



Our world is predicated on the automobile



“Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody.”

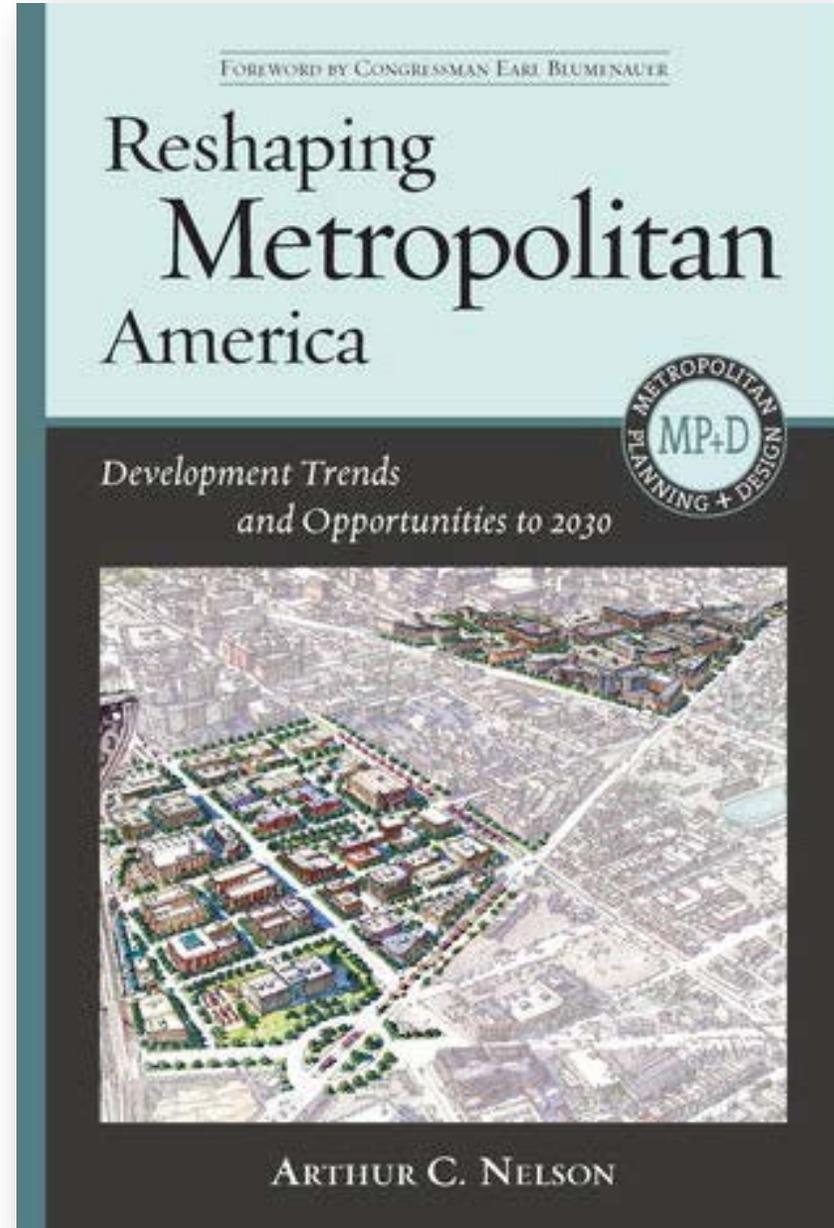
-Jane Jacobs

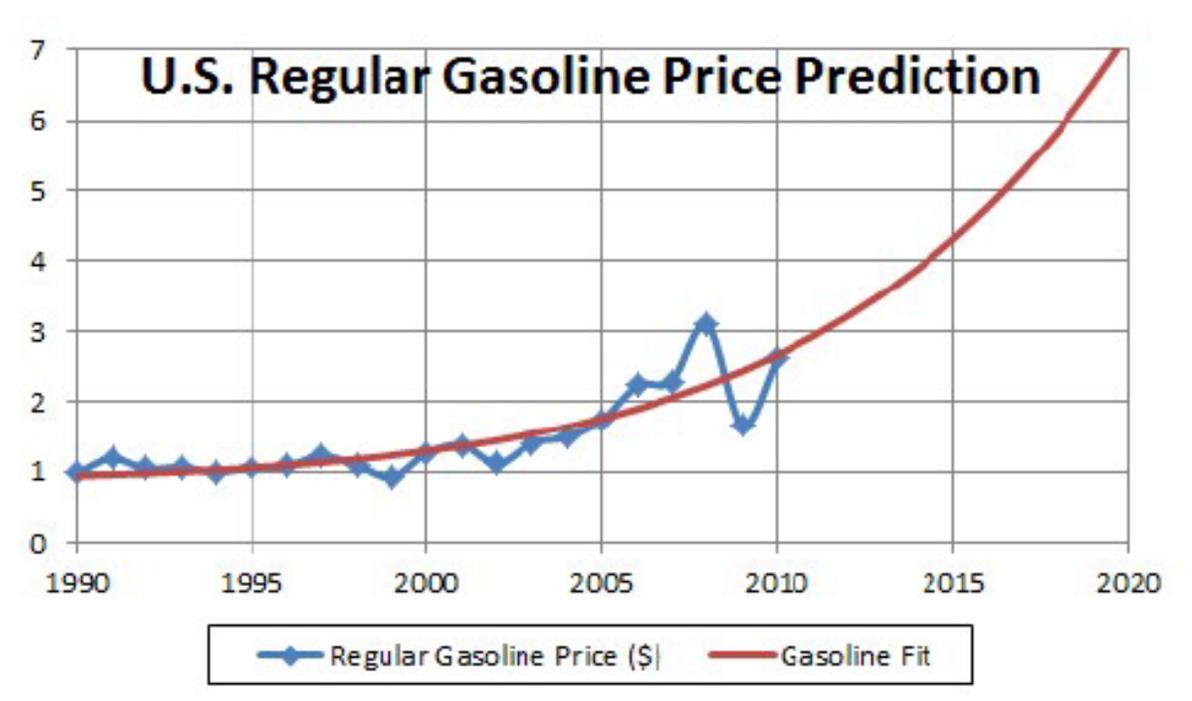
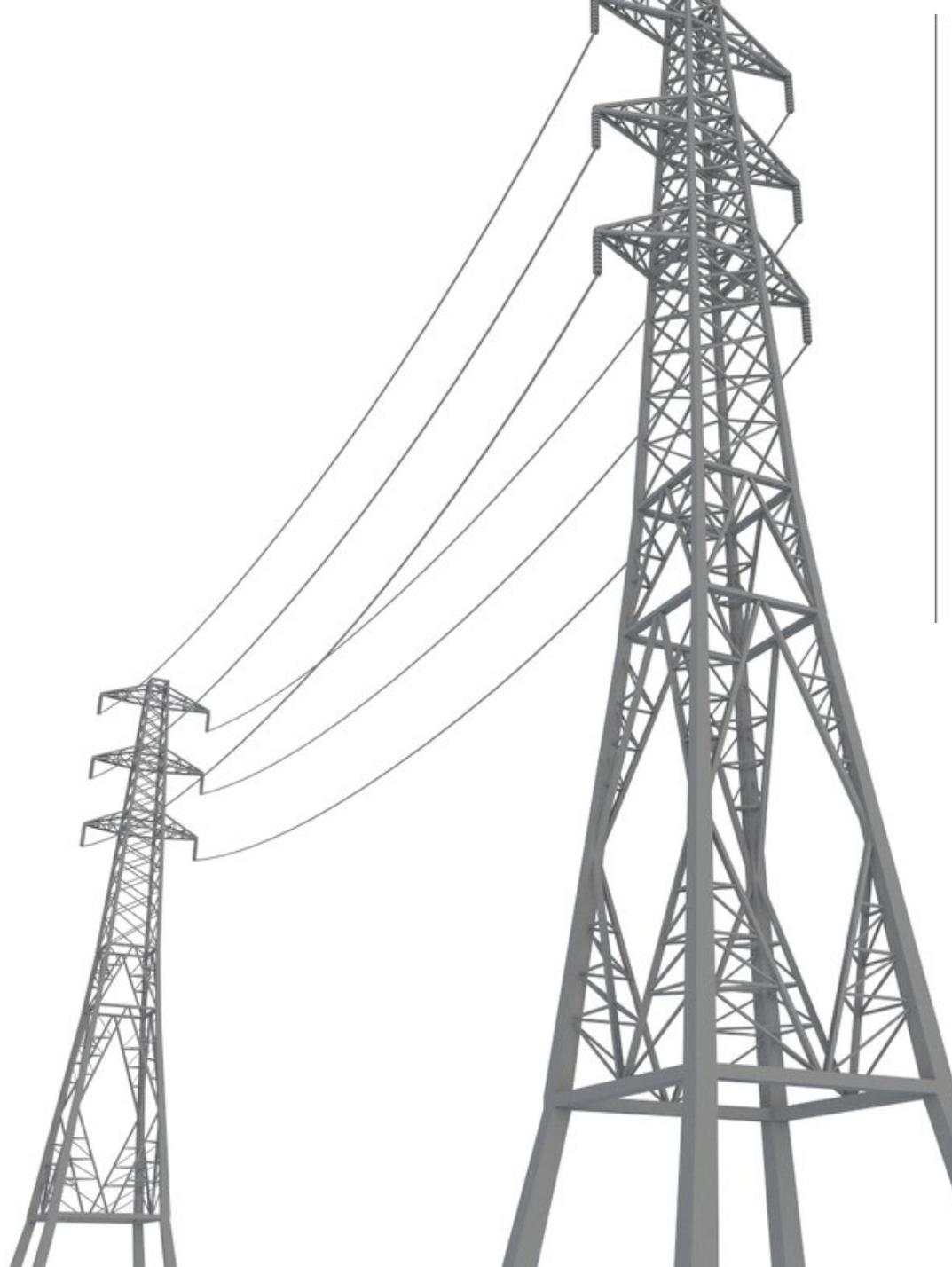
Context

Principles

Interventions

Populations & Built Environment

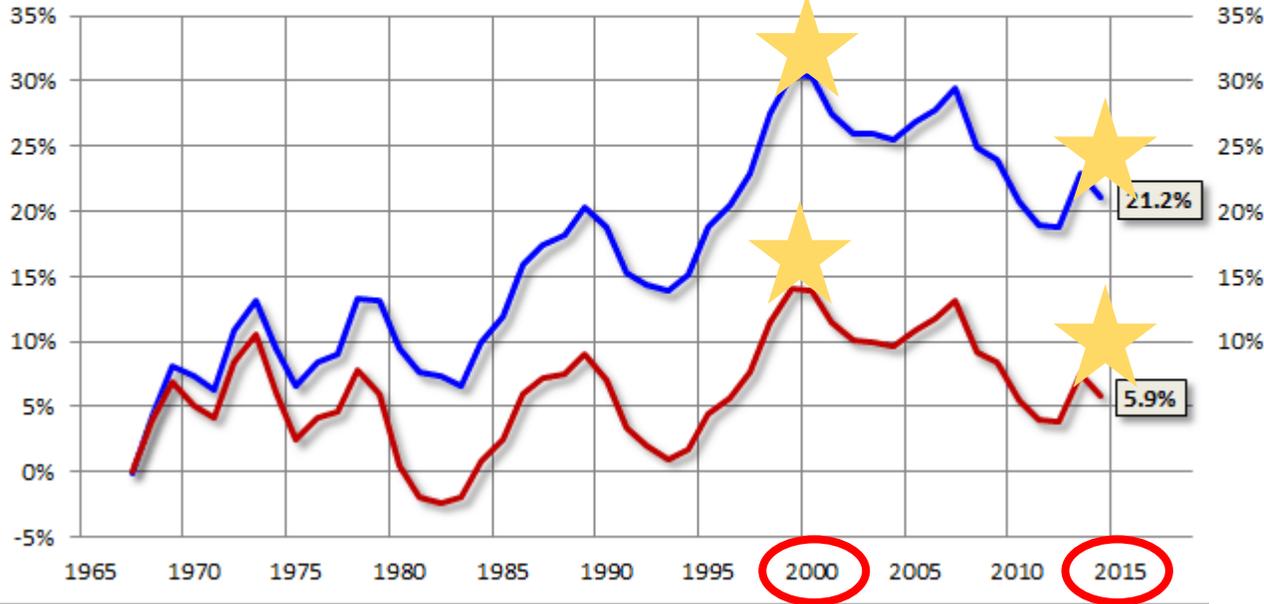




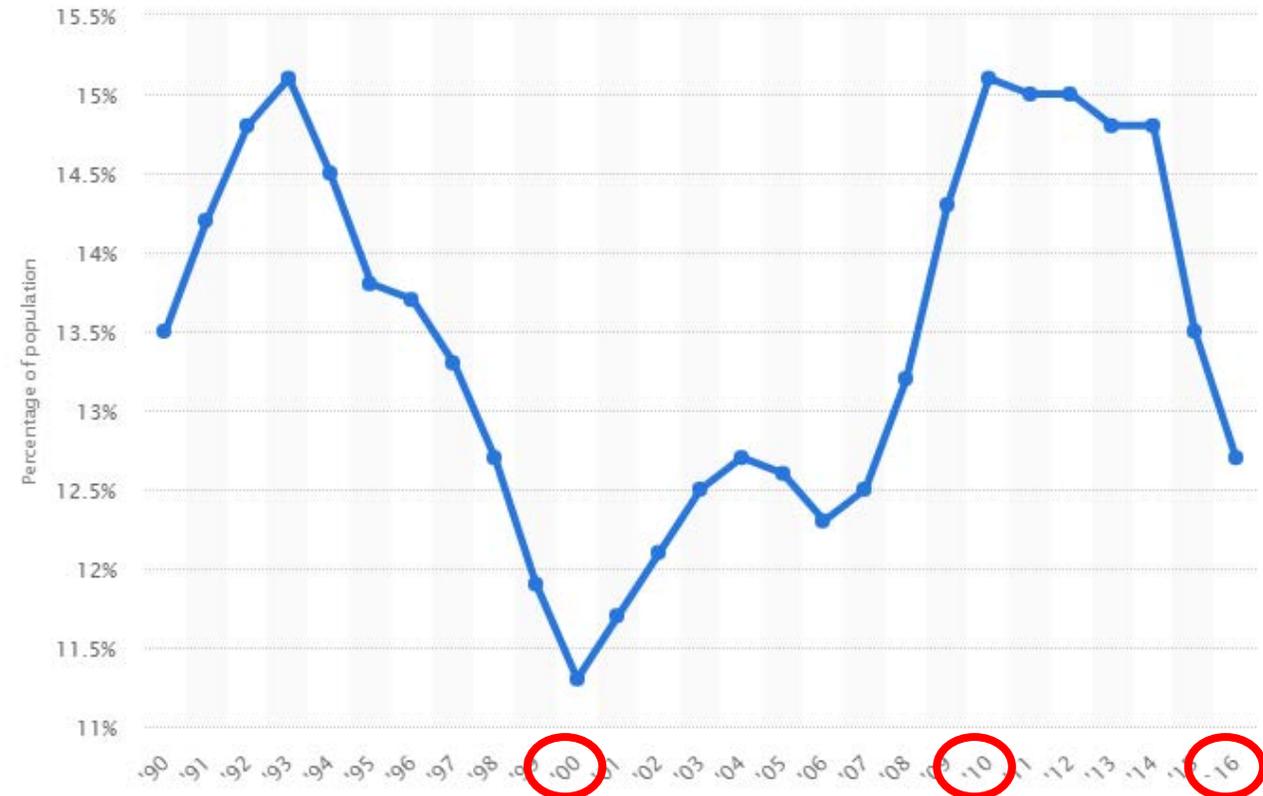
Adjusting Median Household Income for Inflation

