVE TIME





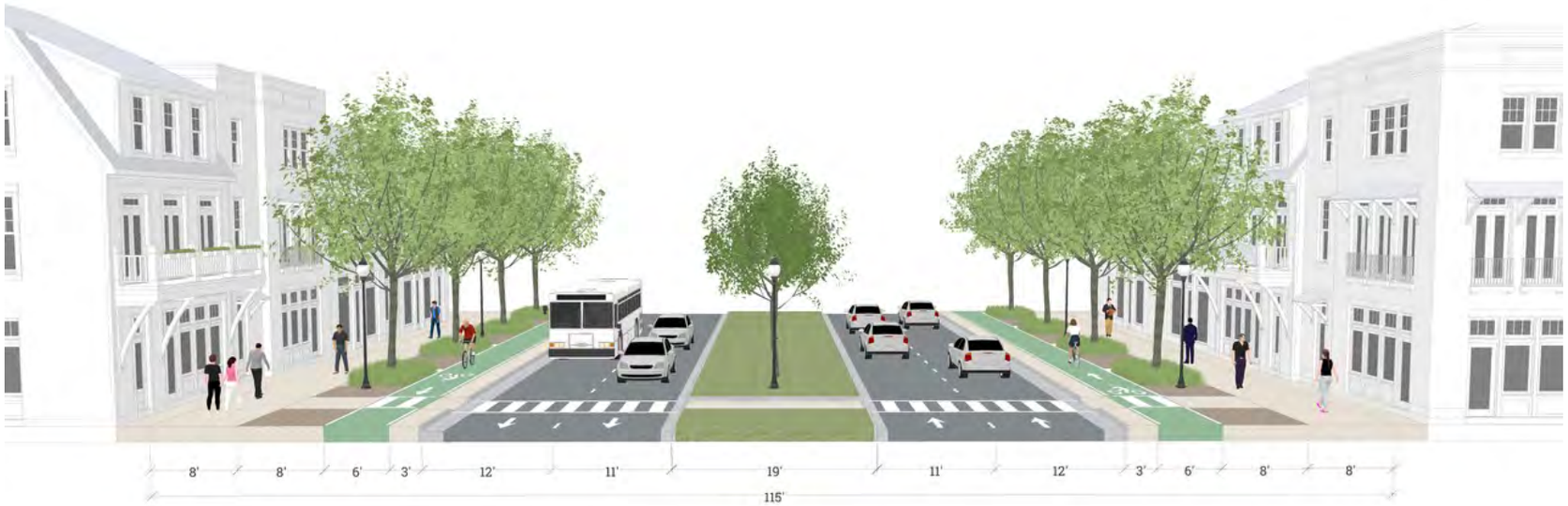
PLACE:
STREET AS
DESTINATION

DESIGN
PRIORITY:
SPEND TIME

Private Development | Prioritized Users | Secondary Users

Adapted from Complete Mobility @dewanmkarim. & Hazel Boyrs @ PlaceMakers
Flickr images: (L) Country lemonade; (R) La Citta Vita

Street Capacity & Character



4-Lane Arterial Mountain Vista West (Phase 2)

Connector Local (T3, T4)

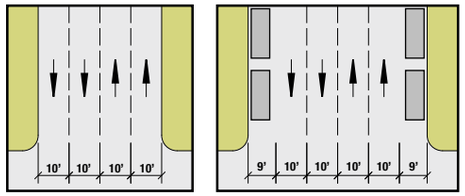
CZ-5 AVENUE

An Avenue carries through-traffic between Town Centers or more distantly-spaced neighborhoods. Sidewalks are located within the public frontage to accompany Avenues. Design speed for the Avenue is low to promote the safety and comfort of pedestrians. In commercial areas, sidewalks can be very wide to facilitate pedestrian street activity. Avenues generally have no curb cuts to adjoining land uses, unless the curb cuts are spaced similar to block spacing.

TECHNICAL DESCRIPTION

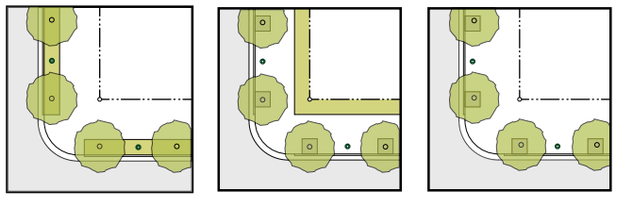
USUAL NUMBER OF LANES	xxx	SERVICE ROADS	none
LANE WIDTHS	xxx	INTERSECTION SPACING	xxx
TYPE OF MEDIAN	none	CURBSIDE PARKING	yes
RIGHT OF WAY WIDTHS	xxx	SIDEWALKS	yes
INTERSECTIONS	at grade	SPEED LIMIT	xxx
LEFT TURN LANES	xxx	HORIZONTAL CURVE RADIUS	xxx
TRAFFIC CONTROLS	xxx	MAXIMUM GRADE	xxx

APPLICABLE LANE ASSEMBLIES



XXX ADT	XXX ADT
12 seconds	17 seconds
moderate	moderate

APPLICABLE PUBLIC FRONTAGES



URBAN 3 | URBAN 4 | URBAN 5

DPZ CODESIGN

Context Based Street Design (8)

TABLE 3B: Vehicular Lane/Parking Assemblies. The projected design speeds determine the dimensions of the vehicular lanes and Turning Radii assembled for Thoroughfares.

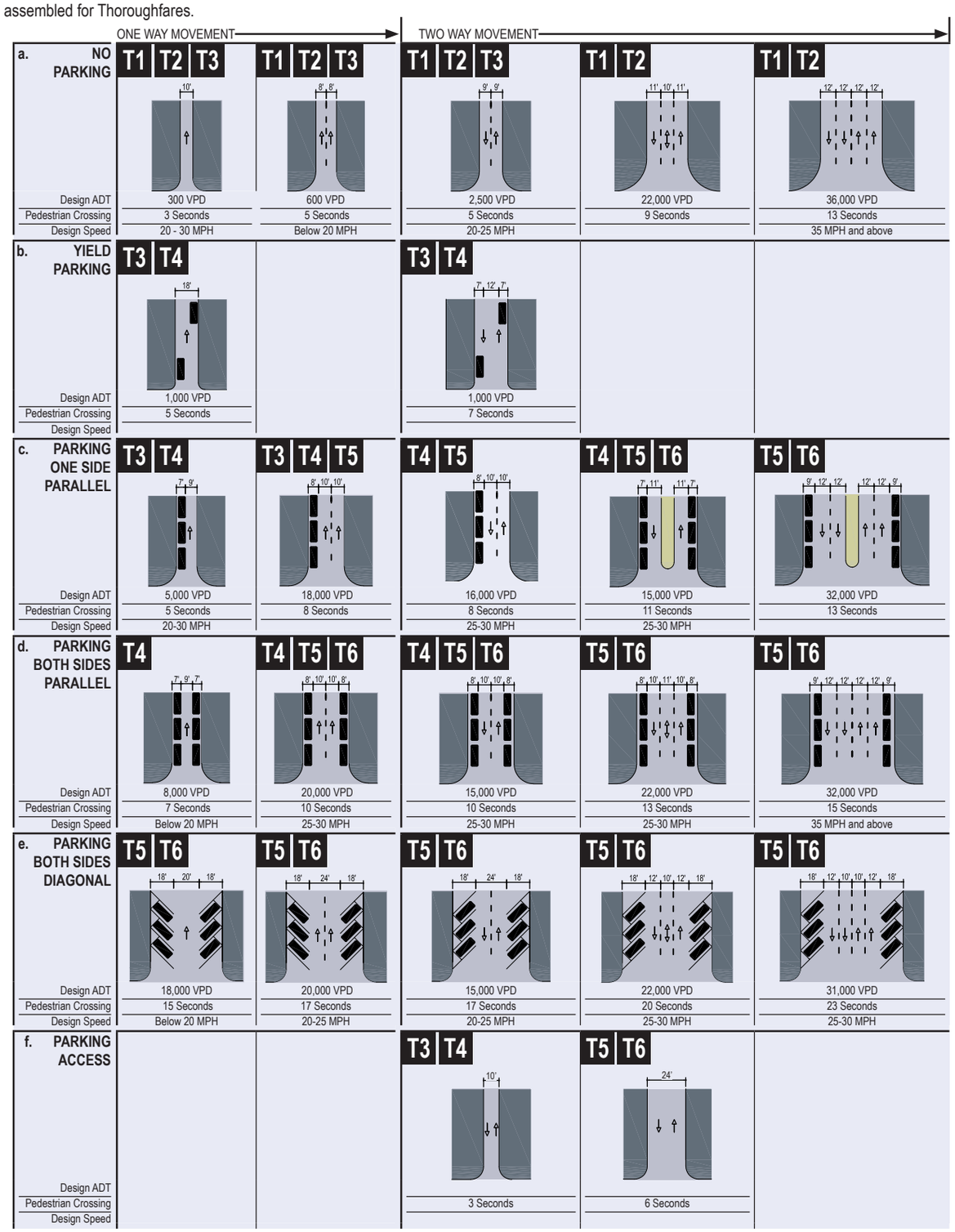
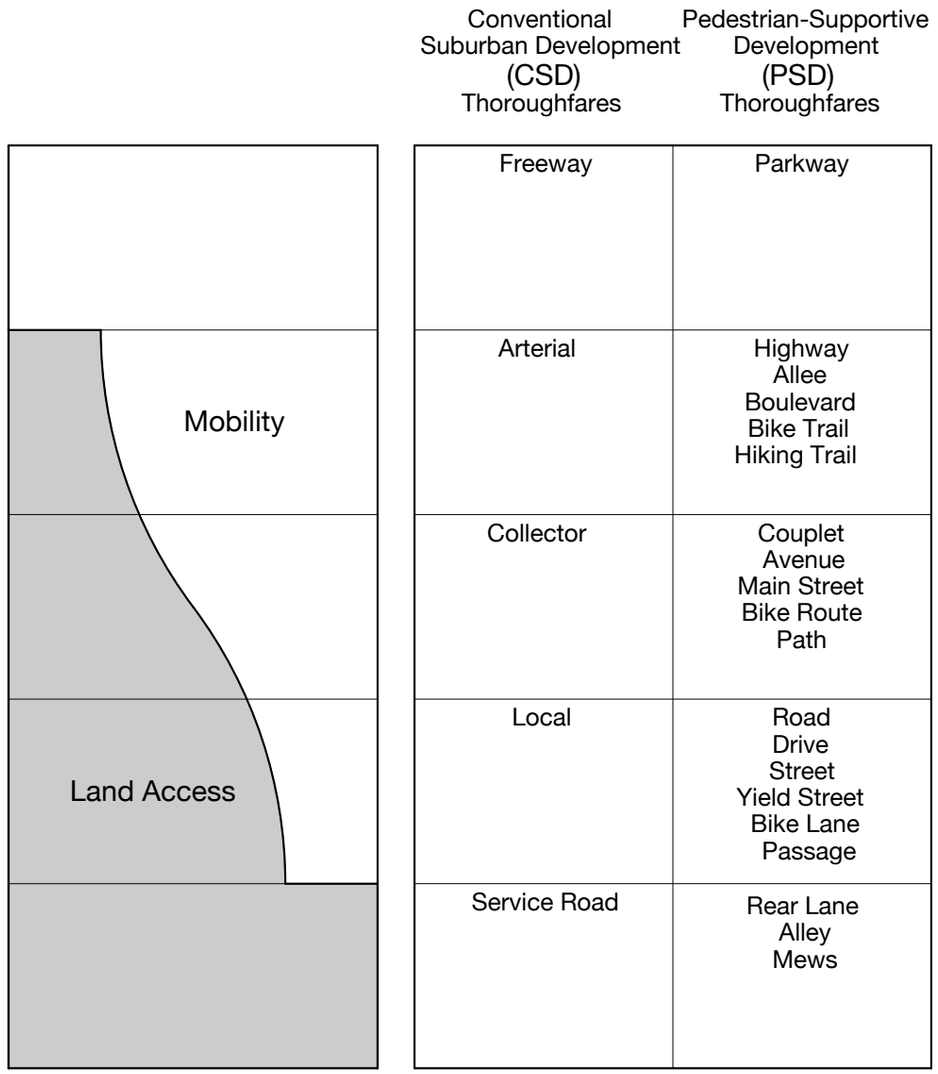
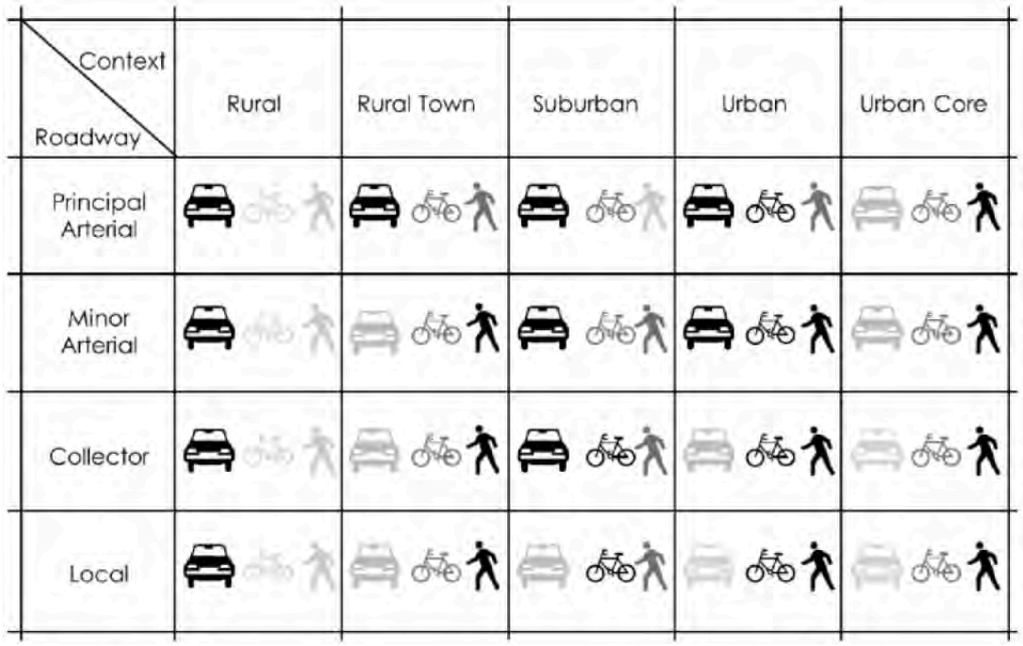