dshort.com

— CPI-U-RS — CPI Adjusted

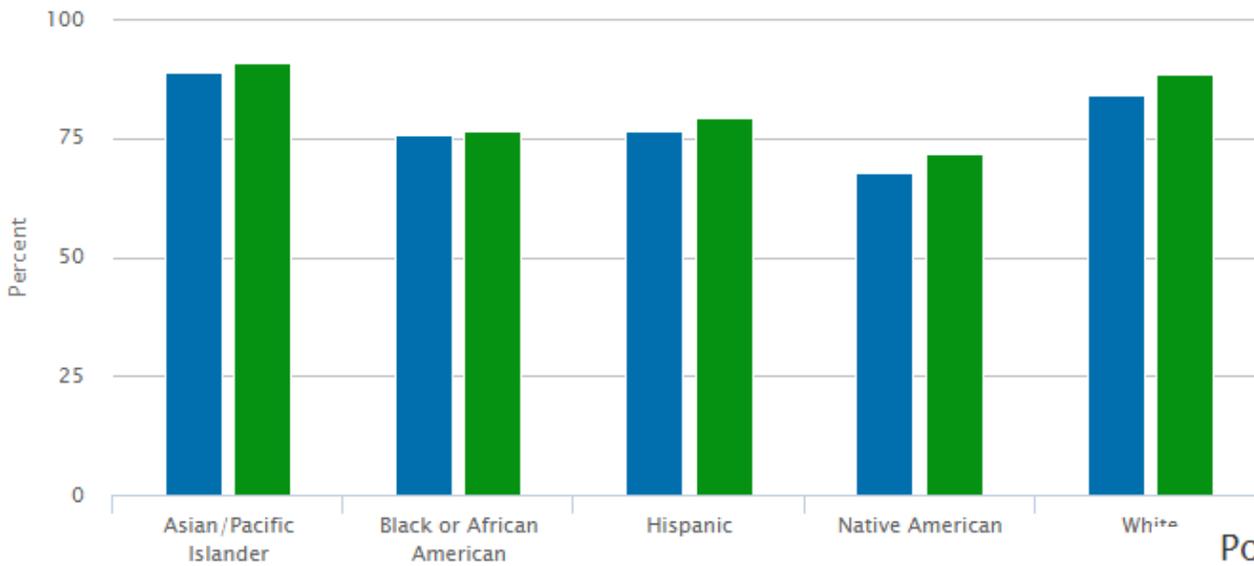


Poverty rate in the United States from 1990 to 2016



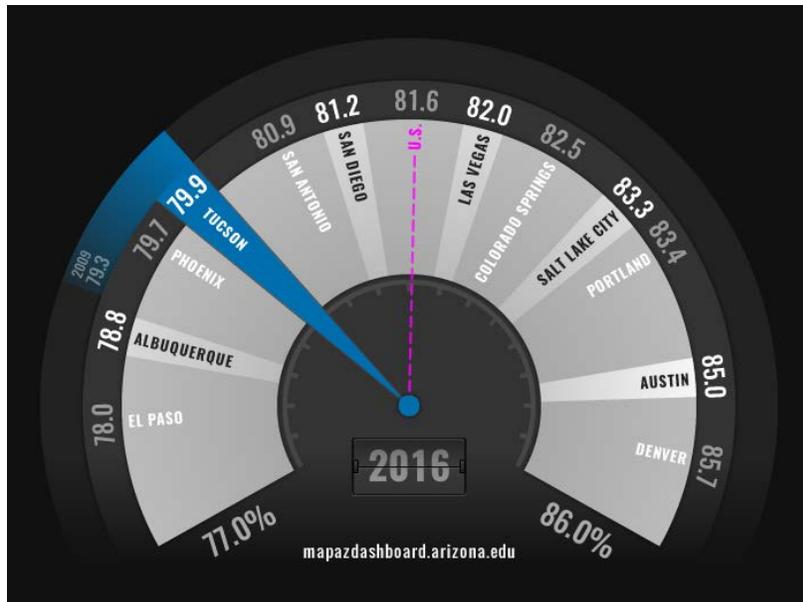


High School Graduation Rates by Race & Ethnicity (2016)

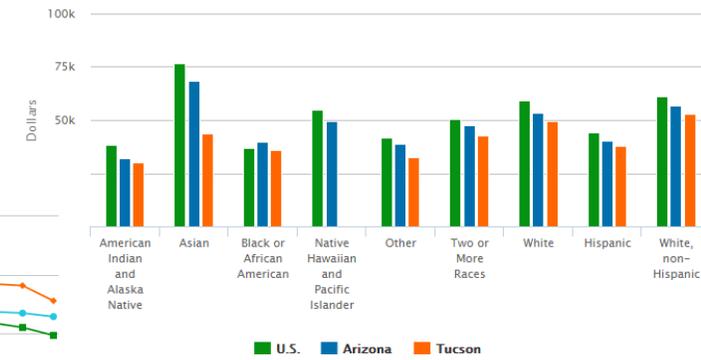


■ Arizona ■ U.S.

Labor Force Participation Rate Among Ages 25-54 (2016)



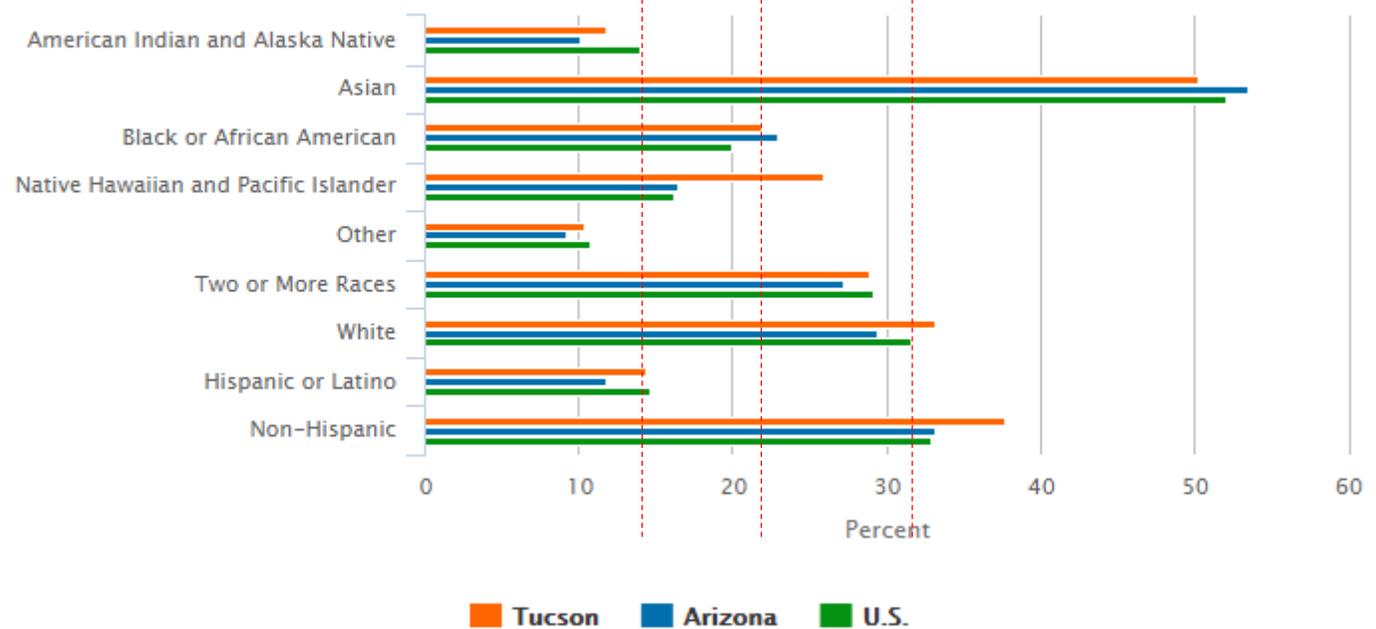
Median Household Income by Race & Ethnicity (2016)



■ U.S. ■ Arizona ■ Tucson



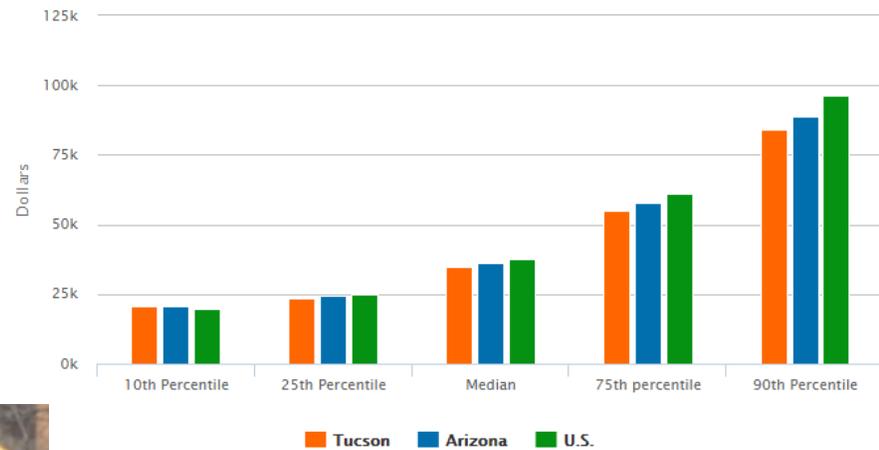
Population 25+ with a Bachelor's Degree or Higher by Race & Ethnicity (2016)



■ Tucson ■ Arizona ■ U.S.



Wage Distribution (2017)



Census Bureau reveals the fastest growing county in the nation

(MEREDITH) - The Census Bureau is out today with its county-level population data, and the fastest growing county in the nation is adding more than **222 people each and every day.**

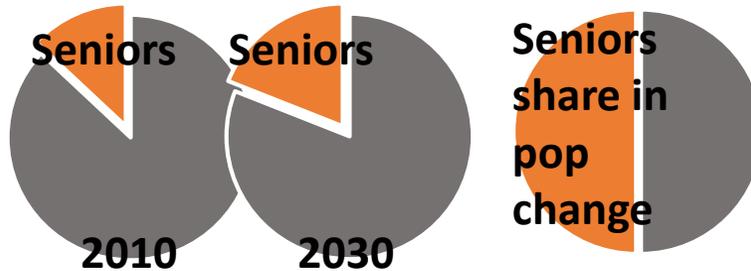
After crunching all the 2016 data, Maricopa County, Arizona, the home of Phoenix, takes the crown, ending Harris County, Texas's eight-year run as the county with the greatest population growth. Harris County is home to Houston.



The Census Bureau is out today with its county-level population

- location
- Downtown and Nearby
- Elsewhere in central city
- Suburbs built to about 1980
- Burbs '80 to 2000
- Post-2000 suburbs
- Exurbs

faster than US growth rate	About US growth rate	slower than US growth rate	Stagnating or Declining
8	7	5	4
7	7	5	3
5	5	3	2
5	4	2	1
4	3	2	1
2	1	1	1