FIGURE 3.C PROPORTION OF SERVICE DIAGRAM

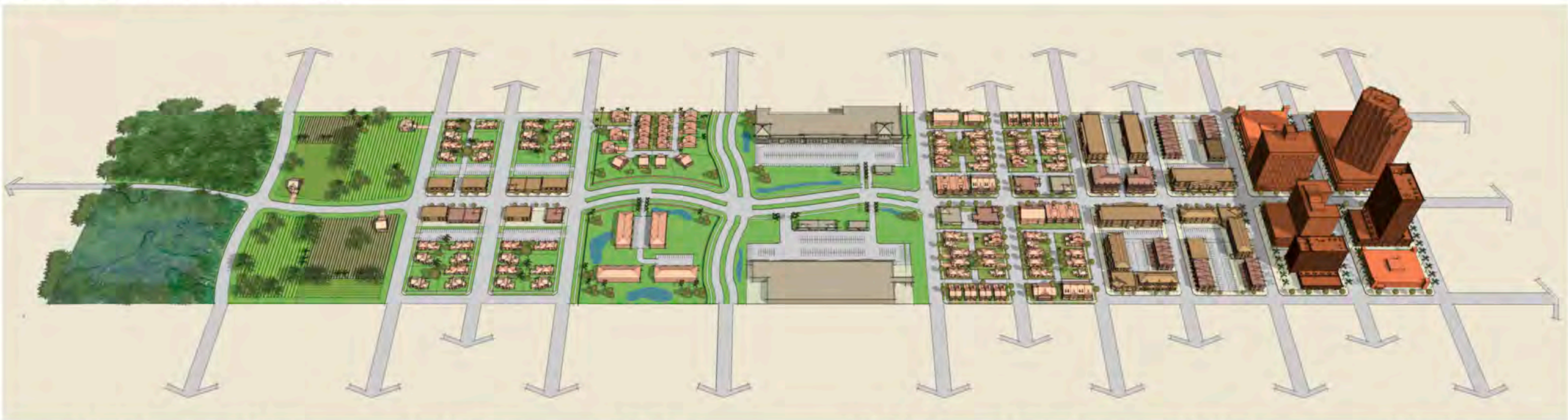


DPZ CODESIGN

A Solution: Coordinate Streets to Zoning



Source: Rick Hall, HPE



C1-Natural
Lands preserved in a natural or wilderness condition, including lands unsuitable for settlement due to natural conditions.

C2-Rural
Sparsely settled lands; may include agricultural land, grassland, woodland, and wetlands.

C2T-Rural Town
Small concentrations of developed areas immediately surrounded by rural and natural areas; includes many historic towns.

C3R-Suburban Residential
Mostly residential uses within large blocks and a disconnected or sparse roadway network.

C3C-Suburban Commercial
Mostly non-residential uses with large building footprints and large parking lots within large blocks and a disconnected or sparse roadway network.

C4-Urban General
Mix of uses set within small blocks with a well-connected roadway network. May extend long distances. The roadway network usually connects to residential neighborhoods immediately along the corridor or behind the uses fronting the roadway.

C5-Urban Center
Mix of uses set within small blocks with a well-connected roadway network. Typically concentrated around a few blocks and identified as part of a civic or economic center of a community, town, or city.

C6-Urban Core
Areas with the highest densities and building heights, and within FDOT classified Large Urbanized Areas (population >1,000,000). Many are regional centers and destinations. Buildings have mixed uses, are built up to the roadway, and are within a well-connected roadway network.

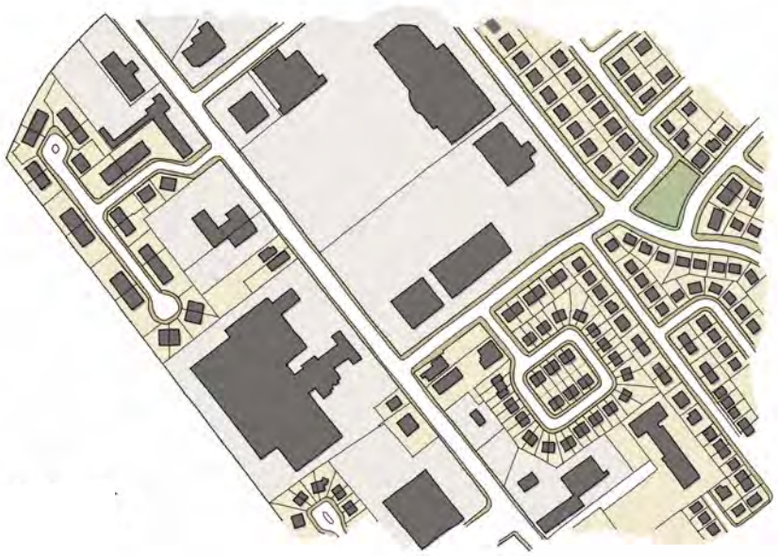
RURAL	SUBURBAN	URBAN

DPZ CODESIGN

A Solution: Coordinate Streets to Zoning

2-7. Sprawl lacks structure, centers, and edges

2-6. Complete communities consist of distinct corridors, districts, and neighborhoods



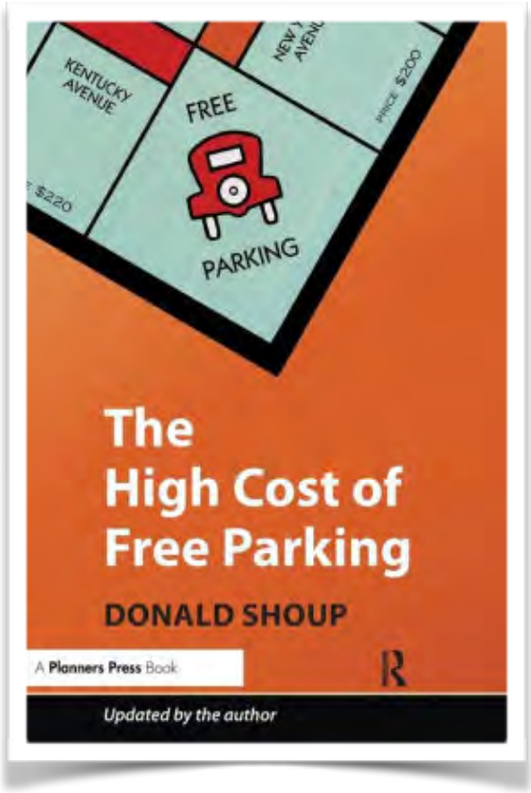
DPZ CODESIGN

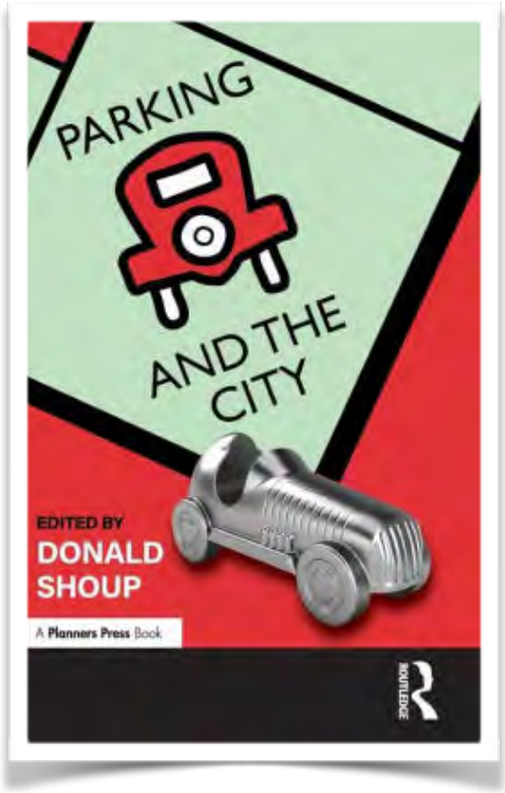
An Interconnected Street Network (9)

Highway removals:

Montreal, Canada
Seoul, Korea
San Francisco, CA
New York, NY
Rochester, NY
Dallas, TX
Detroit, MI
Milwaukee, WI ($25m to + $1b investment)

Freeways without Futures (10)





1. Charge the right prices for on-street parking.
2. Spend the parking revenue to improve public services on the metered streets.
3. Remove off-street parking requirements.

Gateway Redeveloped: Shared Parking, City Ratio (Short Term)

Use	Total Required	Mon - Fri 8am - 6pm		Mon - Fri 6pm - 12am		Mon - Fri 12am - 8am		Sat - Sun 8am - 6pm		Sat - Sun 6pm - 12am		Sat - Sun 12am - 8am	
Dining	929 spaces	70%	651 sp.	100%	930 sp.	10%	93 sp.	70%	651 sp.	100%	930 sp.	20%	186 sp.
Lodging	68 spaces	70%	48 sp.	100%	69 sp.	100%	69 sp.	70%	48 sp.	100%	69 sp.	100%	69 sp.
Theater	395 spaces	30%	119 sp.	70%	277 sp.	5%	20 sp.	50%	198 sp.	100%	395 sp.	5%	20 sp.
Retail	421 spaces	90%	380 sp.	80%	338 sp.	5%	22 sp.	100%	422 sp.	70%	295 sp.	5%	22 sp.
Office	391 spaces	100%	391 sp.	20%	79 sp.	5%	20 sp.	5%	20 sp.	5%	20 sp.	5%	20 sp.
Housing	451 spaces	60%	271 sp.	100%	452 sp.	100%	452 sp.	80%	362 sp.	100%	452 sp.	100%	452 sp.
Total	**2,656 spaces**		**1,860 sp.**		**2,145 sp.**		**676 sp.**		**1,701 sp.**		**2,161 sp.**		**769 sp.**

DPZ CODESIGN

Rethinking Parking (6)

TABLE 7: Private Frontages. The Private Frontage is the area between the building Facades and the Lot lines.

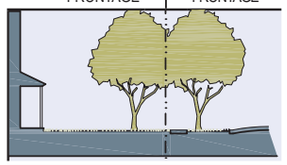
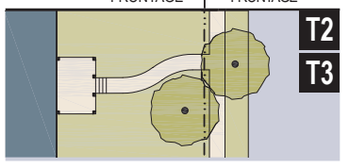
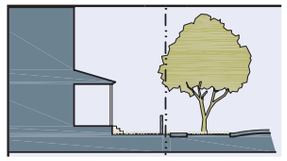
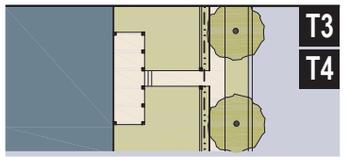
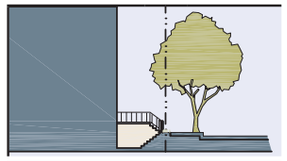
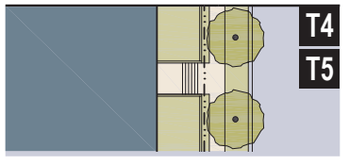
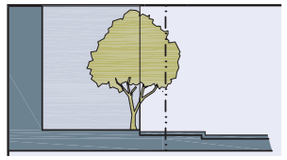
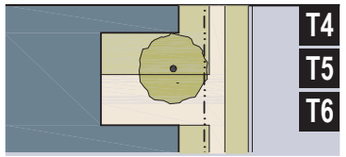
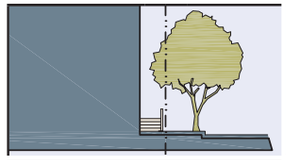
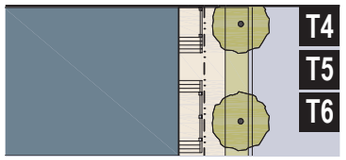
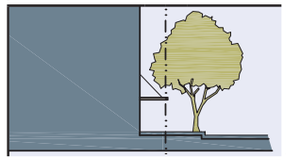
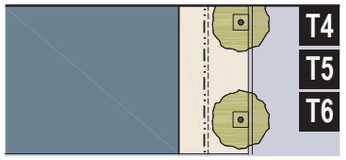
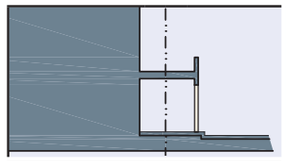
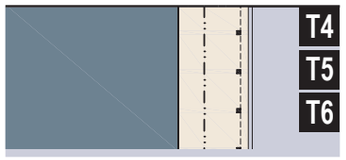
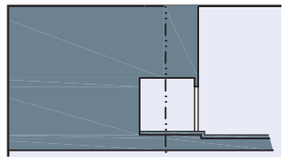
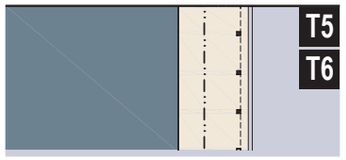
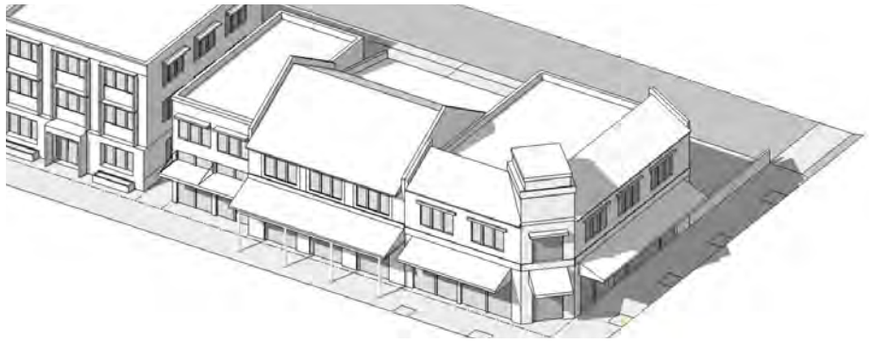
	SECTION (LOT ▶ PRIVATE ▶ FRONTAGE / ◀ R.O.W. ◀ PUBLIC FRONTAGE)	PLAN (LOT ▶ PRIVATE ▶ FRONTAGE / ◀ R.O.W. ◀ PUBLIC FRONTAGE)
a. Common Yard: a planted Frontage wherein the Facade is set back substantially from the Frontage Line. The front yard created remains unfenced and is visually continuous with adjacent yards, supporting a common landscape. The deep Setback provides a buffer from the higher speed Thoroughfares.		 T2 T3
b. Porch & Fence: a planted Frontage wherein the Facade is set back from the Frontage Line with an attached porch permitted to Encroach. A fence at the Frontage Line maintains street spatial definition. Porches shall be no less than 8 feet deep.		 T3 T4
c. Terrace or Lightwell: a Frontage wherein the Facade is set back from the Frontage line by an elevated terrace or a sunken Lightwell. This type buffers Residential use from urban Sidewalks and removes the private yard from public Encroachment. Terraces are suitable for conversion to outdoor cafes. Syn: **Dooryard.**		 T4 T5
d. Forecourt: a Frontage wherein a portion of the Facade is close to the Frontage Line and the central portion is set back. The Forecourt created is suitable for vehicular drop-offs. This type should be allocated in conjunction with other Frontage types. Large trees within the Forecourts may overhang the Sidewalks.		 T4 T5 T6
e. Stoop: a Frontage wherein the Facade is aligned close to the Frontage Line with the first Story elevated from the Sidewalk sufficiently to secure privacy for the windows. The entrance is usually an exterior stair and landing. This type is recommended for ground-floor Residential use.		 T4 T5 T6
f. Shopfront: a Frontage wherein the Facade is aligned close to the Frontage Line with the building entrance at Sidewalk grade. This type is conventional for Retail use. It has a substantial glazing on the Sidewalk level and an awning that may overlap the Sidewalk to within 2 feet of the Curb. Syn: Retail Frontage.		 T4 T5 T6
g. Gallery: a Frontage wherein the Facade is aligned close to the Frontage line with an attached cantilevered shed or a lightweight colonnade overlapping the Sidewalk. This type is conventional for Retail use. The Gallery shall be no less than 10 feet wide and should overlap the Sidewalk to within 2 feet of the Curb.		 T4 T5 T6
h. Arcade: a colonnade supporting habitable space that overlaps the Sidewalk, while the Facade at Sidewalk level remains at or behind the Frontage Line. This type is conventional for Retail use. The Arcade shall be no less than 12 feet wide and should overlap the Sidewalk to within 2 feet of the Curb. See Table 8.		 T5 T6

TABLE 4C. FRONTAGE SETBACK TYPES

SETBACK TYPE: SHALLOW	
Illustration	
Shading	1 understory tree or 10 shrubs per 45 sm, trees species should be coordinated with adjacent street trees; 70% of the surface area must be shaded by trees, or structural shading devices; Landscape or shading devices should shade the sidewalk
Surface	Must be landscaped in *T4* and may be paved in *T5*.
Walkways	1 per frontage providing access to building entries in *T4*.
Fencing	Permitted at or interior to the building setback line at *primary frontages*. Permitted at or interior to *secondary frontage* lines.

SETBACK TYPE: URBAN	
Illustration	
Shading	80% of the surface area must be shaded by structural shading devices. Shading should be provided for adjacent sidewalks.
Surface	Must be paved and at sidewalk grade. Vegetation is permitted in raised containers.
Walkways	n/a
Fencing	Permitted at outdoor seating areas only.

DPZ CODESIGN

A Solution: Code Private Frontages

4-142. Dispersed building and parking layout in existing office park

6-1. Existing commercial megablock

4-143. Office park repaired into a transit-oriented town center

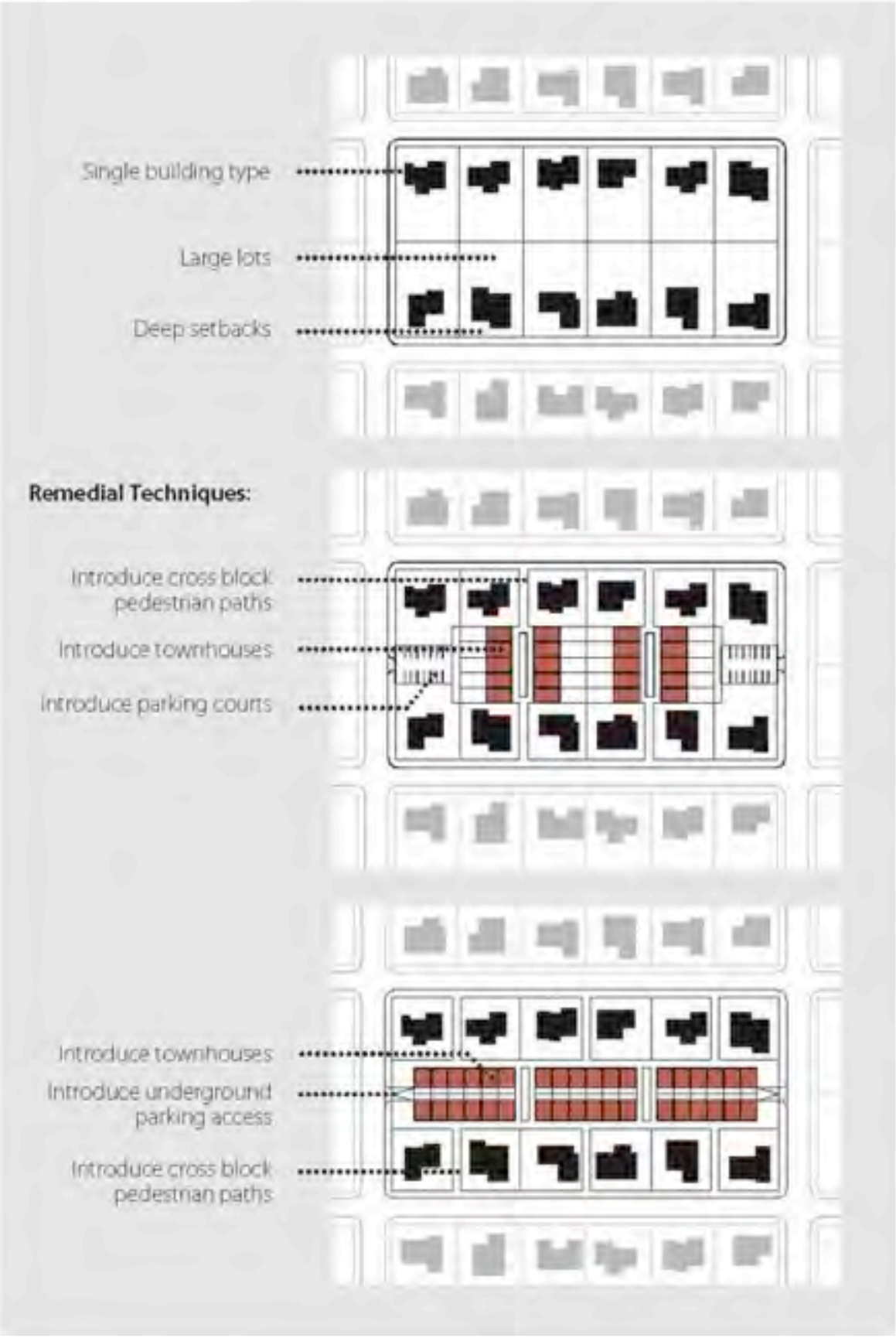
6-2. Repaired urban fabric with mix of uses and civic spaces

DPZ CODESIGN

Building Better Suburbs through Retrofit (2)