America's Overall Population Growth



Minorities 2030



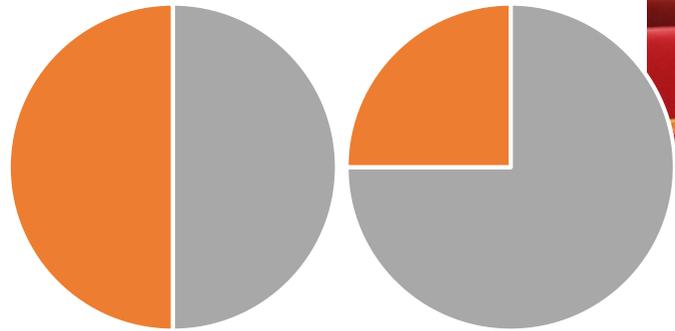
Minorities 2010



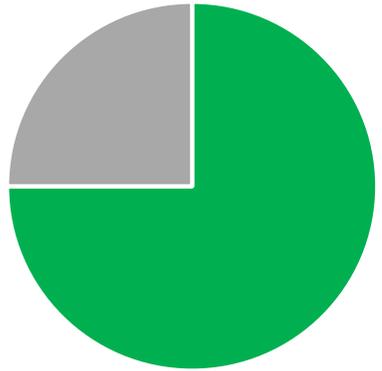
Age 65
2030

70s
2040





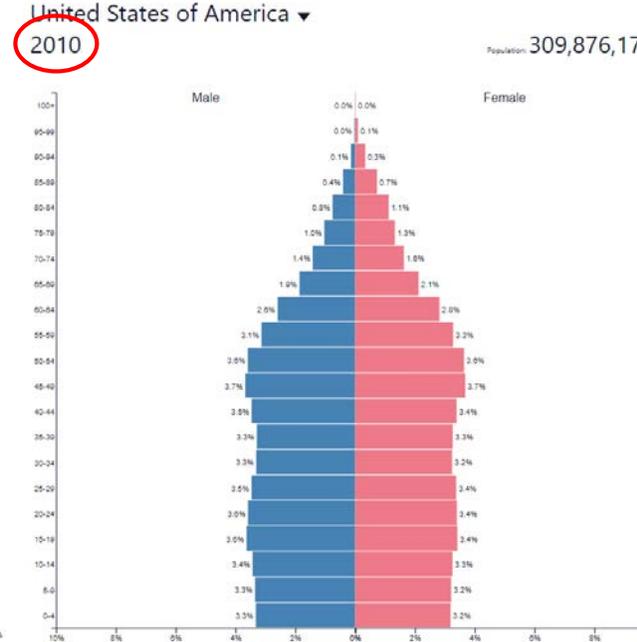
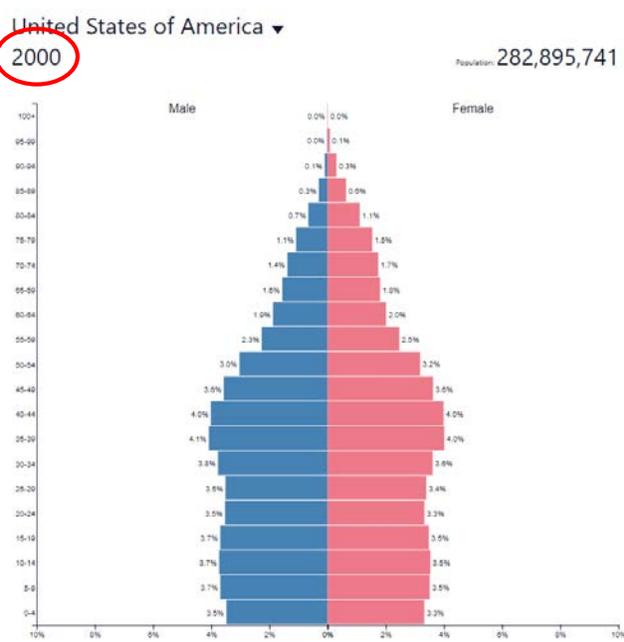
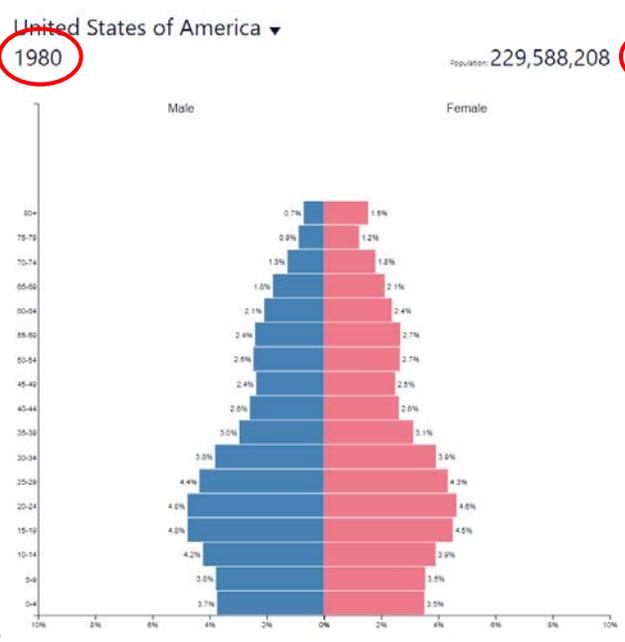
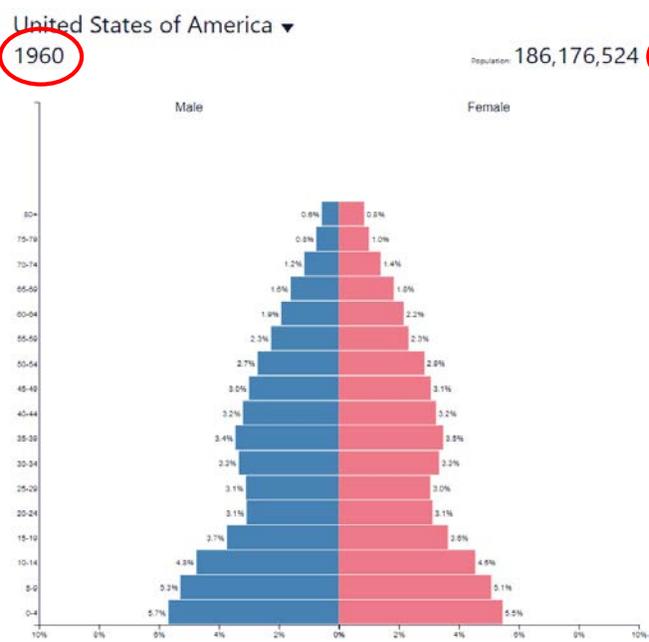
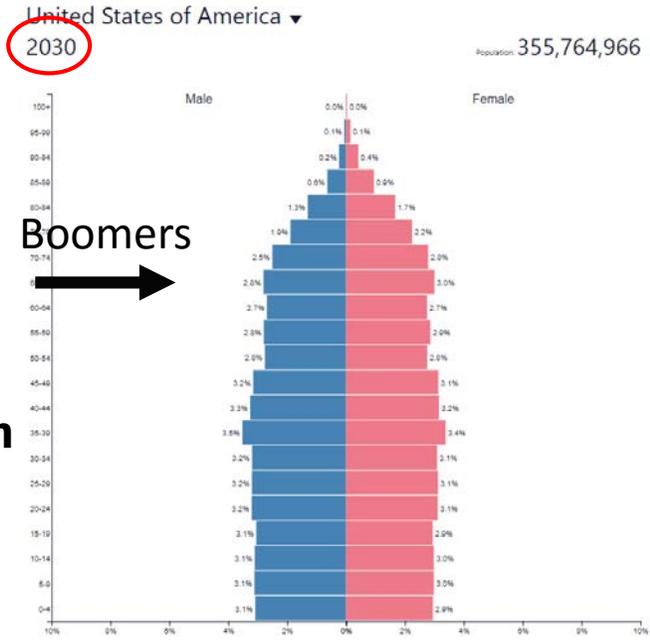
HHs w/ children, BB era & 2030

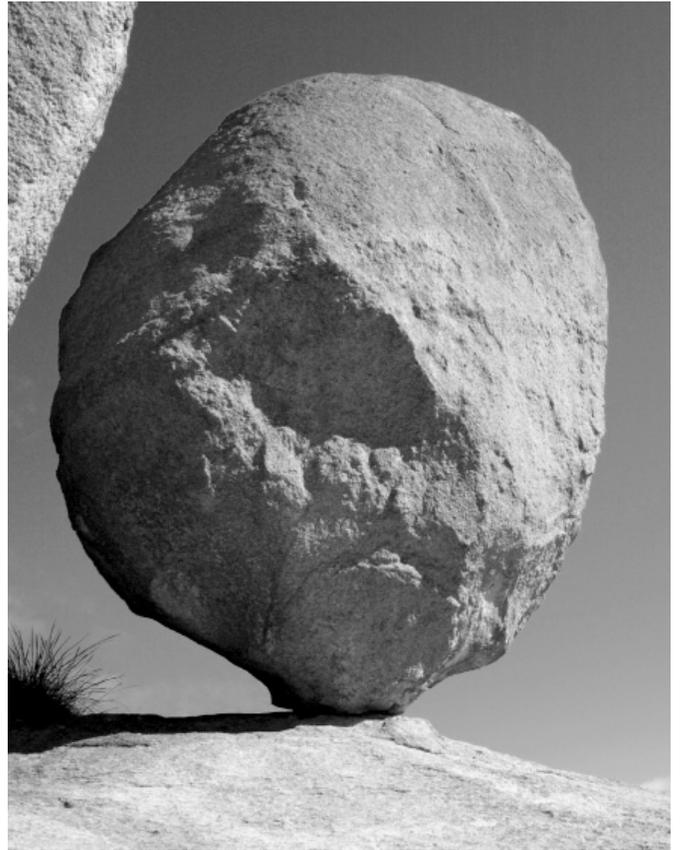
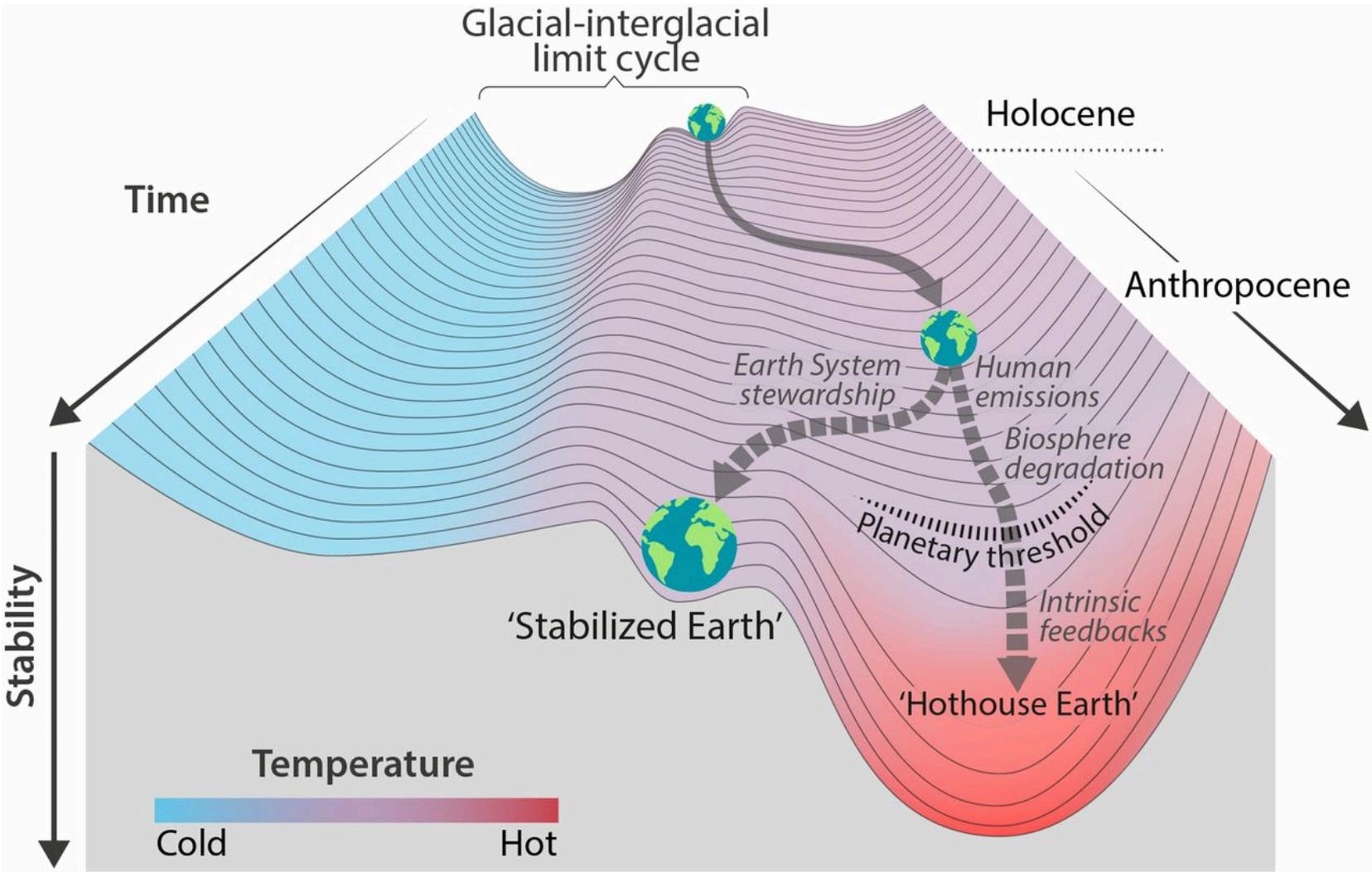


Housing Demand HHs w/o children



Housing & homebuilding



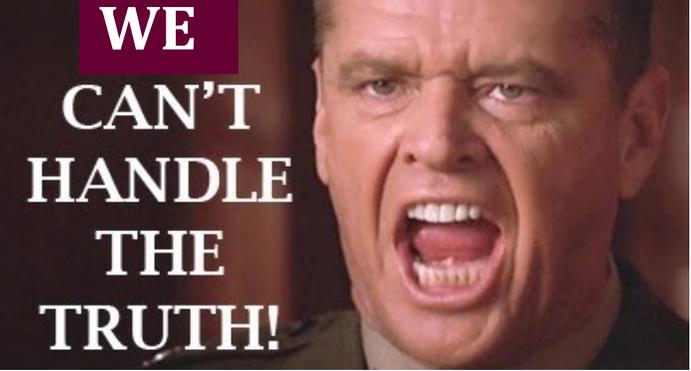


North Carolina didn't like science on sea levels ... so passed a law against it

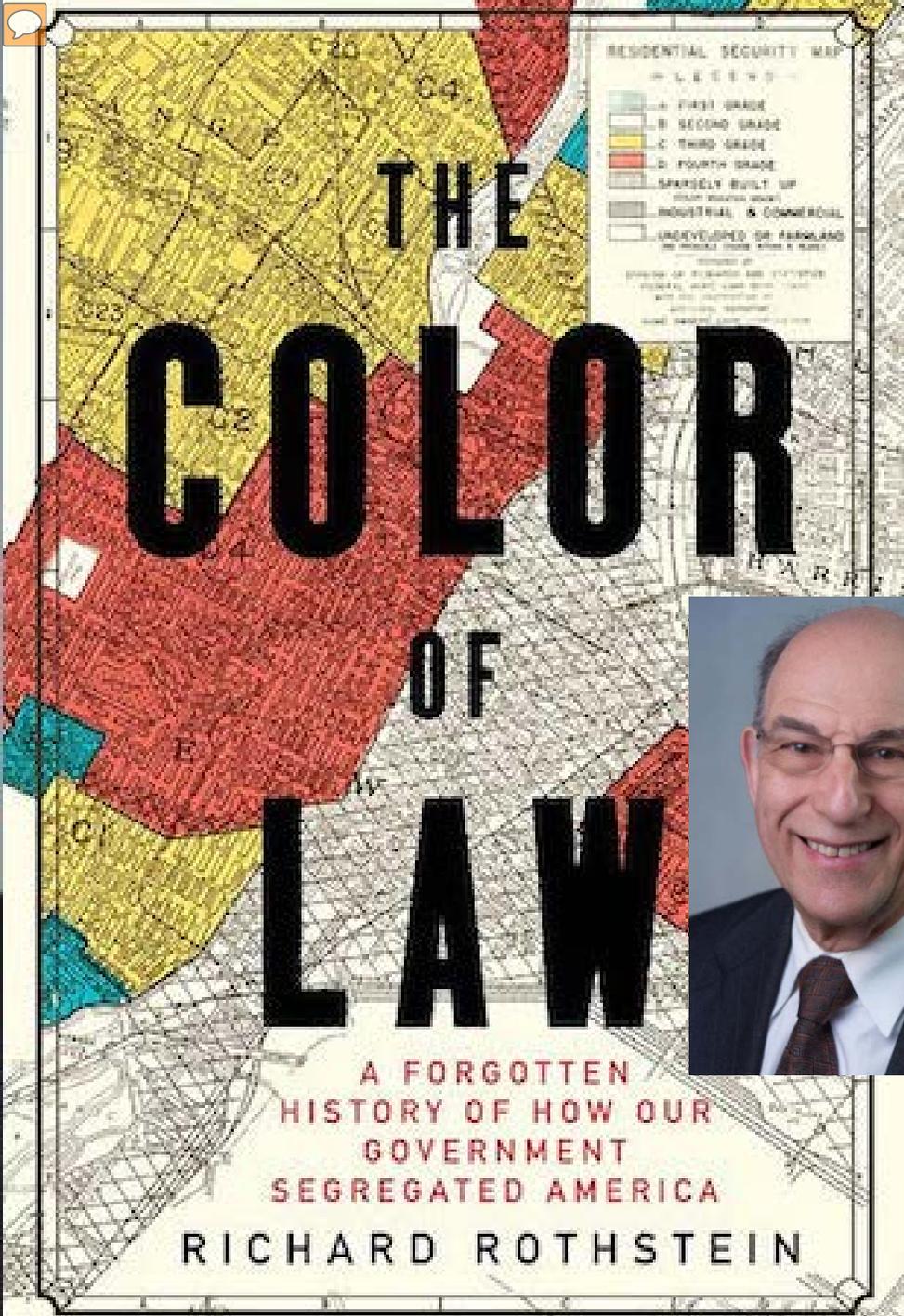
In 2012, the state whose low-lying coast lies in the path of Hurricane Florence reacted to a prediction of catastrophically rising seas by banning policies based on such forecasts