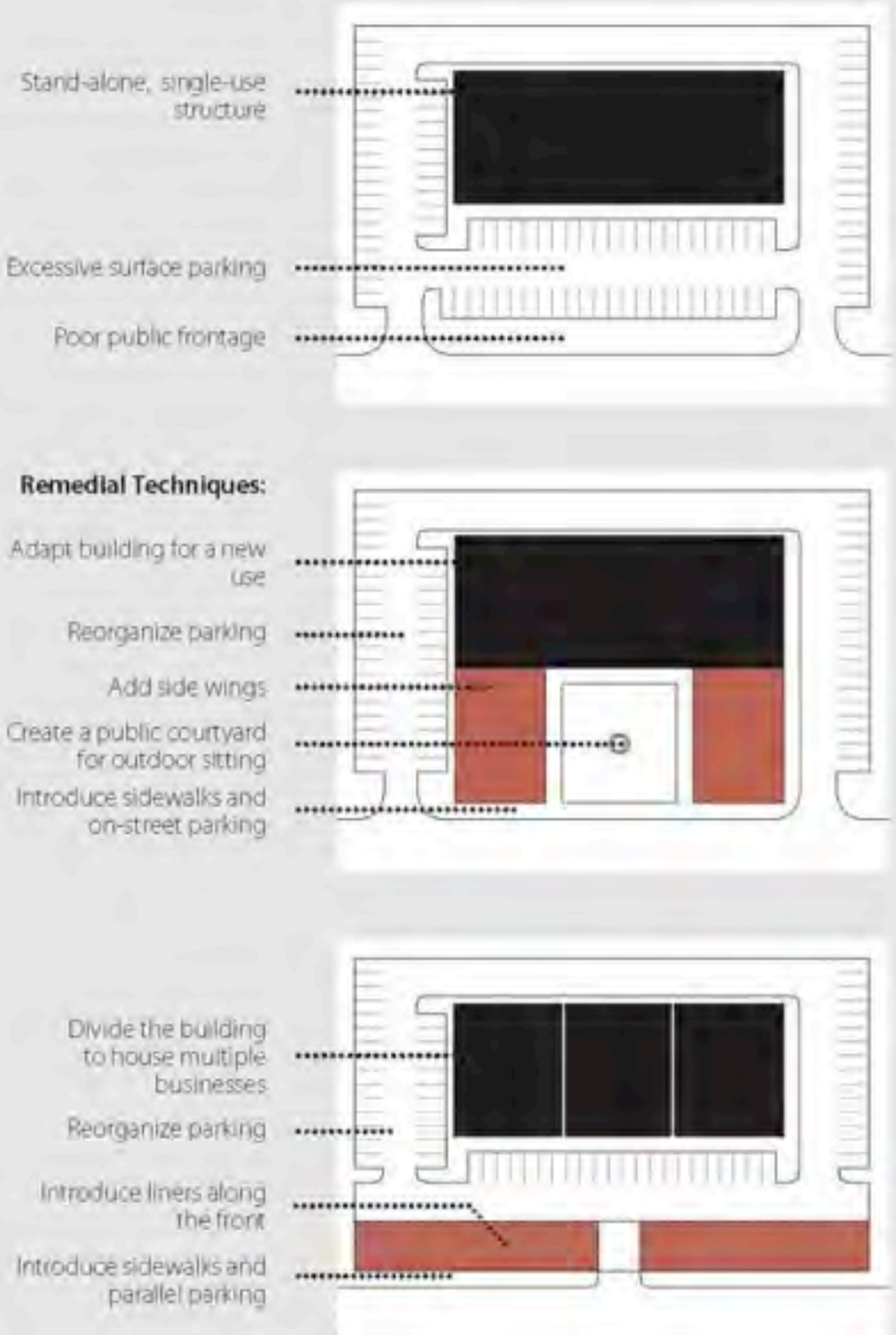
DPZ CODESIGN

Repair at the Community Level



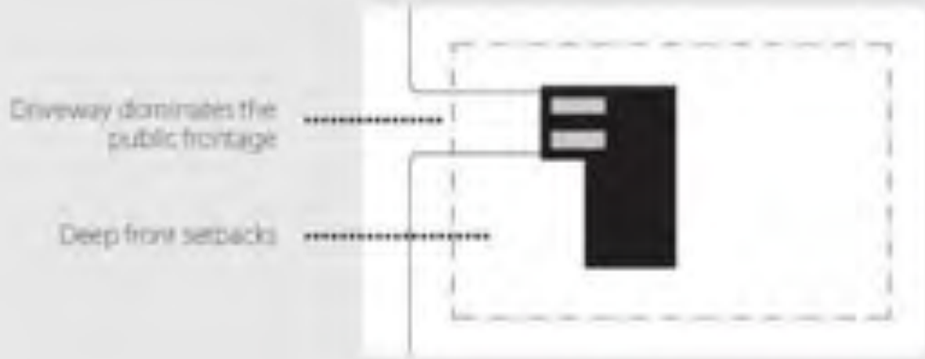
DPZ CODESIGN

Repair at the Block Level

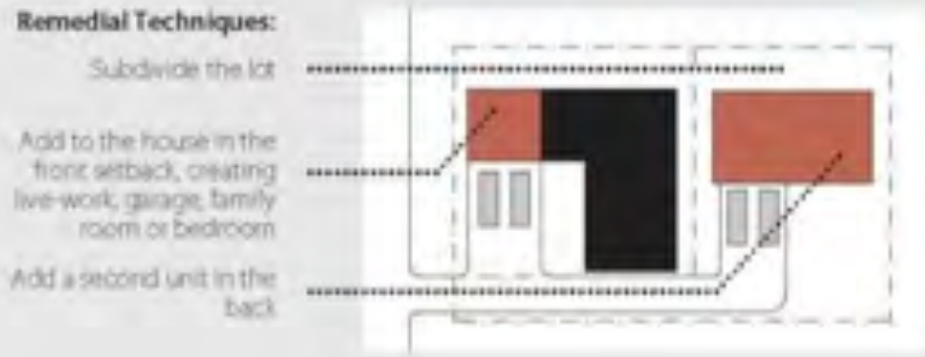


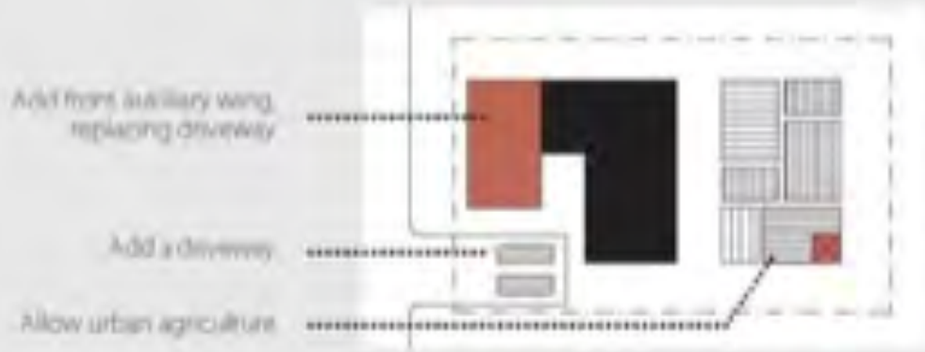
DPZ CODESIGN

Repair at the Building Level



Remedial Techniques:





DPZ CODESIGN

Retrofitting Buildings

How do you retrofit existing communities with placemaking in mind?

DPZ CODESIGN

Challenge 2: Sprawl Repair

Design neighborhoods that are:

CONVIVIAL

Know what to regulate:

- Create a linked system of community services and parks;
- Coordinate community benefits with master plans;
- Develop play sheds for playgrounds;
- Commit a dedicated sum for programming;
- Think big and small: enable shared experiences through strategic, small-scale interventions in public spaces

DPZ CODESIGN

A Robust Civic Infrastructure

Source Doug Farr & Associates

- Broaden community engagement strategies to build long-term support and champions;
- Bring the right partners to the table, at the right time;
- Be transparent in design.

DPZ CODESIGN

Multi-disciplinary Design Charrette (14)

CRABTREE GROUP, INC.
ENGINEERING SMART GROWTH

RAINWATER STRATEGY

SARATOGA SPRINGS, UTAH

TYPICAL 660' x 660' URBAN CORE BLOCK

STORMWATER DECISION MATRIX	GREEN INFRASTRUCTURE	CONVENTIONAL INFRASTRUCTURE
INITIAL CAPITAL COST	★★	★
MAINTENANCE COMPLEXITY	★★★	★★
LAND SAVINGS	★★★	★
SUSTAINABILITY	★★★	★

LEGEND	
★★★	Good/Low Cost
★★	Moderate/Median Cost
★	Poor/High Cost

CONVENTIONAL PIPE AND POND COSTS

ITEM	UNIT	ESTM. QNTY	UNIT COST	TOTAL
New 36" RCP Pipe	l.f.	1,460	$ 100.00	$ 146,000.00
New 18" RCP Pipe	l.f.	600	$ 60.00	$ 36,000.00
AC Paving	s.f.	44,900	$ 3.50	$ 157,150.00
Drain Basin	ea.	4	$ 2,000.00	$ 8,000.00
Curb Inlet	ea.	8	$ 1,000.00	$ 8,000.00
Drainage Manhole	ea.	3	$ 2,400.00	$ 7,200.00
Detention Pond	acre	0.3	$ 60,000.00	$ 15,000.00
Soft Costs	%	15%	$ 377,350.00	$ 56,602.50
			GRAND TOTAL	$ 434,000.00

GREEN STREETS COST

ITEM	UNIT	ESTM. QNTY	UNIT COST	TOTAL
Porous Pavers	s.f.	44,900	$ 7.50	$ 336,750.00
Soft Costs	%	15%	$ 336,750.00	$ 50,512.50
			GRAND TOTAL	$ 387,000.00

Green neighborhood infrastructure can cost up to 11% less than conventional engineering infrastructure.

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Light Imprint (25)

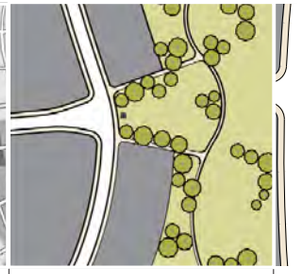
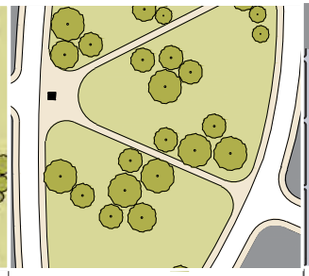
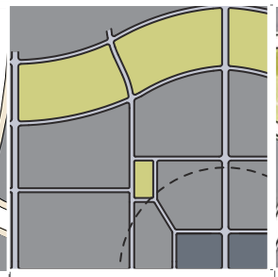
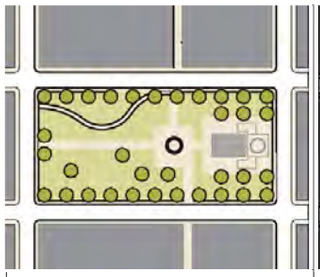
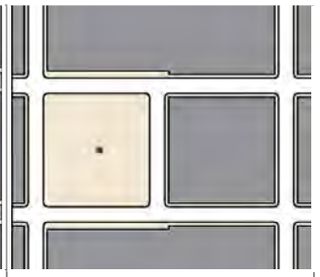
Source StreetPlans

DPZ CODESIGN

Tactical Urbanism (10)

TABLE 6.1: OPEN SPACE STANDARDS, ILLUSTRATED

This Table generally illustrates and defines the specific Open Space types. It also allocates them by Transect zone and provides regulations for each

OPEN SPACE HIERARCHY	Environmental Protection Area	National Park	Green Belt	Metropolitan Park	Linear Park	District Park	Neighbourhood Park	Plaza
Characteristics								
	Ecologically sensitive lands and water bodies that provide protection to ecological habitats and resources from inappropriate or excessive development. They can be Ecologically Critical (terrestrial and marine protected areas), Resource-Productive Critical (agricultural areas, water resource areas, mineral extraction areas) or Hazard Critical (air polluted areas).	A large regional park of importance with areas dedicated to passive and active recreational uses. it may also reserve parts of the park for the preservation, rehabilitation, enhancement or creation of natural features or areas. They may include existing natural features to support environmental preservation and are intended to be low-maintenance and have restricted water requirements.	A network of interlocking Open Spaces that separates urbanized areas. Greenbelts may contain environmental and agricultural preserves. In Kuwait, it separates Kuwait City from Metropolitan Kuwait.	A park sized to site conditions and available for unstructured and structured passive and active recreation green are spatially defined by extensive perimetre streetscape rather than building frontages. Its landscape consists of treatment of landform, open ground and plantings, naturalistically arranged with pedestrian circulation, seating, recreation facilities and lighting. Stormwater management provisions may be integrated into landscape treatment.	Highly accessible visible, linear park configuration to follow natural corridors in geologic systems.	A park sized to site conditions and available for unstructured and structured passive and active recreation. A smaller scale then the metropolitan park, it may be spatially defined by a combination of extensive perimetre streetscape and a few building frontages. Its landscape consists of treatment of landform, open ground and plantings, naturalistically arranged with pedestrian circulation, seating, recreation facilities and lighting. Stormwater management provisions may be integrated into landscape treatment.	A small park prominently sited for unstructured civic use, commercial activity and passive recreation and functions as a main community meeting place. Neighbourhood Parks are spatially defined by substantial, adjacent streetscape and/or building frontages with streets on at least two sides. Its landscape consists of paving, walls, landscape elements and plantings formally arranged. Neighbourhood Parks are typically located at the intersection of important thoroughfares and may contain a mosque.	Major urban space for civic purposes and programmed activities. Plazas are spatially defined by building and street frontages. Building edges at grade to contain continuous public service uses for animation and support. Plaza grade should be flush with perimetre sidewalks and provide access to adjacent buildings. Its landscape consists primarily of pavement with option of strategically placed trees planted at grade. Plazas may be anchored by landmark focal point, such as water feature, public art or Community Facilities. Plazas are typically located at the intersection of important thoroughfares. Plazas may be publicly accessible private or public space.
STANDARDS / T-ZONES	**Permitted in: T1**	**Permitted in: T1**	**Permitted in: T1**	**Conditional in: T3, T4, T5, T6**	**Permitted in: T1, OS**	**Conditional in: T3**	**Permitted in: OS Conditional in: T3, T4, T5, T6**	**Permitted in: OS Conditional in: T3, T4, T5, T6**
Size	none	50 ha min.	min. avg. width of 100m	10 ha min.	50m avg. width / 12 ha min.	5 ha min.	0.4 ha min. / 4 ha max.	1 ha max.
Catchment Distance	none	none	none	1,200m	none	1,200m	600m	none
BLDG Coverage (max.)	5%	5%	none	5%	5%	5%	5%	5%
BLDG Footprint (max.)	1,000m^2	1,000m^2	500m^2	500m^2	500m^2	500m^2	250m^2	100m^2
Permitted Uses	See "Table 6.2: Suggested Active & Passive Recreational Uses In Open Space Types"				See "Table 6.2: Suggested Active & Passive Recreational Uses In Open Space Types"			
Permitted Community Facilities	See "Table 5.3. Community Facility Building Use by Transect Zone"				See "Table 5.3. Community Facility Building Use by Transect Zone"			
BLDG Height (max.)	1 Storey	1 Storey	1 Storey	2 Storeys	2 Storeys	2 Storeys	2 Storeys	1 Storey (3.5m max.)
BLDG Setback (min.)	100m buffer	5m	5m	3m	3m	3m	3m	1m
Parking (min.) [1]	0.5 / 100 m^2	0.5 / 100 m^2	0.5 / 100 m^2	0.5 / 100 m^2	0.5 / 100 m^2	0.5 / 100 m^2	0.5 / 100 m^2	0.5 / 100 m^2

Notes:

How will you measure the success of public places, and their contributions to the livability of the community?

Challenge 3: Define Success

Design neighborhoods that are:

COMPLEX

Know what to regulate:

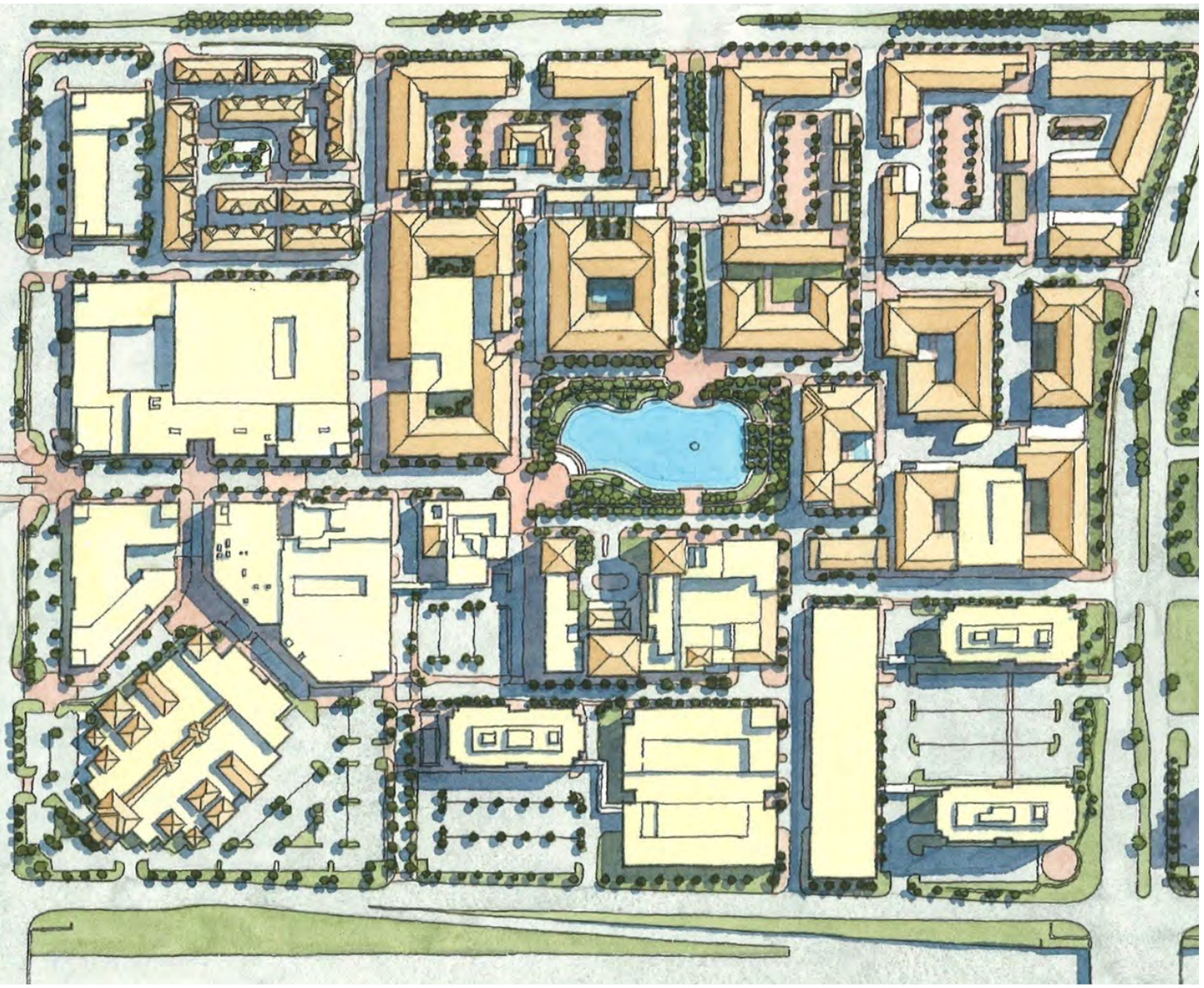
- Find what is unique to your city and capitalize on it;
- Require your vision to shape development, not development shape your city;
- Require multiple architects for large-scale projects;
- Decide what you are willing to code and enforce.

Kentlands, MD (DPZ)

North Commons, KY, (DPZ)

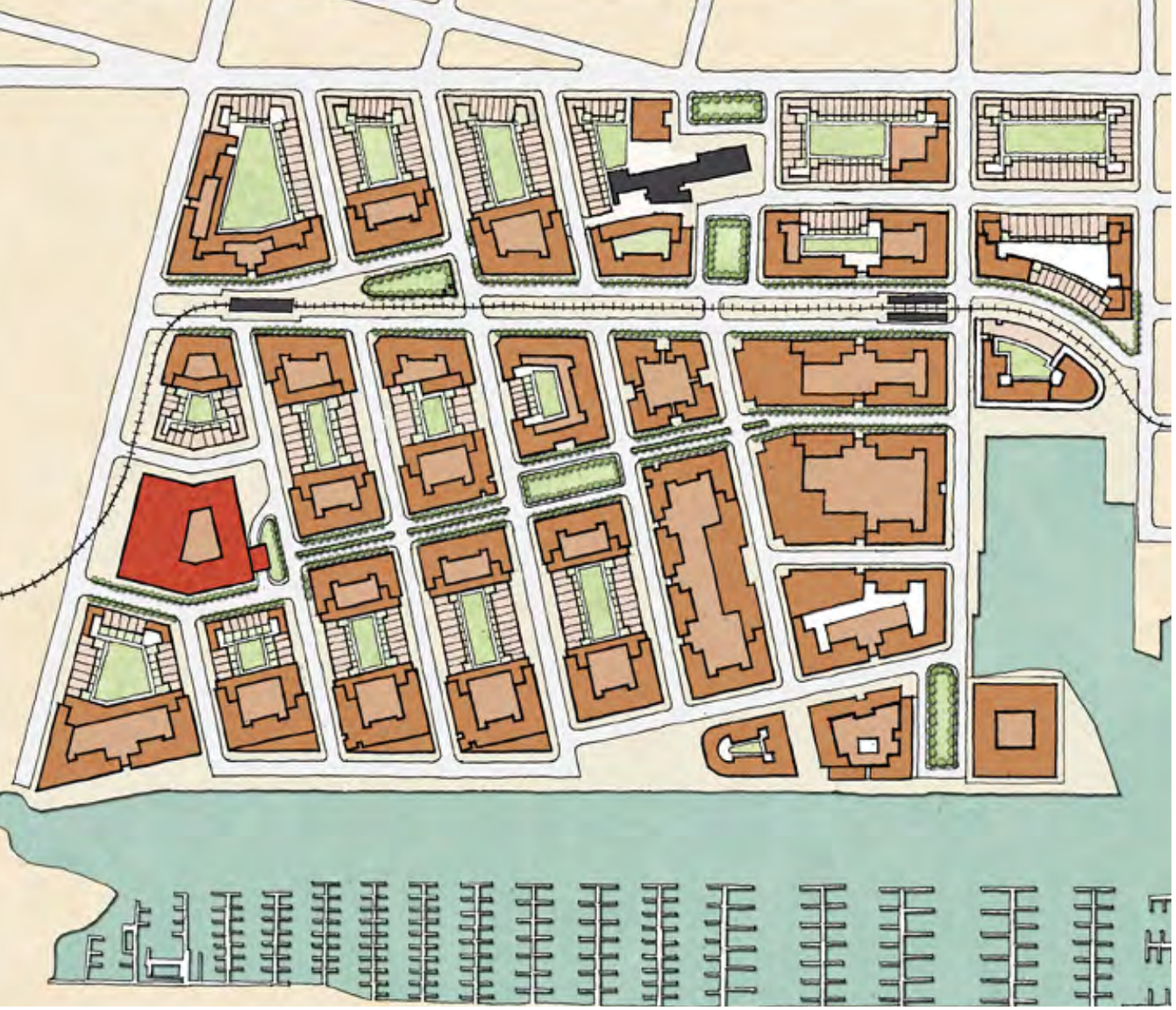
DPZ CODESIGN

Traditional Neighborhood Development (23)