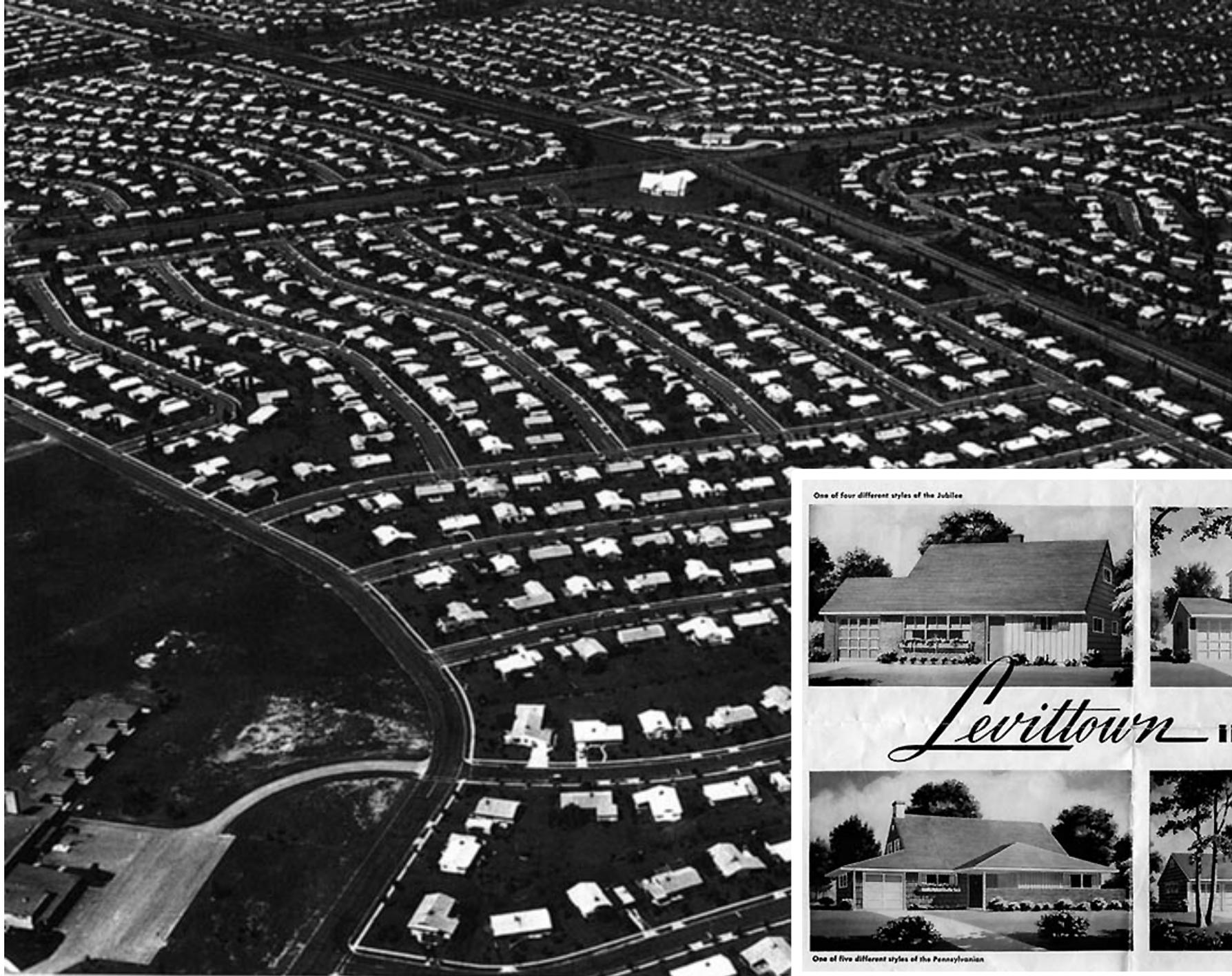


▲ The Albemarle Sound floods the Nags Head-Manteo Causeway shortly after Hurricane Irene barreled through the Outer Banks, North Carolina, in 2011. Photograph: Jim Lo Scalzo/EPA



Segregation





One of four different styles of the Jubilee



One of four different styles of the Colonial



Levittown IN 1957



One of five different styles of the Pennsylvanian



One of four different styles of the Country Clubber



WELCOME TO THE NEIGHBORHOOD



MATT DAMON

JULIANNE MOORE

OSCAR ISAAC

Suburbicon

FROM DIRECTOR GEORGE CLOONEY
PARAMOUNT PICTURES AND BLACK BEAR PICTURES PRESENT A DARK CASTLE ENTERTAINMENT - SMOKEHOUSE PRODUCTION
MATT DAMON, JULIANNE MOORE, "SUBURBICON" NOAH JUPE AND OSCAR ISAAC COSTUME DESIGNER ELLEN CHENOWETH
MUSIC BY ALEXANDRE DESPLAT EDITOR JENNY FAGAN EXECUTIVE PRODUCERS STEPHEN MARRIONE, AISC PRODUCED BY JAMES D. BUSSELL
DIRECTOR OF PHOTOGRAPHY ROBERT ELSWIT, AISC EXECUTIVE PRODUCERS JESSE SILVER, HILARY SANDOFF, COHAN CERVINO, BARBARA A. HALL, DANIEL STEINMAN PRODUCED BY GRANT HESLON, J.P.G. AND GEORGE CLOONEY WRITTEN BY TERRY SCHWARTZMAN WITH LARI CHEN & ETHAN CHEN AND GEORGE CLOONEY & GRANT HESLON
DIRECTED BY GEORGE CLOONEY
DOLBY DIGITAL
3 SMOKEHOUSE
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DOLBY DIGITAL
SUBURBICON MOVIE.COM
OCTOBER 27
DOLBY DIGITAL
DOLBY DIGITAL



Town IN 1957

Rockland County Village Accused of Bias in Zoning

See Story That Debates Just How Mixed

By PHILIP J. GARDNER
 HORTONVILLE, N.Y. (AP) — A zoning board in a small village in Rockland County, N.Y., is accused of bias in zoning laws that would restrict the number of non-whites who could live in the village.

The zoning board, which is made up of seven members, is accused of passing a zoning ordinance that would restrict the number of non-whites who could live in the village.

The ordinance would restrict the number of non-whites who could live in the village to a certain percentage of the total population.

The ordinance would also restrict the number of non-whites who could live in the village to a certain percentage of the total population.

The ordinance would also restrict the number of non-whites who could live in the village to a certain percentage of the total population.

Court Finds Bias in Zoning In L.I. Town

Ruling Broadens Impact Of Fair-Housing Laws

By PHILIP J. GARDNER
 A Federal court has ruled that zoning laws in the town of L.I. Town, N.Y., are biased against non-whites and violate the Fair Housing Act.

The court's ruling is the first time a Federal court has ruled that zoning laws are biased against non-whites.

The ruling is a landmark decision because it broadens the impact of the Fair Housing Act.

The ruling means that zoning laws that restrict the number of non-whites who can live in a certain area are illegal.

The ruling also means that zoning laws that restrict the number of non-whites who can live in a certain area are illegal.

The ruling also means that zoning laws that restrict the number of non-whites who can live in a certain area are illegal.

Arguments Are Presented in L.I. Zoning-Bias Suit

By PHILIP J. GARDNER
 Arguments were presented in court today in a suit charging that zoning laws in L.I. Town, N.Y., are biased against non-whites.

The suit was filed by the NAACP and other civil rights groups.

The suit charges that the zoning laws in L.I. Town restrict the number of non-whites who can live in the town.

The suit also charges that the zoning laws in L.I. Town restrict the number of non-whites who can live in the town.

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The suit also charges that the zoning laws in L.I. Town restrict the number of non-whites who can live in the town.

On L.I., Bias Case Looks At Zoning and the Poor

By PHILIP J. GARDNER
 The zoning laws in L.I. Town, N.Y., are not only biased against non-whites, but also against the poor.

The zoning laws in L.I. Town restrict the number of non-whites who can live in the town.

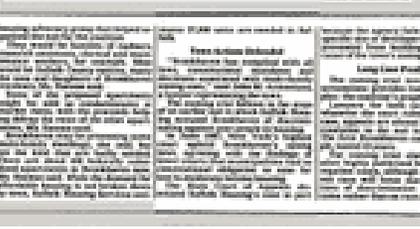
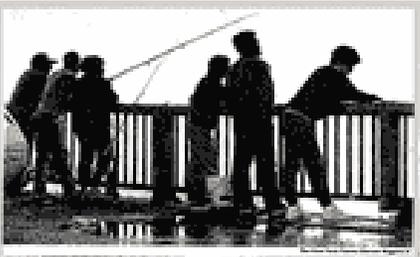
The zoning laws in L.I. Town also restrict the number of poor people who can live in the town.

The zoning laws in L.I. Town restrict the number of non-whites who can live in the town.

The zoning laws in L.I. Town also restrict the number of poor people who can live in the town.

The zoning laws in L.I. Town restrict the number of non-whites who can live in the town.

The zoning laws in L.I. Town also restrict the number of poor people who can live in the town.

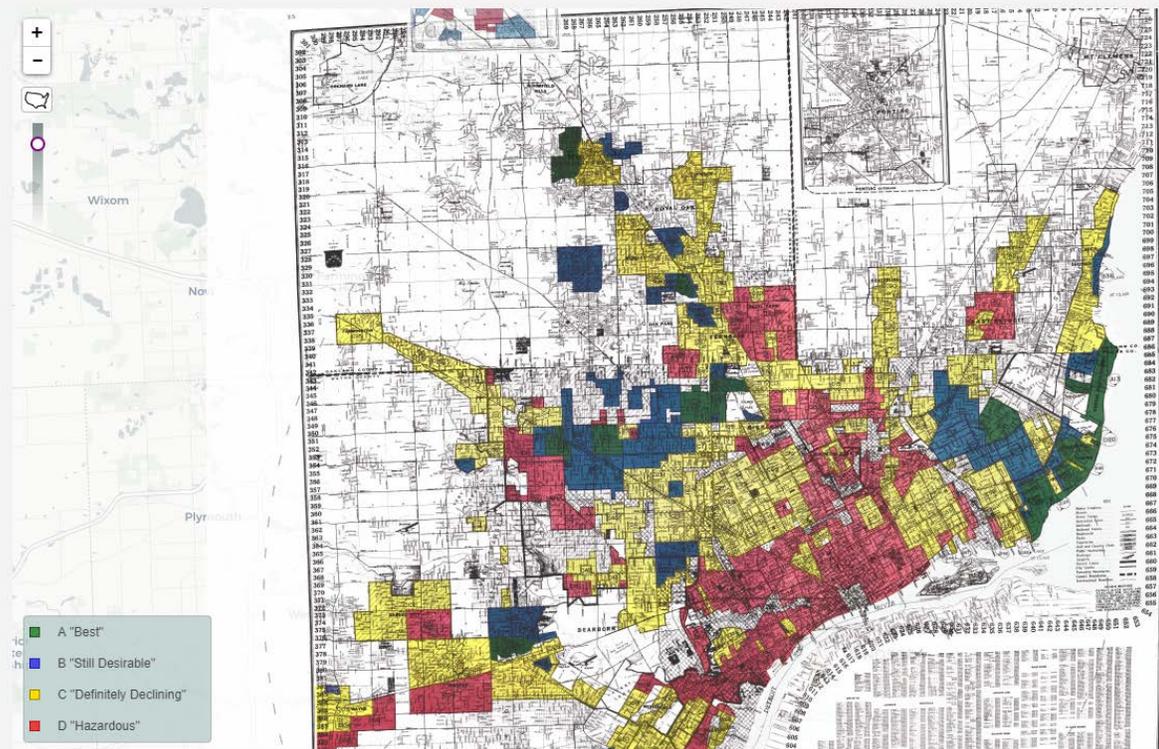


LOOK!

LOOK At These Homes NOW!
 An entire block ruined by negro invasion. Every house marked "X" now occupied by negroes. ACTUAL PHOTOGRAPH OF 4300 WEST BELLE PLACE. SAVE YOUR HOME! VOTE FOR SEGREGATION!

MAPPING INEQUALITY Redlining in New Deal America

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14. Light Imprint aka Green Infrastructure

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17. The Charter of the New Urbanism, empirical intellectual foundation

18. The rural-to-urban Transect

19. Transit-oriented development

20. Street networks

21. The charrette

22. Sustainable urbanism

23. Public housing that engages the city

24. The polycentric region

25. Freeways without futures aka Freeways to Boulevards

25 Great Ideas



Rank	Solution	Sector	TOTAL ATMOSPHERIC CO ₂ -EQ REDUCTION (GT)	NET COST (BILLIONS US \$)	SAVINGS (BILLIONS US \$)
1	Refrigerant Management	Materials	89.74	N/A	\$-902.77
2	Wind Turbines (Onshore)	Electricity Generation	84.60	\$1,225.37	\$7,425.00
3	Reduced Food Waste	Food	70.53	N/A	N/A
4	Plant-Rich Diet	Food	66.11	N/A	N/A
5	Tropical Forests	Land Use	61.23	N/A	N/A
6	Educating Girls	Women and Girls	59.60	N/A	N/A
7	Family Planning	Women and Girls	59.60	N/A	N/A
8	Solar Farms	Electricity Generation	36.90	\$-80.60	\$5,023.84
9	Silvopasture	Food	31.19	\$41.59	\$699.37
10	Rooftop Solar	Electricity Generation	24.60	\$453.14	\$3,457.63
11	Regenerative Agriculture	Food	23.15	\$57.22	\$1,928.10
12	Temperate Forests	Land Use	22.61	N/A	N/A
13	Peatlands	Land Use	21.57	N/A	N/A
14	Tropical Staple Trees	Food	20.19	\$120.07	\$626.97
15	Afforestation	Land Use	18.06	\$29.44	\$392.33
16	Conservation Agriculture	Food	17.35	\$37.53	\$2,119.07
17	Tree Intercropping	Food	17.20	\$146.99	\$22.10
18	Geothermal	Electricity Generation	16.60	\$-155.48	\$1,024.34
19	Managed Grazing	Food	16.34	\$50.48	\$735.27
20	Nuclear	Electricity Generation	16.09	\$0.88	\$1,713.40
21	Clean Cookstoves	Food	15.81	\$72.16	\$166.28
22	Wind Turbines (Offshore)	Electricity Generation	14.10	\$545.30	\$762.50
23	Farmland Restoration	Food	14.08	\$72.24	\$1,342.47
24	Improved Rice Cultivation	Food	11.34	N/A	\$519.06
25	Concentrated Solar	Electricity Generation	10.90	\$1,319.70	\$413.85
26	Electric Vehicles	Transport	10.80	\$14,148.00	\$9,726.40

Missing Middle



Rethinking Parking

THE Arts N C1
The New York Times
MONDAY, SEPTEMBER 15, 2014

BEFORE Current parking at a superblock-size East Harlem housing development.