Legacy Town Center, TX (DPZ)

Mixed Use Urban Centers (22)

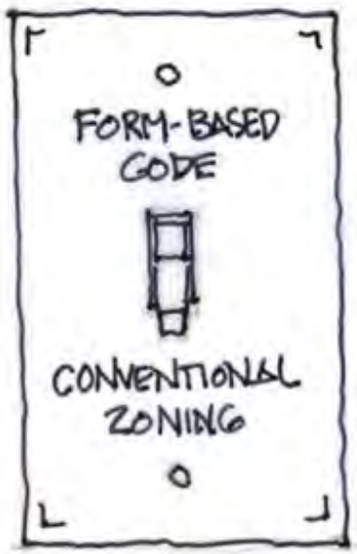


Liberty Harbor, NJ (DPZ)

ITDP's Principles of Urban Development for Transport in Urban Life:

1. [WALK] Develop neighborhoods that promote walking
2. [CYCLE] Prioritize non-motorized transport networks
3. [CONNECT] Create dense networks of streets and paths
4. [TRANSIT] Locate development near high-quality public transport
5. [MIX] Plan for mixed use
6. [DENSIFY] Optimize density and transit capacity
7. [COMPACT] Create regions with short commutes
8. [SHIFT] Increase mobility by regulating parking and road use

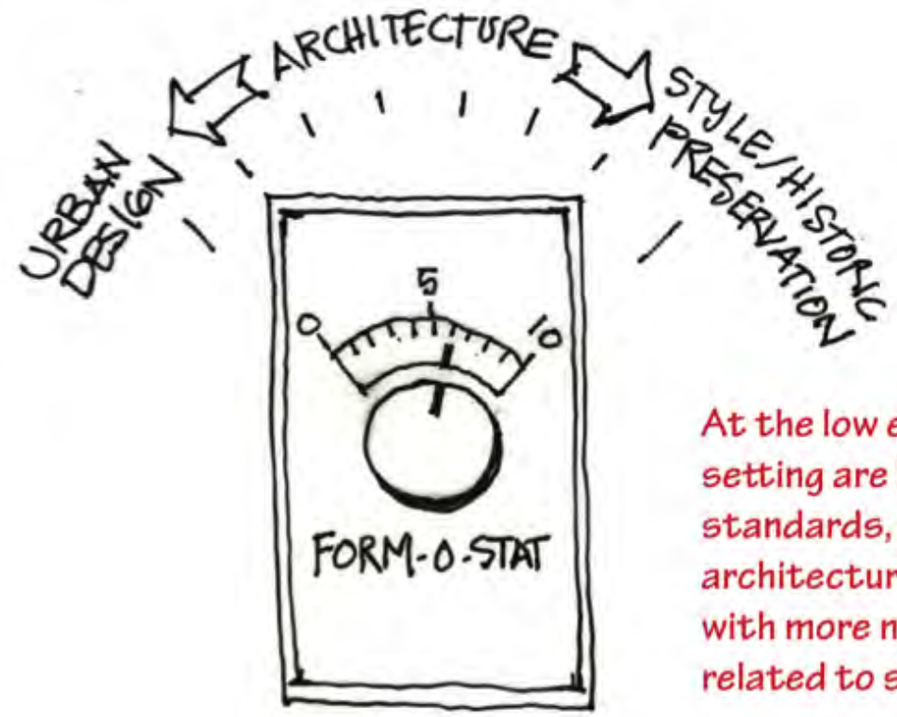
Transit-Oriented Development (24)



Many view form-based codes as a kind of all-or-nothing solution.

It's either on or off....

The Assumption



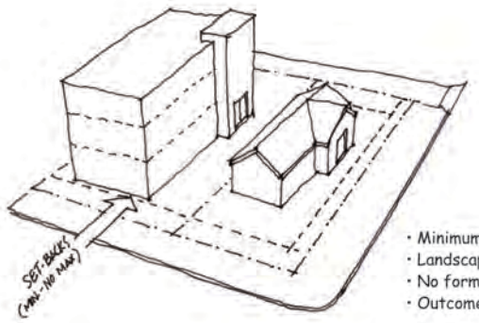
At the low end of the temperature setting are basic urban design standards, followed by general architectural standards, and ending with more nuanced standards related to style and preservation.

The Reality

- Consider the specific character of the neighborhoods.
- Establish Standards & Guidelines
- There is no one size fits all.

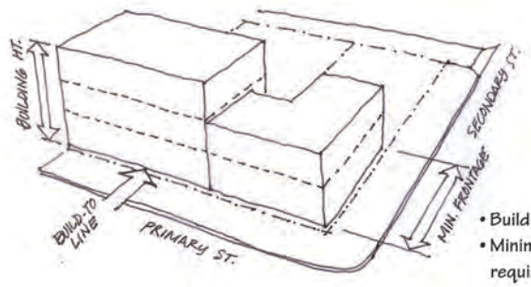
DPZ CODESIGN

A Solution: Tailor to Conditions



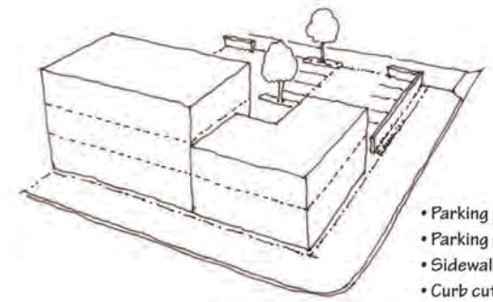
- Minimum setbacks
- Landscape buffers
- No form standards
- Outcome is unpredictable

0° - Conventional Zoning



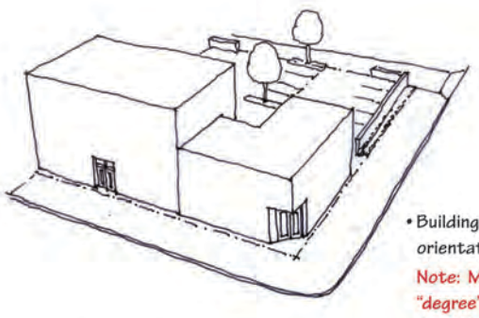
- Build-to lines
- Minimum frontage requirements
- Mass & height

1° - Building Mass & Placement



- Parking placement
- Parking screens
- Sidewalk standards
- Curb cuts
- Landscape standards

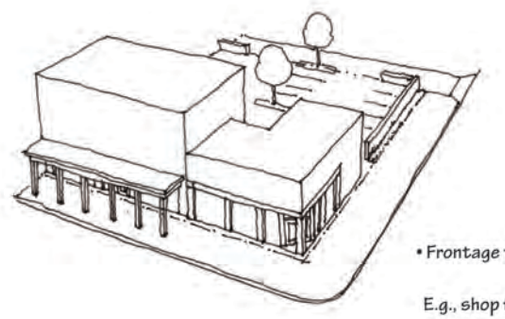
2° - Site Design Standards



- Building entrance orientation

Note: Minumum "degree" setting for Form Based Code

3° - Entry Orientation



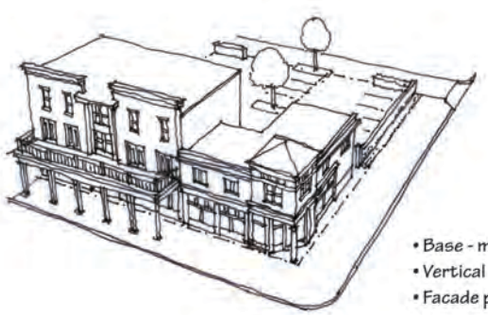
- Frontage types

E.g., shop front, arcade, gallery, etc.

4° - Building Frontage Type

- % of glazing vs. % of solid material

6° - Solid and Void Ratios



- Base - middle - top
- Vertical rythm
- Facade proportion

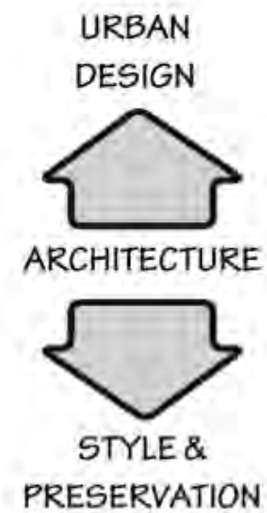
7° - Facade Articulation

- Compatible materials
- May vary by street orientation

8° - Building Materials

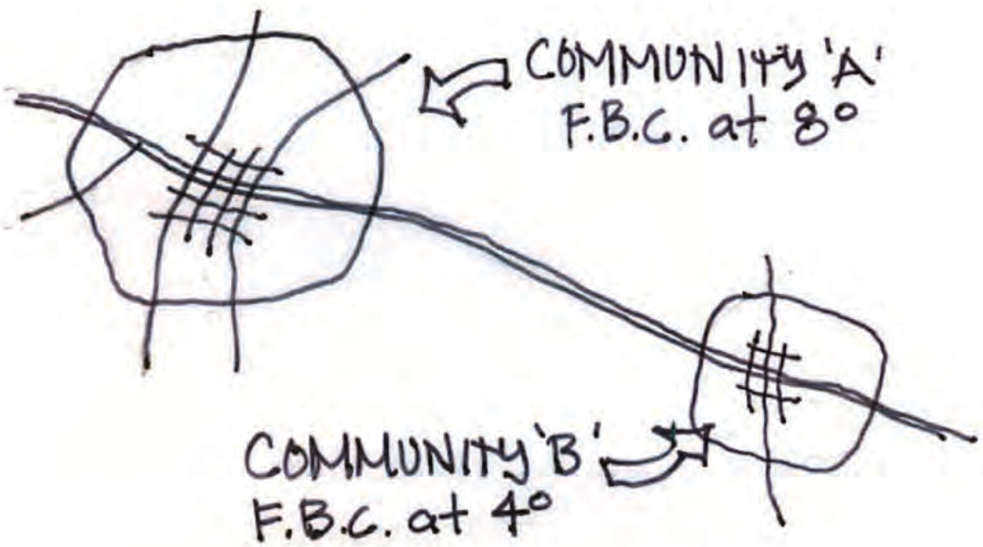
- Green building standards
- Special character-defining elements (e.g., balconies, towers, etc.)

9° - Special Requirements - non-style

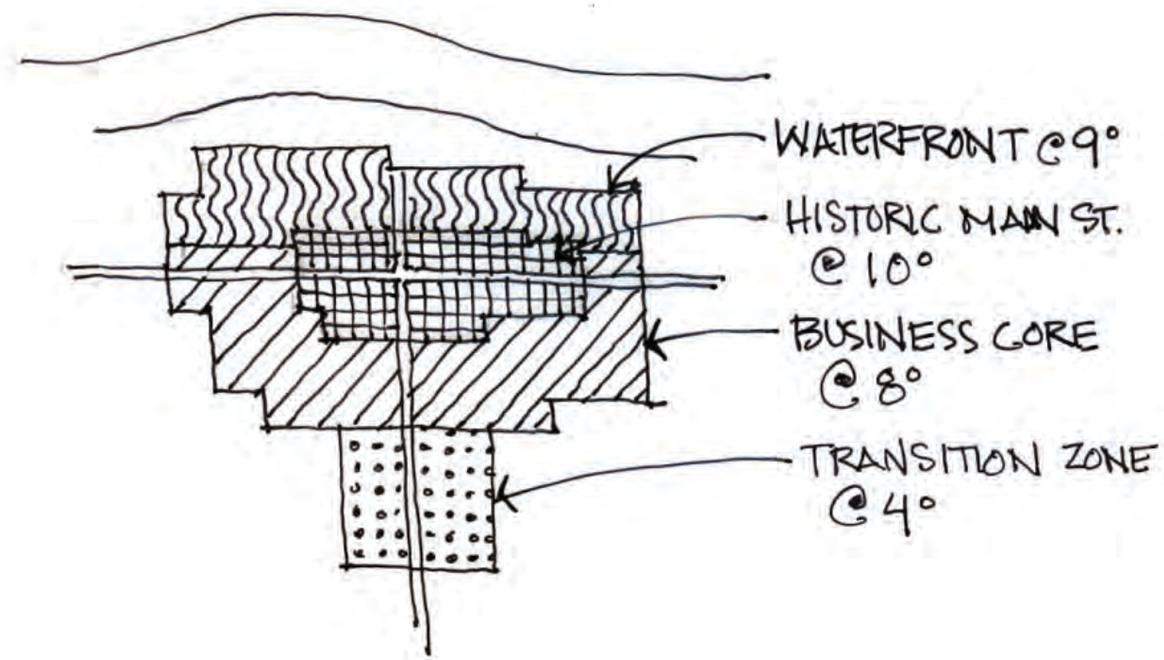


DPZ CODESIGN

FBC Elements: Requirements vs/ Incentives



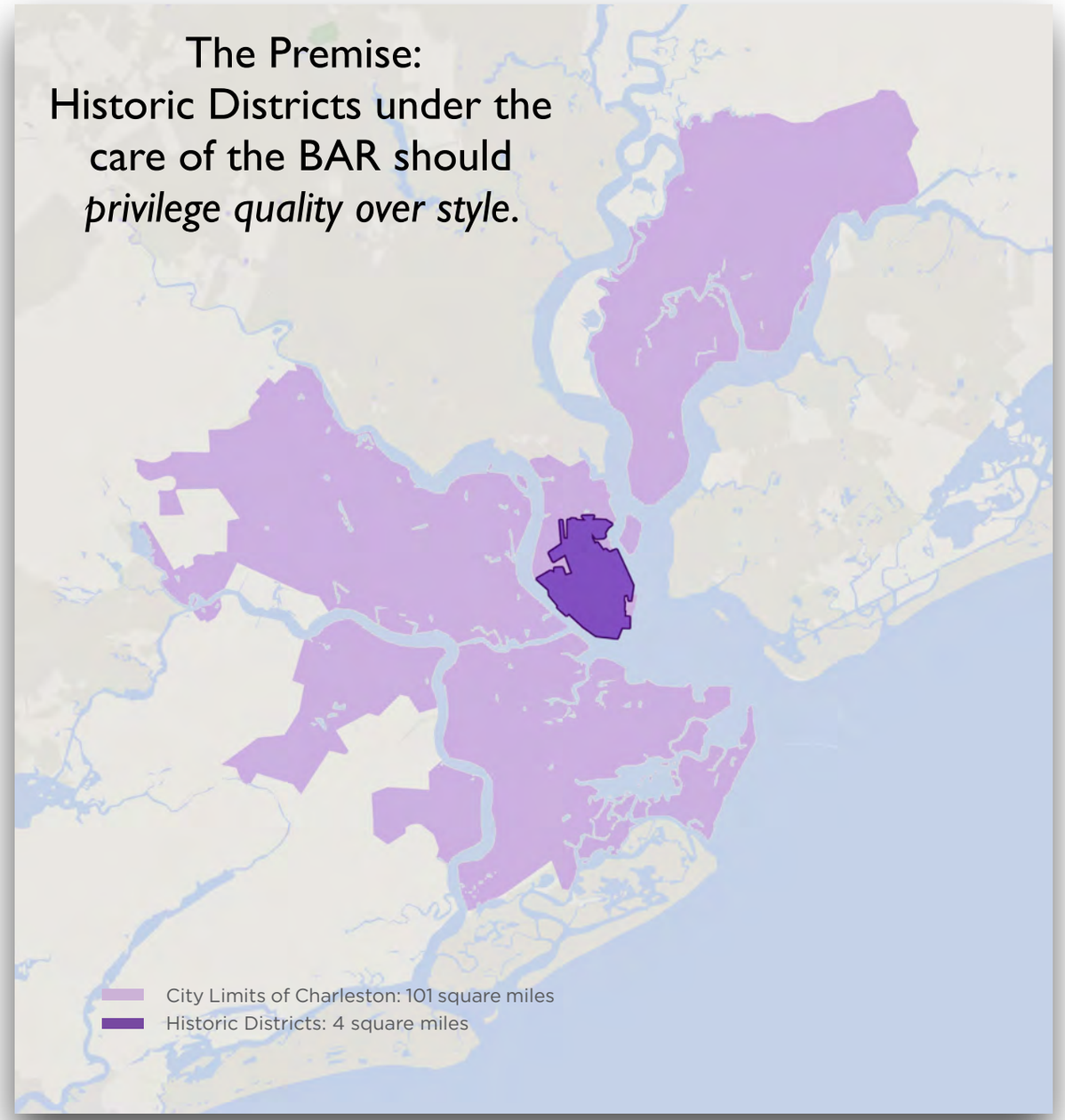
Each community may decide their own "temperature" setting



"Temperature" settings may vary within a community or area

- Consider the specific character of the neighborhoods.
- Establish Standards & Guidelines
- There is no one size fits all.

Coding for Degree of Intervention



A-GRID <····· B-GRID ·····> C-GRID

GENERALLY EASIER TO APPROVE <····· > MORE DIFFICULT TO APPROVE

URBAN GUIDELINES

TALLER CEILING HEIGHTS <·····> SHORTER CEILING HEIGHT

NARROW TO THE FRONTAGE <·····> WIDER TO THE FRONTAGE

BASE DIFFERENTIATED <····· > BASE CONTINUOUS

MANY SMALL BUILDINGS <·····> FEW LARGE BUILDINGS

PARKING MASKED FROM FRONTAGE <·····> PARKING VISIBLE FROM FRONTAGE

PARKING PROVIDED <·····> EXCESS PARKING PROVIDED

ARCHITECTURAL GUIDELINES

NATURAL & INTEGRAL MATERIALS <·····> COMPOSITE & CLADDING MATERIALS

STRUCTURAL EXPRESSION <·····> SURFACE EXPRESSION

APPLICATION OF LOCAL CRAFT <·····> ABSENCE OF CRAFT

UNIFIED STOREFRONT DESIGN <·····> STOREFRONT BY COMPONENT

CLEAR GLAZING <····· > DARK OR MIRROR GLAZING

VERTICAL PROPORTIONS <·····> HORIZONTAL PROPORTIONS

REPETITIVE FENESTRATION <·····> MIXED FENESTRATION

SMALL MULLIONS <·····> LARGE OR NO MULLIONS

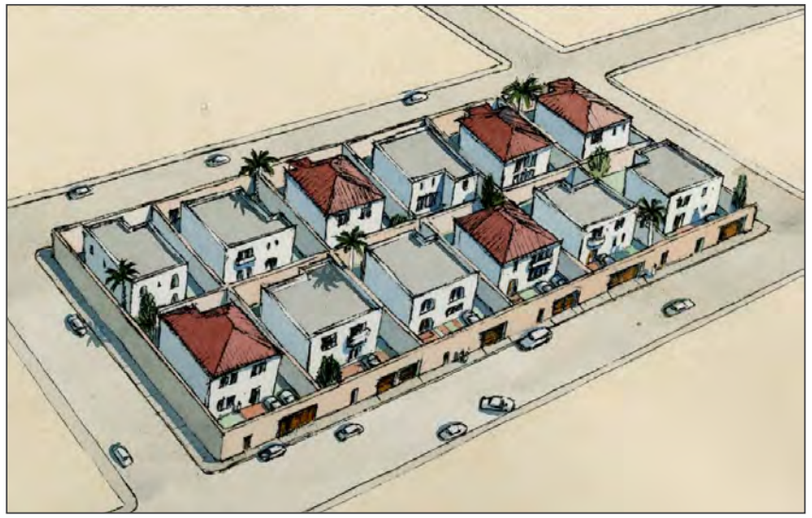
THICKER WALL DEPTH <····· > THINNER WALL DEPTH

SIMPLE MASSING <····· > COMPLEX MASSING

SHADING ELEMENTS PROVIDED<·····> NO SHADING ELEMENTS

DPZ CODESIGN

A Solution: Code for Quality



Existing Villas at 14 - 22 dwelling units / hectare.

Courtyard Villas at 14 - 22 dwelling units / hectare.

BUILDING TYPE SPECIFIC REGULATIONS

T3 Large Standard Villa

A. Plot Occupation

Plot width / depth	24m min / 30m min.
Plot area	720m² min.
Plot coverage	60% max if front loaded
F.A.R.	1.0
Open Space Required	30% min.
Density	13 du/ha

B. Building Disposition

Courtyard	Permitted
Edge Yard	Not Permitted
Rear Yard	Not Permitted
Side Yard	Permitted

C. Building Height

Principal Building	2.5 Stories max.
Accessory Structure	1 Stories max.

D. Setbacks

Principal Building

Front Setback	6m min.
Side Setback	3m min.
Rear Setback	5m min.
Frontage Buildout	30% min.

Accessory Structure (20m max)

Front Setback	0m min. up to 30% of frontage max
Side Setback	0m min.
Rear Setback	1m min.

E. Encroachments

At Building Frontage	1m max.
At Building Side	1m max.
At Building Rear	none

F. Private Frontages

Garden & Wall	Permitted
Forecourt	Not permitted
Terrace	Not permitted
Forestoop	Not permitted
Shopfront & Awning	Not permitted
Arcade / Gallery	Not permitted

G. Building Function

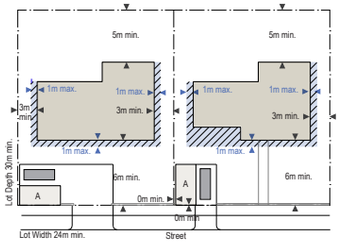
Residential	Permitted
Lodging	Permitted
Office	Prohibited
Retail	Prohibited

H. Parking Provisions

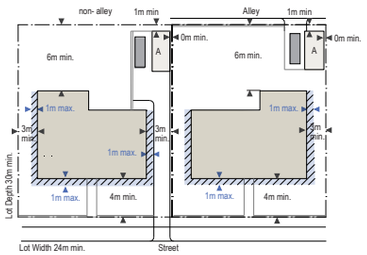
2 spaces min. per villa

Notes:

1. Minimum separation between principal buildings shall be 3m.



STANDARD VILLA FRONT LOADED



STANDARD VILLA FRONT LOADED - REAR GARAGE AND REAR LOADED

Key: Principal Building | A Accessory Structure | Encroachment | Parking location

Building Disposition and Plot Ocupation shown for illustrative purposes only

T3 Large Courtyard Villa

A. Plot Occupation

Plot width / depth	24m min / 30m min.
Plot area	720m² min.
Plot coverage	60% max if front loaded
F.A.R.	1.2
Open Space Required	30% min.
Density	13 du/ha

B. Building Disposition

Courtyard	Permitted
Edge Yard	Permitted
Rear Yard	Not Permitted
Side Yard	Permitted

C. Building Height

Principal Building	2.5 Stories max.
Accessory Structure	1 Story max.

D. Setbacks

Principal Building

Front Setback	3m min.
Side Setback	3m min. / 0m min. other side
Side Corner Setback	2m min.
Rear Setback	0m min.
Frontage Buildout	40% min.

Accessory Structure (20m² max.)*

Front Setback	0m min. up to 30% of frontage max.
Side Setback	0m min.
Rear Setback	0m min.

E. Encroachments

At Building Frontage	1m max.
At Building Side	1m max.
At Building Rear	none

F. Private Frontages

Garden & Wall	Permitted
Forecourt	Not permitted
Terrace	Not permitted
Forestoop	Not permitted
Shopfront & Awning	Not permitted
Arcade / Gallery	Not permitted

G. Building Function

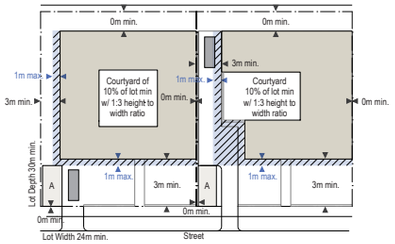
Residential	Permitted
Lodging	Permitted
Office	Prohibited
Retail	Prohibited

H. Parking Provisions

2 spaces min. per villa

Notes:

1. Minimum separation between principal buildings shall be 3m.
2. Courtyard dimensions may be reduced if multiple courtyards are provided on lot
3. There shall be no windows on shared plot lines. Windows may face a shared plot line with minimum setback of 3m. (See controlled privacy definition)



Key: Principal Building | A Accessory Structure | Encroachment | Parking location

Building Disposition and Plot Ocupation shown for illustrative purposes only

DPZ CODESIGN

A Solution: Incentivize w/ Code

How do you create buildings people will love and places that will endure?