AFTER The same site could include a parking garage and multiuse development.

ILLUSTRATIONS FROM PETERLIN RECH OFFICE/SAGI GOLLA

Trading Parking Lots for Affordable Housing

What is the solution to affordable housing in New York?

One number has been repeated over and over — 200,000 subsidized units, to be built or preserved over a decade. Mayor Bill de Blasio promised it, but has yet to explain how he'll get there.

Here are two other numbers: 9 x 18. In square feet, that's 162, smaller than the most micro micro-apartment.

MICHAEL KIMMELMAN
CRITIC'S NOTEBOOK

It is the size of a typical parking space. That lowly slice of asphalt has prompted three young architects — Miriam Peterson, Sagi Golan and Nathan Rich, fellows at the Institute for Public Architecture — to come up with what could be an innovative way to ease the housing crisis.

I'm intrigued by their proposal, "9 x 18," because it's about more than apartment buildings plopped onto vacant land. It considers how parking spaces — mandated in outmoded zoning regula-

Seeing potential in swaths of asphalt.

tions, prolific at public housing sites — might be leveraged into something more ambitious, something that encourages a mix of housing in active neighborhoods with accessible transit, public services and lively streets. In effect, the proposal

trades asphalt for housing and amenities.

And even if "9 x 18" isn't perfect or foolproof — especially when it comes to finances — at least it is concerned with more than hitting some arbitrary number.

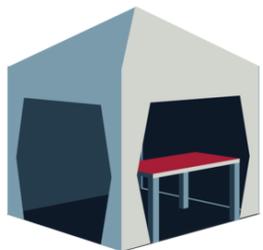
After all, the New York City Housing Authority, albeit with a wealth of federal money, did build nearly 200,000 subsidized apartments in the two decades after World War II. But that was hardly an unqualified success: Too many of those

apartments ended up in projects on the far edges of the city, without shops or grocery stores, surrounded by vast parking lots that acted like moats, thwarting street life and cutting off residents from the rest of the neighborhood. Many of the projects are crumbling today. The housing authority is broke.

The "9 x 18" proposal capitalizes on an outdated and onerous zoning mandate that requires private developers to build

Continued on Page 4

Incremental Development



Katrina Cottage

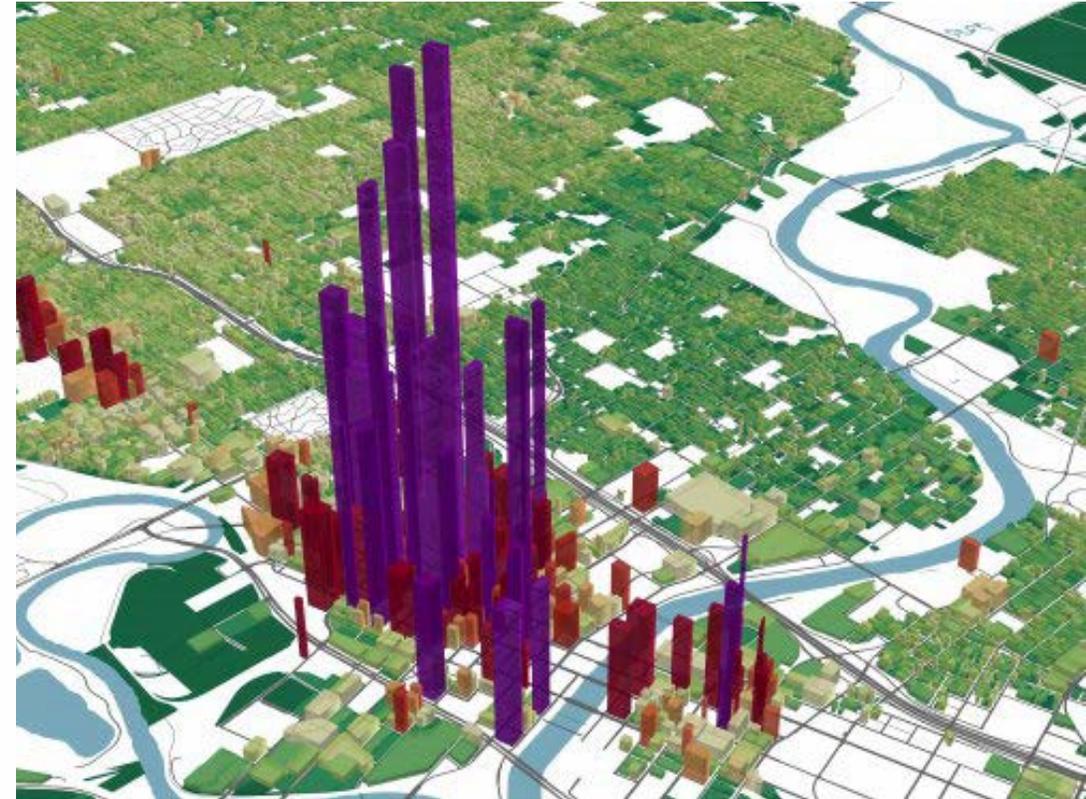


Municipal fiscal health

Urban³



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



Suburban Retrofit



Suburban Retrofit

ROOSEVELT
MANOR

Celebrity Theatre
Concert venue with
a revolving stage



N 32nd St

N 32nd St

N 32nd St

E Randolph Rd

E 1st St

Suburban Retrofit



Suburban Retrofit





Traditional Neighborhood Development



Architecture that puts the city first







Form-Based Codes

Responsibilities in the Private Realm

Buildings are aligned parallel to the street, built close to the sidewalk and configured to minimize gaps between buildings in order to physically shape the street as an outdoor room.

Location of all off-street parking, both surface and structured, screened from street view.

Building facade height must be a minimum to create a sense of enclosure and a maximum to avoid eliminating sunlight from the outdoor room.

Sidewalks are shaded with awnings and galleries.

Shopfronts maximize transparency with clear windows.

Main building entries face the sidewalk to increase activity on the street.

A sufficient amount of openings facing the street, such as windows and doors, create interest and enhance security.

Elements of Downtown Character



Thoroughfares designed for vehicle speeds below 25 mph for a sense of comfort and safety.

Encourage outdoor dining so long as an adequate walkway width is maintained.

Defined "Furnishing Zone" allowing placement of trees, bicycle parking, parking meters, street lights, and other streetscape elements.

Sidewalks shaded with street trees where awnings and galleries are not present.

Responsibilities of the Public Realm

On-street parking serves as a buffer for people walking and dining, helps reduce vehicle speeds, and provides convenient parking for shoppers and guests.

Walkways are wide enough to allow at least two people to walk side-by-side comfortably.

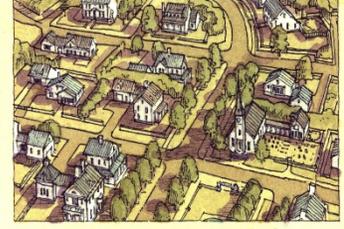
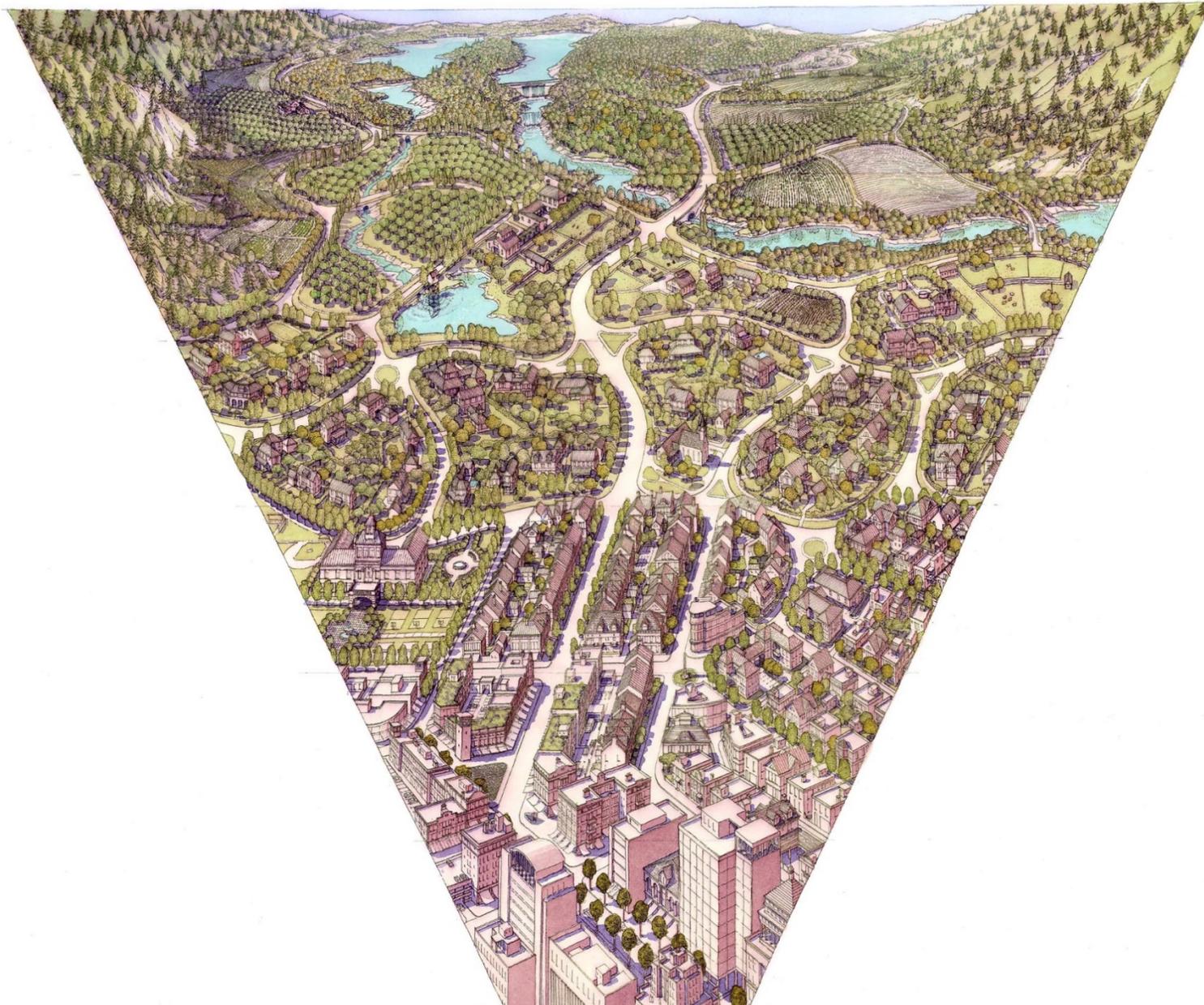




Context-based street design

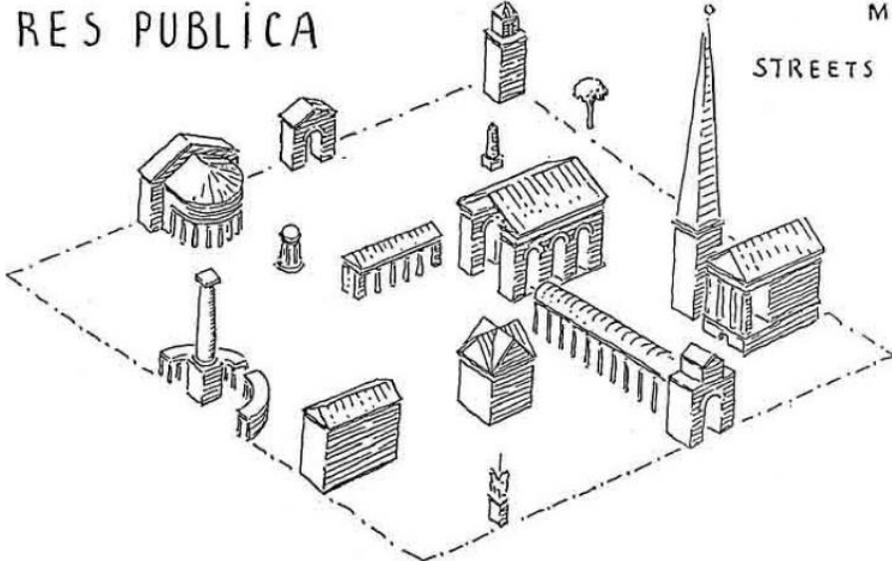


The Rural-to-Urban Transect



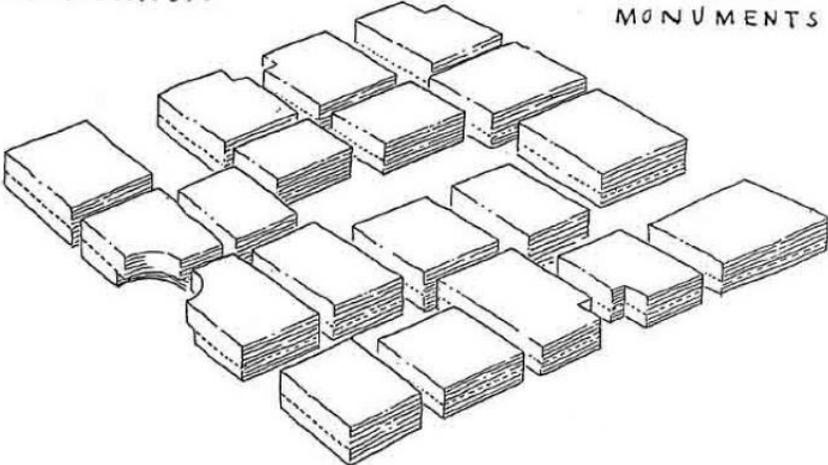
The Public Realm

RES PUBLICA

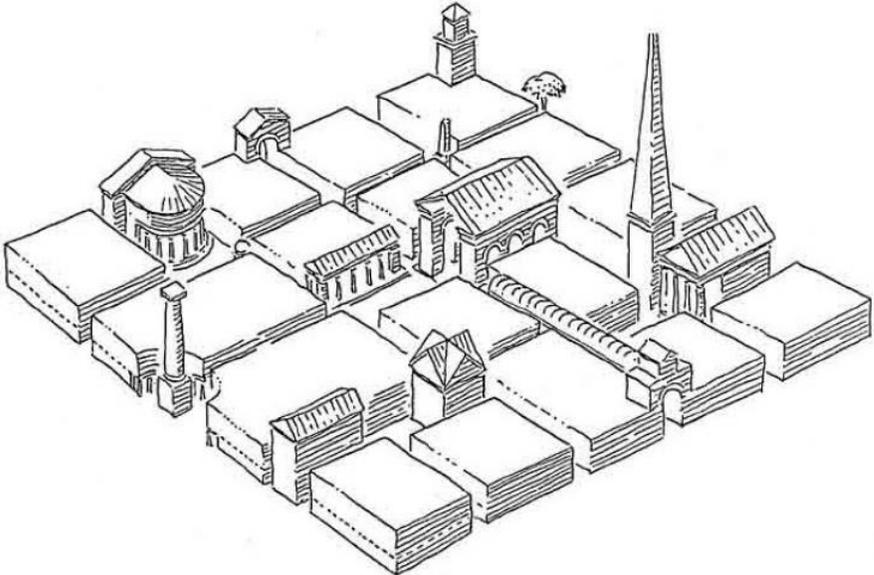


MONUMENTS
WITHOUT
STREETS or SQUARES

RES ECONOMICA



STREETS and SQUARES
WITHOUT
MONUMENTS



CIVITAS

THE
TRUE
CITY

Development and Impact Fees

Development and Impact Fees



THE JOURNAL OF TRANSPORT AND LAND USE <http://jtlu.org>
Vol. 11 No. 1 (2018) pp. 103–118