DPZ CODESIGN

Challenge 4: Lovable Places

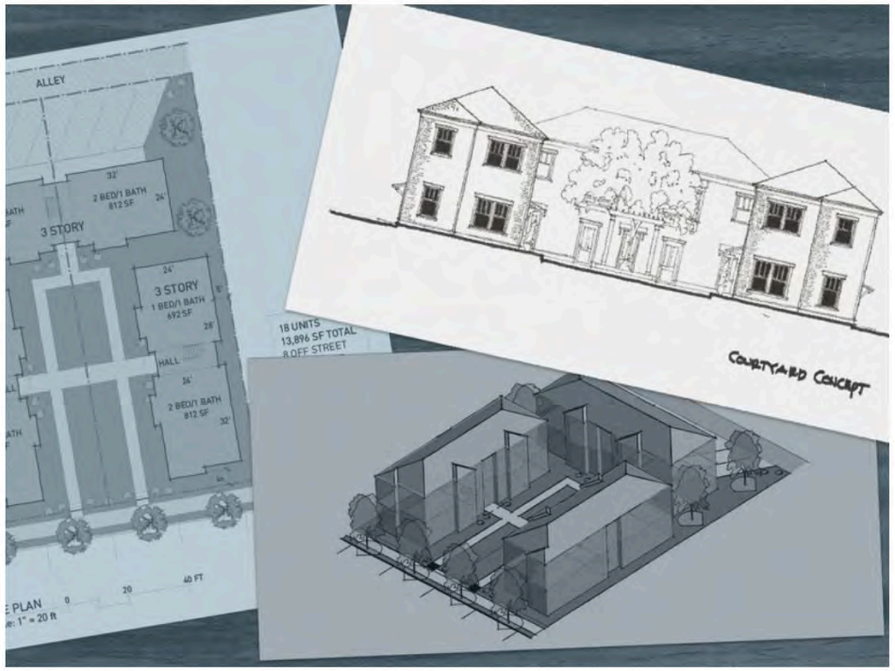
Design neighborhoods that are:

EQUITABLE

Know what to regulate:

- Provide a more supportive regulatory environment;
- Be faster with targeted improvements;
- Promote incremental / small-scale development;
- Focus on strategic placemaking;
- Match areas of need with greater opportunities for redevelopment

Method: Learn from local, share from experience

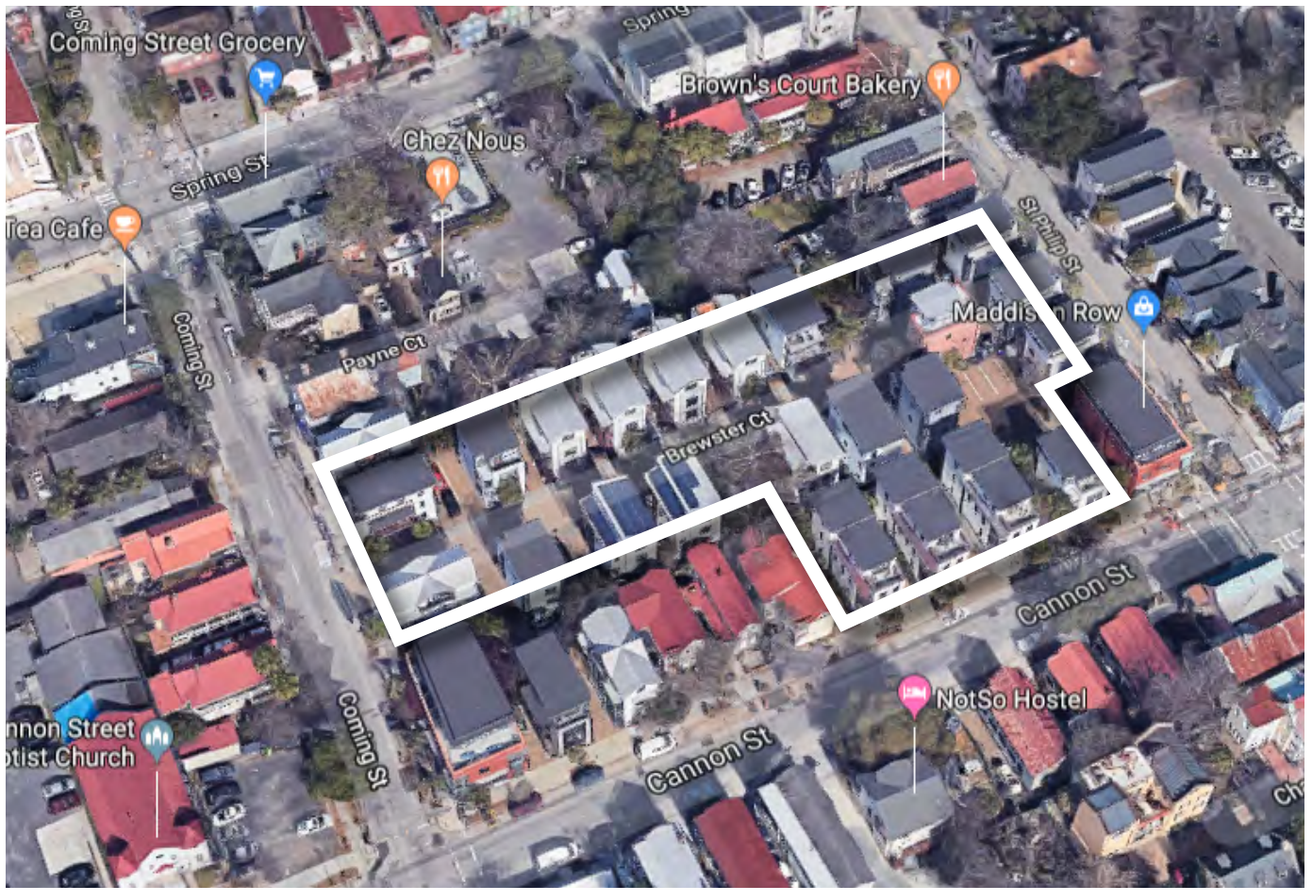


Outcome: Eager small developers and a city determined to support them

Incremental Development (21)

PROBLEMS	SOLUTIONS
TAKES TOO LONG	PINK ZONES
COSTS TOO MUCH	THRESHOLDS
REQUIRES EXPERTS	WORKAROUNDS
REQUIRES CERTIFICATION	APPRENTICESHIP
PRIVILEGES HIGH TECH	VERNACULAR SYSTEMS

A RETURN
TO COMMON SENSE



Lean Urbanism (13)

DECISION POINTS

"If we have learned nothing else from the 20th century, we should at least have grasped that the more perfect the answer, the more terrifying its consequences. Incremental improvements upon unsatisfactory circumstances are the best that we can hope for, and probably all we should seek. "

~ Tony Judt

The focus of this tool is on the small number of issues that are most important over a variety of contexts while overcoming multiple barriers to redevelopment. It begins with a series of decision points that help the reader select the best strategies for incremental code reform.

1. Does your comprehensive plan support infill and walkable urban places?

YES	**PROCEED**
No	**SEE LEAN COMPREHENSIVE PLAN TOOL**

2. Are there political support, community buy-in, and staff capacity in place to implement significant Lean code reform? This system tags strategies as:

S M L XL

Minimal political support + staff capacity

Moderate political support + staff capacity

Significant political support + staff capacity

LEAN CODE TOOL

The tool also organizes changes by urban context.

There are different requirements for areas trying to incentivize urban infill and adaptive reuse versus those hoping to implement sprawl repair. Some strategies are appropriate for both situations. All strategies are tagged with the icon for the relevant context:

[Ui] Urban Infill

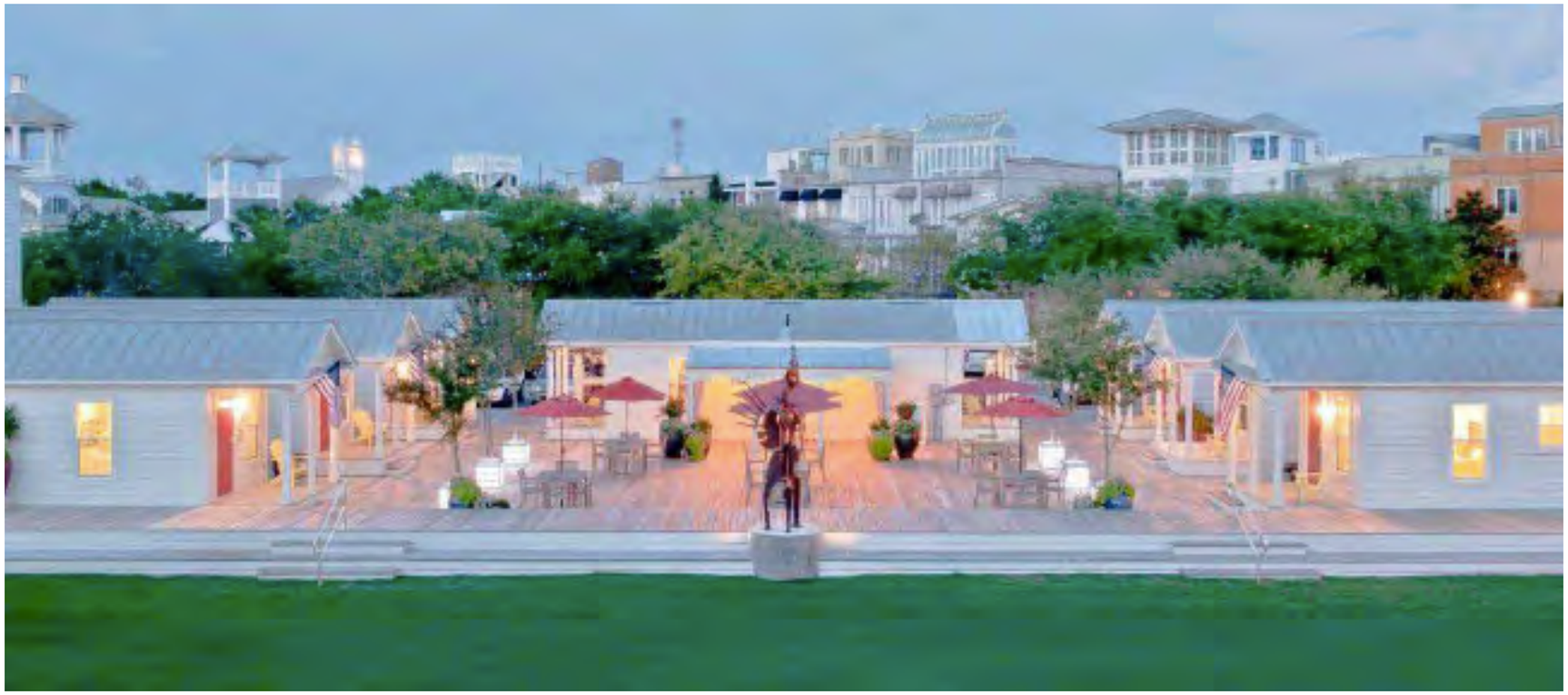
[Sr] Sprawl Repair

Finally, each strategy identifies the barrier that it is responding to:

Albemarle Square in Baltimore by TGP

DPZ CoDESIGN

Public Housing that Engages with the City (20)



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Katrina Cottages (19)

How to provide the highest benefit
to the largest number of people.

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Challenge 5

DPZ
CODESIGN

"By far the greatest and most admirable form of wisdom, is that needed to plan and beautify cities and human communities."

Socrates

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