JTLU

Transportation impacts of affordable housing: Informing development review with travel behavior analysis

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Abstract: Planning for affordable housing is challenged by development policies that assess transportation impacts based on methodologies that often do not distinguish between the travel patterns of residents of market-rate housing and those living in affordable units. Given the public goals of providing affordable housing in areas with good accessibility and transportation options, there is a need to reduce unnecessary costs imposed by the potential overestimation of automobile travel and its associated impacts. Thus, the primary objective of this paper is to examine and quantify the influences of urban characteristics, residential housing type, and income on metrics commonly used to assess the transportation impacts of new development, namely total home-based trips and home-based vehicle trips. Using the 2010–2012 California Household Travel Survey, we regressed these metrics on urban place type, regionally adjusted income, and housing type, controlling for household size, weekday travel, and home location. The results indicate significant reductions in vehicle trip making with lower incomes and increasing urbanization. These findings support more differentiation of affordable and market-rate housing in the development review process and emphasize the need for development standards to be more sensitive to the characteristics of future residents and location.

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2018

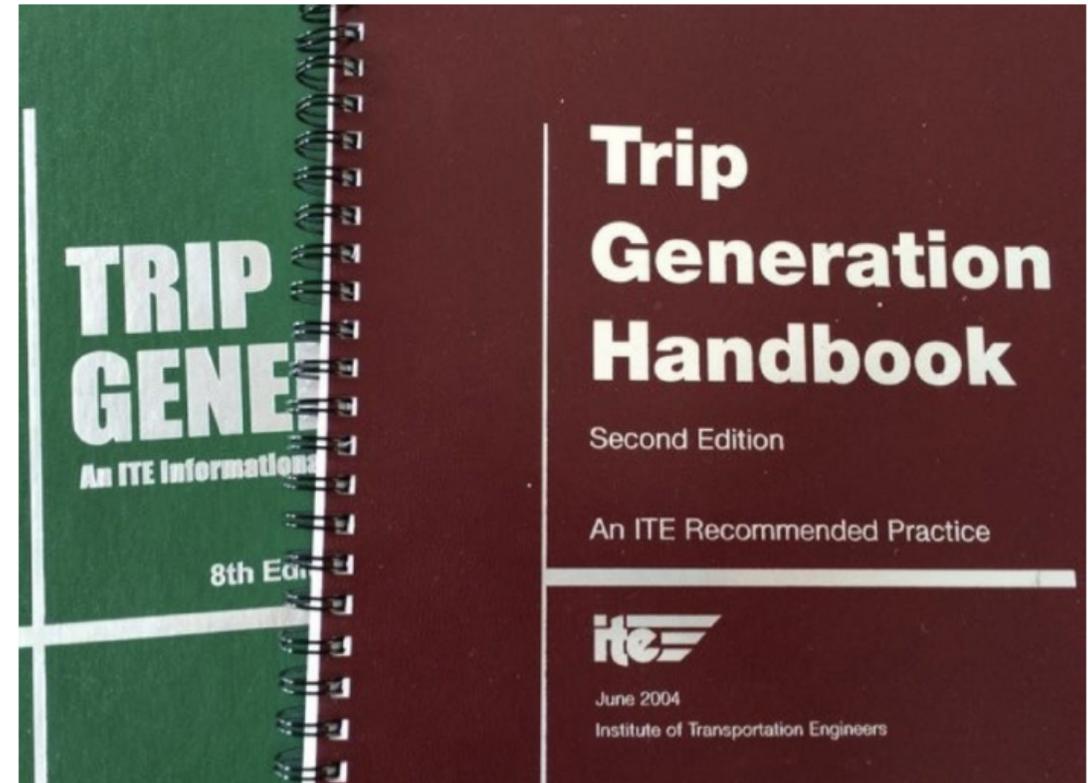
Keywords: Trip generation, affordable housing, transportation impact analysis, low-income, land use

How do we determine additional demand?

ITE *Trip Generation Handbook* with data from *Trip Generation Manual* are the industry standard

Historically focused on **vehicle** trip rates...

#of vehicles accessing/egressing a site during peak hours



Whoops! How Planners and Engineers Badly Overestimate Car Traffic

By Angie Schmitt | Dec 12, 2014 |  0

THE BLOG 06/12/2015 08:56 am ET | Updated Jun 12, 2016

How In-Town Development Produces Less Traffic Than You Might Think



By F. Kaid Benfield

Scaled-back housing plan under review: San Mateo council considers less dense Hillsdale Terrace redevelopment plan

By Samantha Weigel Daily Journal staff | Jan 14, 2017 |  0



Context – what is our current housing story?

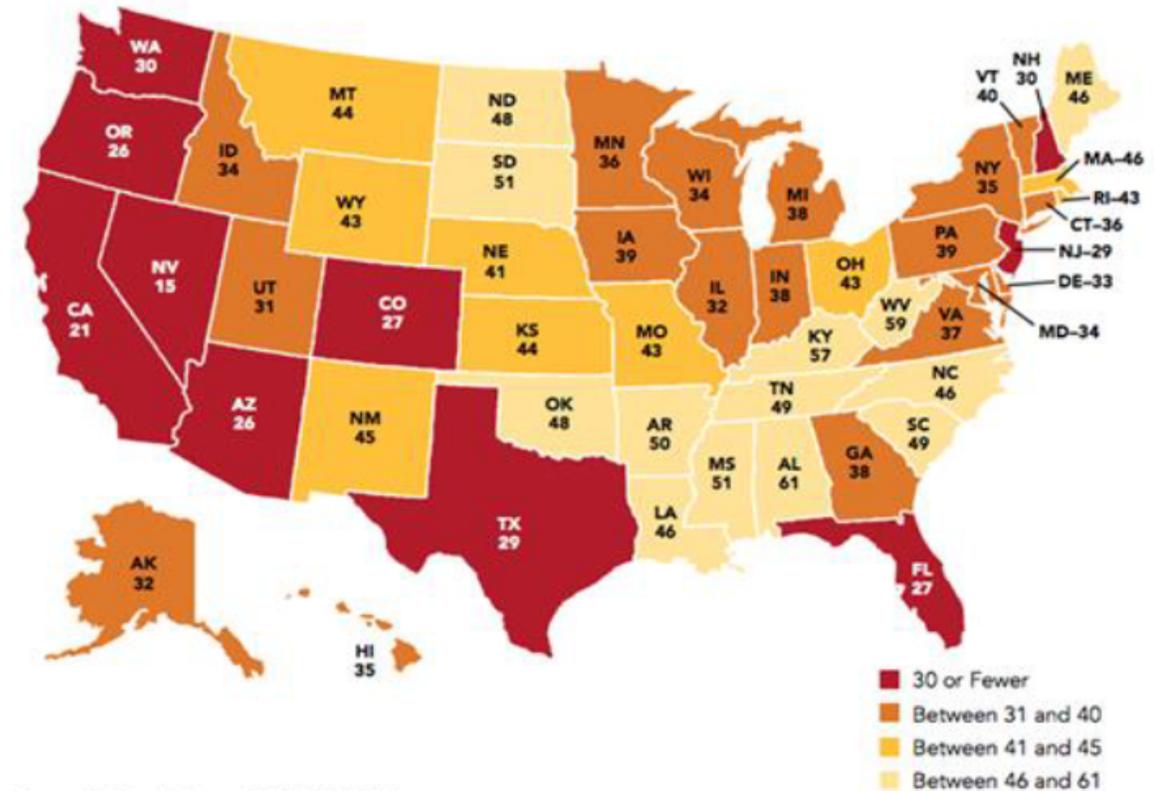
- Lower income households have fewer choices in where they can afford to live and how they can afford to travel...
- More people are living in rental housing than ever before...
- Vacancy rates have declined...
- NIMBYs have used increased traffic concerns to constrain building...
- And most developers cannot build new affordable housing stock without subsidies to close the gap between construction costs and tenants' affordable rents.

The problem for affordable housing

Transportation impact analyses that rely on conventional data & methods **may unduly burden development** by overestimating automobile use.

This is **particularly salient for affordable housing** as cities struggle to encourage more supply...

UNITS AFFORDABLE AND AVAILABLE PER 100 ELI RENTER HOUSEHOLDS BY STATE



Source: NLIHC tabulations of 2015 ACS PUMS data. The 2017 figures should not be compared to previous years, because of a change in the definition of extremely low income.

(NLIHC)

Every U.S. County Has an Affordable Housing Crisis

This is a problem that transcends the rural-urban divide.

TANVI MISRA | [@Tanvim](#) | Apr 27, 2017 | 35 Comments

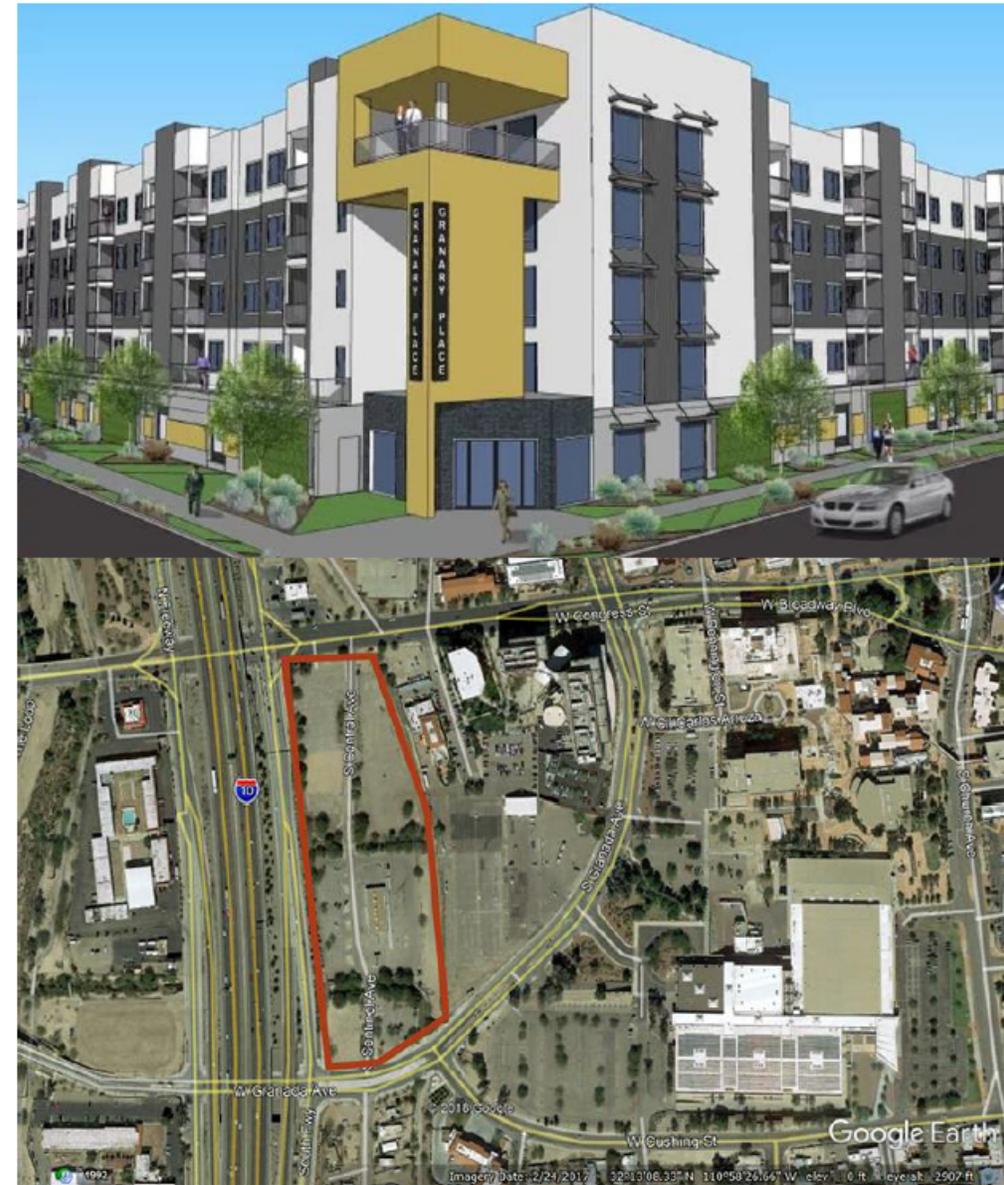
Results



	Vehicle Ownership	Homebased Vehicle Trips	Homebased Total Trips
	1-exp(B)	1-exp(B)	1-exp(B)
HOUSING TYPE			
Multifamily	-0.26	-0.16	0.00
INCOME			
Extremely Low-Income	-0.43	-0.45	-0.21
Very Low-Income	-0.26	-0.29	-0.19
Low-Income	-0.14	-0.15	-0.11
Median/Moderate Income	-0.07	-0.08	-0.07
Above Moderate Income	-	-	-
PLACE TYPE			
Non-Urban	0.49	0.69	-0.24
Suburban Neighborhood	0.37	1.00	-0.08
Urban Neighborhood	0.27	0.90	0.00
Urban District	0.16	0.60	0.00
Urban Core	-	-	-
HHSIZE	0.45	0.70	1.01
HHSIZE SQUARED	-0.03	-0.04	-0.05
WEEKEND DAY (FRI-SUN)	n/a	-0.17	-0.09

Implications for my downtown Tucson project

- 140 affordable units for low-income residents (51-80% AMI)
- Located in an urban neighborhood
- City of Tucson impact fee in 2018: \$3,457/unit¹
- Assuming these fees are entirely based upon ITE Trip Generation, **every low-income unit in this development would be over-assessed \$1,106...**
- ...totaling **\$154,873** in over-assessments transportation impact fees.



¹ City of Tucson Impact Fee calculator:
<https://www.tucsonaz.gov/impactfee>

2016

Pima County Subdivision and Development Street Standards



Applicable to projects submitted on or after May 1, 2016



18. Institute of Transportation Engineers. *Trip Generation Manual*, Ninth Edition, Washington D.C., 2012.

19. ITE Technical Council Committee 5d-10. *ITE Journal: Queuing Areas for Drive-Thru Facilities*, Washington D.C., May 1995.

20. Kindler, C.E. et al. *IHSDM Federal Highway Administration Report No. FHWA-RD-02-045: Intersection Diagnostic Review Model*, Washington D.C., 2003.

21. Koepke, Frank J. and Levinson, Herbert S. *NCHRP Report 348: Access Management Policies and Guidelines for Activity Centers*, Transportation Research Board, Washington D.C., 1989.

22. Los Angeles County. *Model Design Manual for Living Streets*, Los Angeles, 2011.

23. Maricopa Association of Governments. *Pedestrian Policies and Design Guidelines*, Maricopa County, 2005.

24. Maricopa Association of Governments. *Uniform Standard Details for Public Works Construction*, 1998.

25. Maricopa County Department of Transportation. *MCDOT Traffic Impact Procedures*, 2000.

26. National Cooperative Highway Research Program. *Report 659: Guide for the Geometric Design of Driveways*, Washington D.C., 2010.

27. National Cooperative Highway Research Program. *Report 672: Roundabouts: An Informational Guide*, Second Edition, 2010.

28. Pima Association of Governments. *Regional Pedestrian Plan*, Tucson, 2000.

29. Pima Association of Governments. *Regional Plan for Bicycling*, Tucson, 2000.

30. Pima Association of Governments, *Standard Detail Drawings and Specifications*, Tucson.

31. Pima County, *Design Standards for Stormwater Detention and Retention*, Tucson, 2014.

32. Pima County. *Eastern Pima County Trail System Master Plan*, Tucson, 1996

33. Pima County, *Low Impact Development and Green Infrastructure Guidance Manual*, Tucson, 2014.

34. Pima County. *Pima County Code*, Tucson

35. Pima County. *Major Streets Plan*, Tucson, 2015.

36. Pima County. *Ordinance 2010-FC5: Floodplain Management Ordinance*, Tucson, 2010.

37. Pima County. *Regulated Riparian Habitat Mitigation Standards and Implementation Guidelines*, Tucson, 2001

38. Pima County Department of Transportation. *Environmentally Sensitive Roadway Design Guidelines*, Tucson, 2002.

39. Pima County Department of Transportation. *Pavement Marking Design Manual*, Tucson, 2002.

40. Pima County Department of Transportation. *Roadway Design Manual*, Tucson, 2013.

41. Pima County Department of Transportation. *Signing Manual*, Tucson, 2002.

42. Pima County Department of Transportation. *Transit Guidelines for Roadway Design and Construction*, Tucson, 2009.

43. Pima County Regional Flood Control District. *Drainage and Channel Design Standards for Local Drainage*, Tucson, 1984.

44. Smart Growth. *Four Model Ordinances to Help Create Physically Active Communities*, <https://www.planning.org/research/smartgrowth/pdf/section48.pdf>

45. Smart Growth America. *National Complete Streets Coalition*, <http://www.smartgrowthamerica.org/complete-streets>.

46. Stakeholder Design Team. *Neighborhood Street Design Guidelines: An Oregon Guide for Reducing Widths*, Salem, 2000.

47. Transportation Research Board. *Highway Capacity Manual*. Fifth Edition, Washington D.C., 2010.

48. United States Department of Justice. *ADA Standards for Accessible Design*, Washington D.C., 1994.

49. United States Department of Transportation, Federal Highway Administration. *Highway Functional Classification: Concepts, Criteria and Procedures*, Washington D.C., 1989.

50. United States Department of Transportation Federal Highway Administration. *Manual on Uniform Traffic Control Devices*, Washington D.C., 2009.

An ITE Recommended Practice

Designing Walkable Urban Thoroughfares: A Context Sensitive Approach



Institute of Transportation Engineers



Urban



Street



Design



Guide



National Association of City Transportation Officials

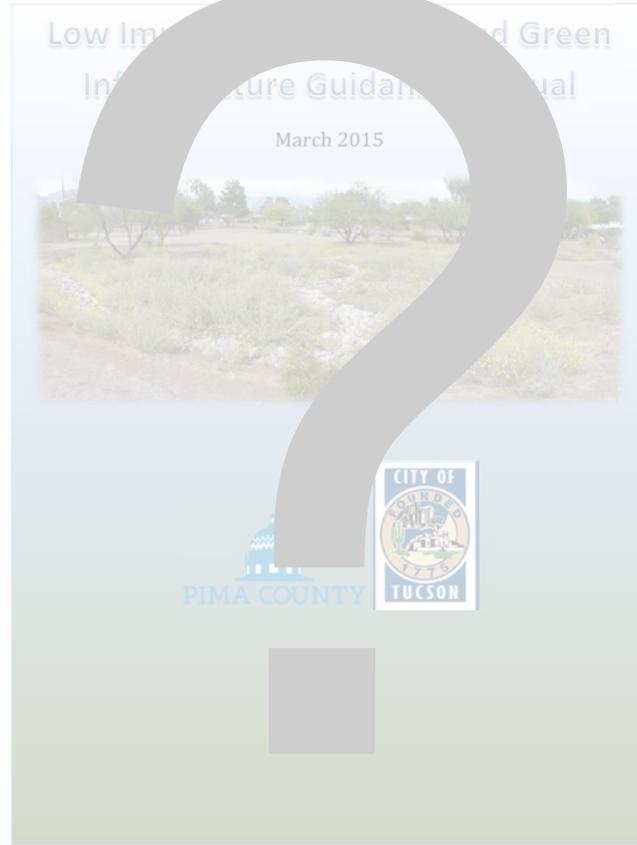
An ITE Recommended Practice



Designing Walkable Urban Thoroughfares
A Context Sensitive Approach



Institute of Transportation Engineers



Urban



Street



Design



Guide



National Association of City Transportation Officials



An ITE Recommended Practice

Designing Walkable Urban Thoroughfares
A Context Sensitive Approach



Institute of Transportation Engineers



Low Impact Development and Green Infrastructure Guidance Manual
March 2005

Policy

Update our method for developing our impact fees, and develop our own using a context sensitive approach.

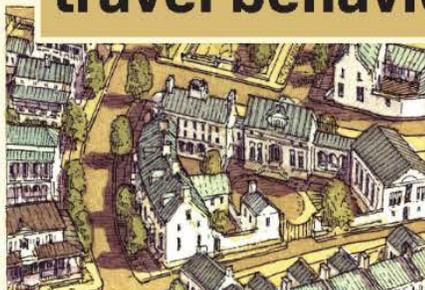
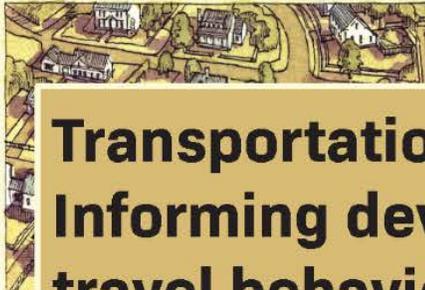
Urban

Street

Design

Guide

National Association of City Transportation Officials



**November 14th
12pm (noon) - 1:00pm
Conference Room C
Public Works Building
201 N Stone**



Kristina Currans, Ph.D., E.I.T

Assistant Professor
School of Landscape Architecture and Planning
University of Arizona

Transportation impacts of affordable housing: Informing development review with travel behavior analysis

While America is experiencing an affordability crisis, federal, state and local governments account for a full one-third of the cost of construction for multifamily housing. In addition to this, low income families lack housing choice, more people are renting, vacancy rates are low, NIMBYs use traffic concerns to block construction, and affordable housing requires government subsidy to close the gap between incomes and construction costs.

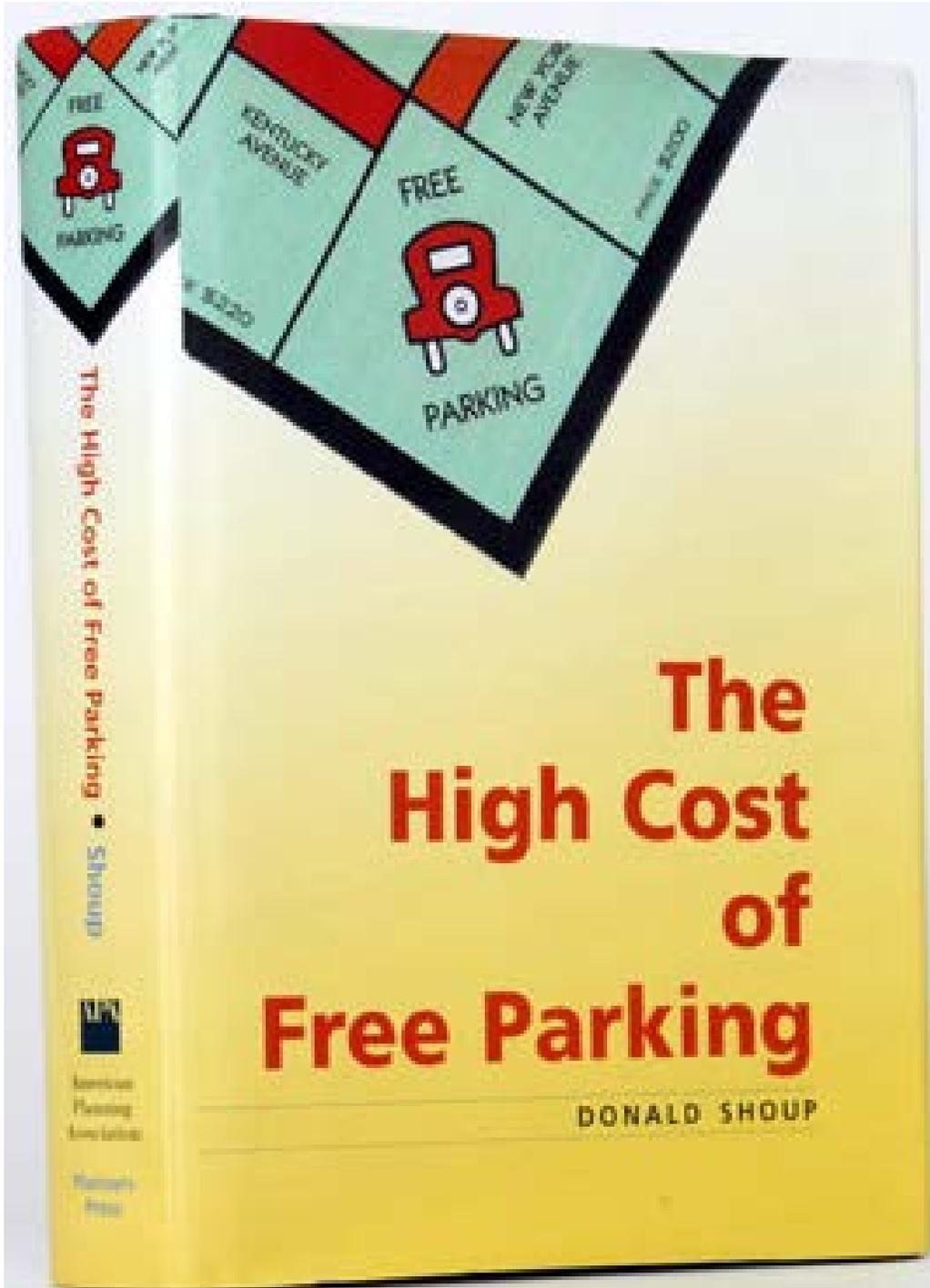
Our cities need to develop their own transportation impact analysis standards using a context sensitive approach

Parking Reform

The cost of parking is the burden of all roles in society except that of the driver.

Inventory our parking supply

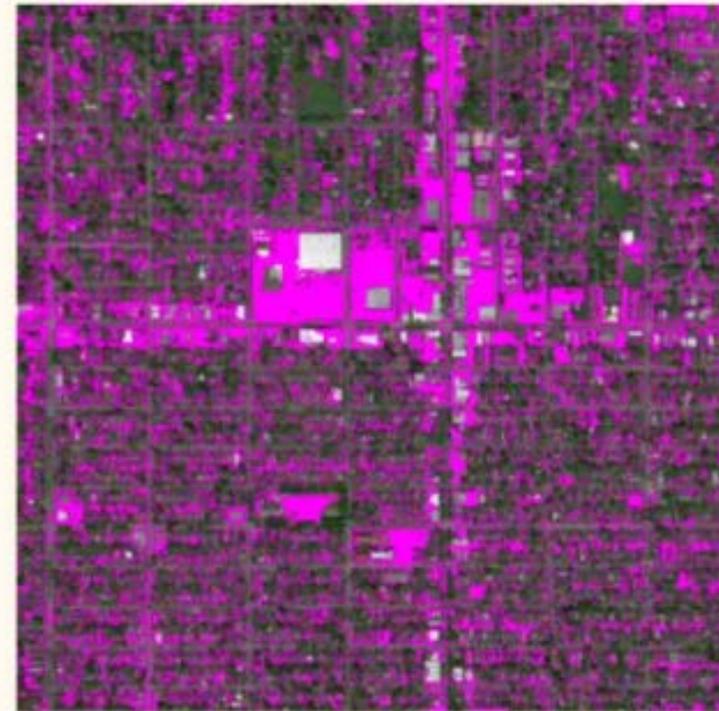
Reform parking standards.
Stop subsidizing parking,
introduce to the market.



American Cities Are Drowning in Car Storage

Groundbreaking research presents credible estimates of the total parking supply in several American cities, and it's not pretty.

By Angie Schmitt | Jul 12, 2018 |  38



Satellite images with surface parking highlighted in Philadelphia (left) and Seattle (right), via the Research Institute for Housing America.

ONE VOICE. ONE VISION. ONE RESOURCE.



RESEARCH INSTITUTE FOR HOUSING AMERICA **SPECIAL REPORT**

Quantified Parking: Comprehensive Parking Inventories for Five U.S. Cities

Eric Scharnhorst
Principal Data Scientist
Parkingmill

18806

HOUSINGAMERICA.ORG

RIHA
RESEARCH INSTITUTE
FOR HOUSING AMERICA

NEVER

DEMAND
SUPPLY



Jackson, WY
\$192k

Seattle, WA
\$118k

Des Moines, IA
\$77k

Philadelphia, PA
\$30k

New York, NY
\$6k

Jackson, WY



Des Moines, IA



Tucson?



CHAPTER 17-9. PARKING

Sections:

17-9-1 Purpose.	1
17-9-2 Parking requirements.	1
17-9-3 Access and circulation.	4
17-9-4 Bicycle parking.	5

17-9-1 Purpose.

The purpose of this chapter is to ensure new development and redevelopment have flexibility in addressing parking demand, and to improve the visual appeal of the town by regulating the placement, layout, and design of parking areas and garages.

17-9-2 Parking requirements.

A. General.

1. At least two off-street spaces within a fully enclosed garage shall be provided for residential uses on lots of 16,000 square feet or less.
2. For all other uses, a parking justification analysis shall be provided.
 - a. The parking justification analysis shall include the following minimum contents:
 - i. **An analysis of the parking demand** from the existing and proposed onsite buildings or uses, including hours of operation and peak use time and demand for each proposed building or use.
 - ii. The number and location of proposed onsite parking spaces (including accessible parking spaces).
 - iii. **The data source used to establish the number of proposed onsite parking spaces.**
 - iv. **The existing and future anticipated available parking within and in the vicinity of the proposed development.**
 - v. If parking demand is proposed to be addressed offsite, reference to or copies of any shared parking agreement or other evidence of a right to park in that location.
 - vi. The location and distance from the site to existing residential neighborhoods and an explanation of how or why the proposed buildings or uses will not place a parking burden on residential streets.
 - vii. Discussion of whether the proposed development or uses will be catering to or may likely attract bicyclists, and if so, the location and number of bicycle racks.



- 110 spaces
- “underparked”
- Surrounding businesses argued for more parking
- Plan will exceed minimum standards



- 110 spaces
- “underparked”
- Surrounding businesses argued for more parking
- Plan will exceed minimum standards

Operating Systems



January 1984



Mac OS X

34 y/o



Mac

33 y/o



Win



November 1985



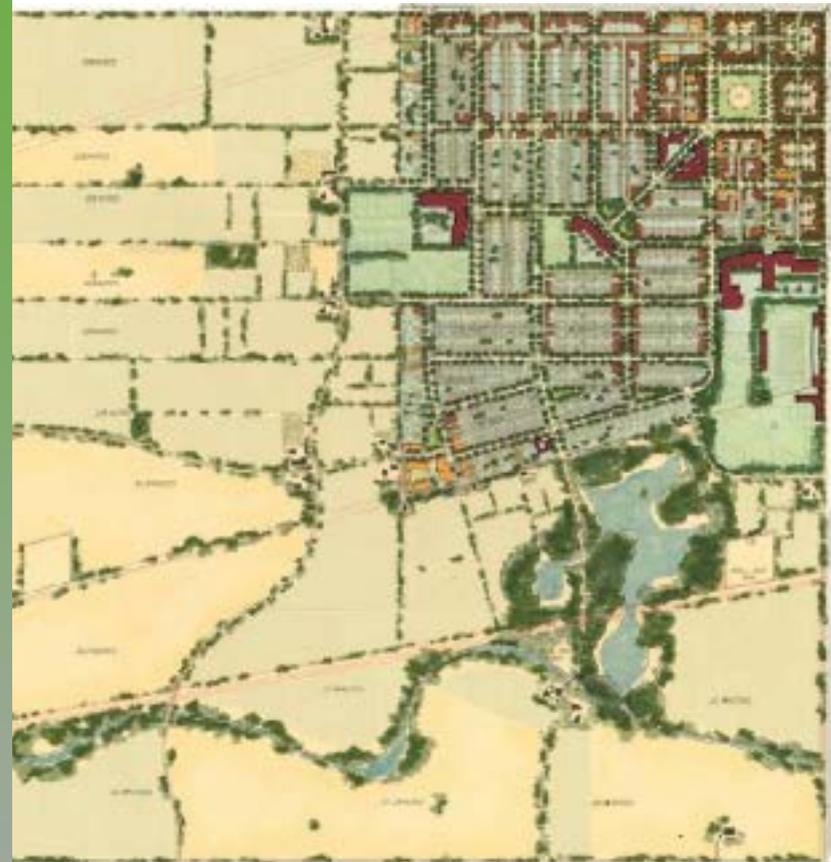


Base Plan: (by others)
Typical Sprawl

Street Pattern: Arterials / Cul de sacs
Residential Pattern: Single Family Detached
Schools: Regional Scale, Isolated from community
Comercial Pattern: Strip at regional arterials / connectors
Ag Pattern: Eliminated

LID elements: Engineered drainages, decorative wetlands, compensation for sprawl impacts

CSD



Proposal:
Traditional Neighborhood Pattern

Street Pattern: Traditional, human scaled streets
Residential Pattern: Transect based diversity
Schools: Neighborhood scaled, intentionally located
Comercial Pattern: Traditional integration, diversity, flexibility
Ag Pattern: Subdivided to favor localized ag, hand farms, family farms.

Elements: Reduced development area + typical public components, Genuine Impact Design via Compact Urban Form

TND

73 y/o Thousands y/o



Land Use Regulation

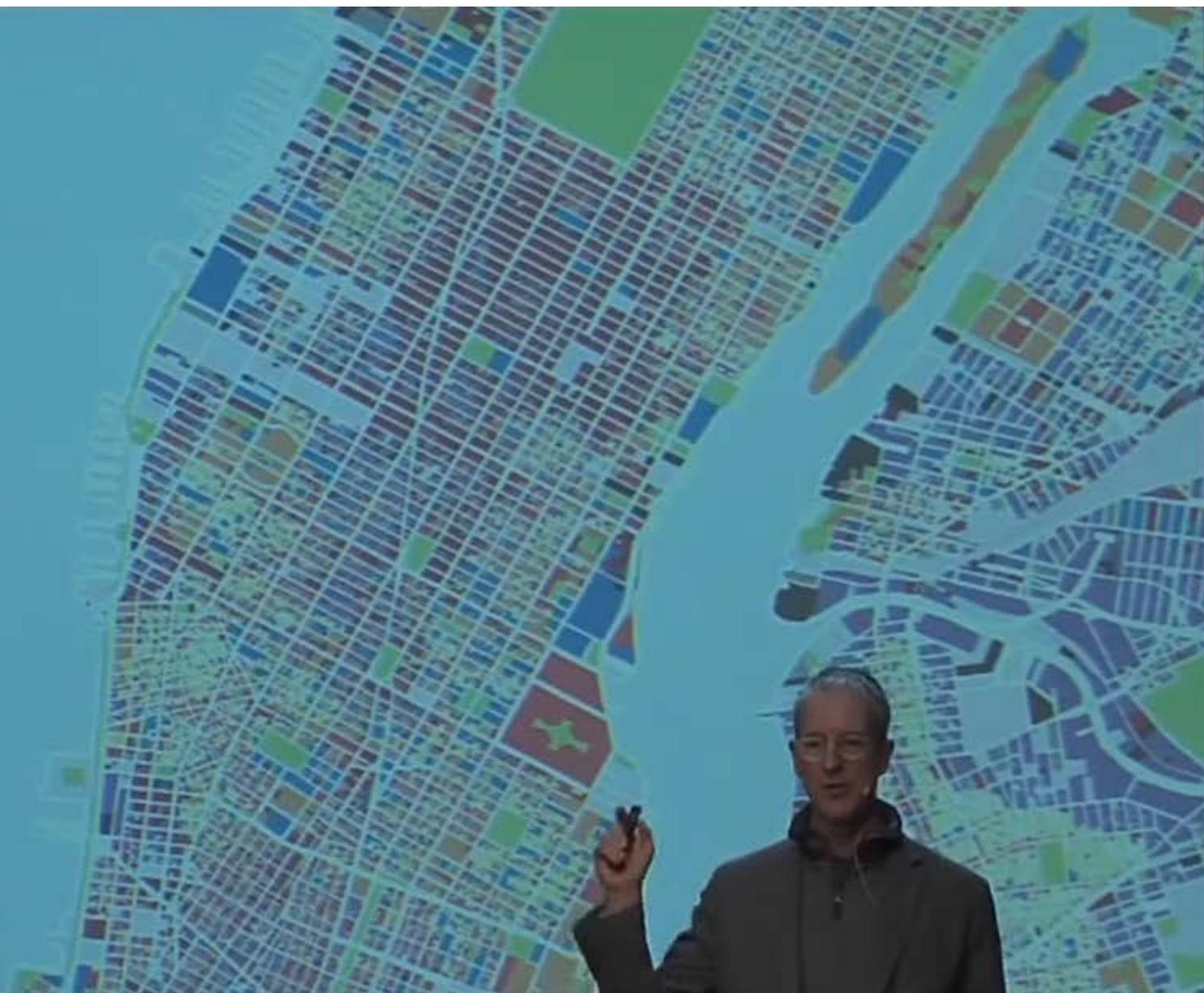




Form-based Zoning

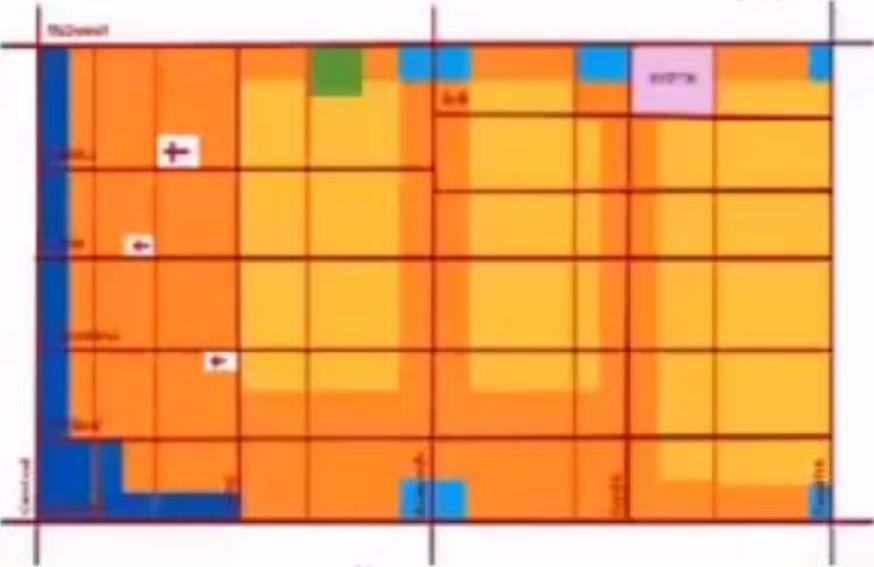


- MultiFamily Walkup Buildings
- MultiFamily Elevator Buildings
- Mixed Commercial/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing
- Transportation/Utility
- Public Facilities & Institutions
- Open Space
- Parking Facilities
- Vacant Land
- All Others or No Data



ZONING MAP FOR THE CITY OF PHOENIX

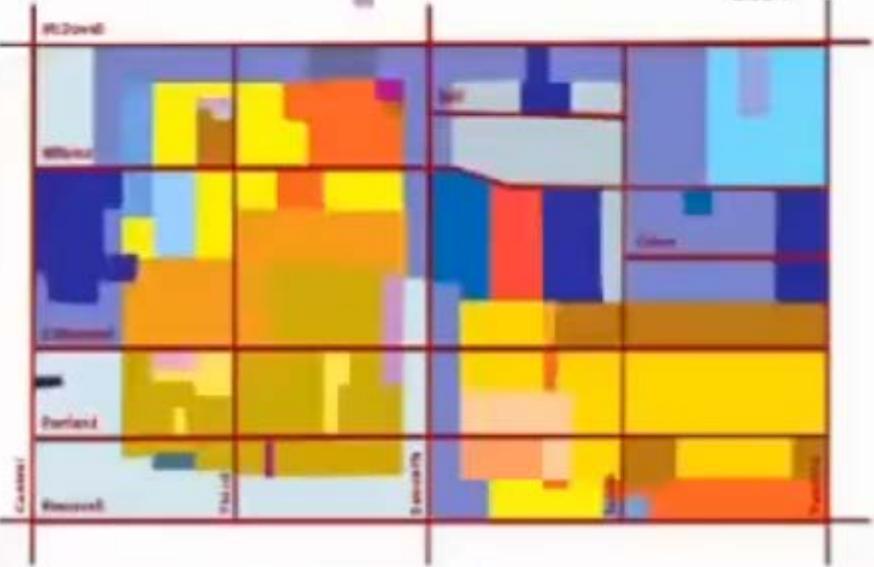
1930



LEGEND

- Business District
- Business District
- Business District
- Residential District
- Park
- Public
- + Church

2004



LEGEND

- | Commercial/Industrial | Residential Single-Family | Residential Medium-Density |
|---|---|--|
| ■ C-1 | ■ R-1 | ■ RM-1 |
| ■ C-2 | ■ R-2 | ■ RM-2 |
| ■ C-3 | ■ R-3 | ■ RM-3 |
| ■ C-4 | ■ R-4 | |
| ■ C-5 | ■ R-5 | |
| ■ C-6 | ■ R-6 | |
| ■ C-7 | ■ R-7 | |
| ■ C-8 | ■ R-8 | |
| ■ C-9 | ■ R-9 | |
| ■ C-10 | ■ R-10 | |
| ■ C-11 | ■ R-11 | |
| ■ C-12 | ■ R-12 | |
| ■ C-13 | ■ R-13 | |
| ■ C-14 | ■ R-14 | |
| ■ C-15 | ■ R-15 | |
| ■ C-16 | ■ R-16 | |
| ■ C-17 | ■ R-17 | |
| ■ C-18 | ■ R-18 | |
| ■ C-19 | ■ R-19 | |
| ■ C-20 | ■ R-20 | |
| ■ C-21 | ■ R-21 | |
| ■ C-22 | ■ R-22 | |
| ■ C-23 | ■ R-23 | |
| ■ C-24 | ■ R-24 | |
| ■ C-25 | ■ R-25 | |
| ■ C-26 | ■ R-26 | |
| ■ C-27 | ■ R-27 | |
| ■ C-28 | ■ R-28 | |
| ■ C-29 | ■ R-29 | |
| ■ C-30 | ■ R-30 | |
| ■ C-31 | ■ R-31 | |
| ■ C-32 | ■ R-32 | |
| ■ C-33 | ■ R-33 | |
| ■ C-34 | ■ R-34 | |
| ■ C-35 | ■ R-35 | |
| ■ C-36 | ■ R-36 | |
| ■ C-37 | ■ R-37 | |
| ■ C-38 | ■ R-38 | |
| ■ C-39 | ■ R-39 | |
| ■ C-40 | ■ R-40 | |
| ■ C-41 | ■ R-41 | |
| ■ C-42 | ■ R-42 | |
| ■ C-43 | ■ R-43 | |
| ■ C-44 | ■ R-44 | |
| ■ C-45 | ■ R-45 | |
| ■ C-46 | ■ R-46 | |
| ■ C-47 | ■ R-47 | |
| ■ C-48 | ■ R-48 | |
| ■ C-49 | ■ R-49 | |
| ■ C-50 | ■ R-50 | |



Codifying New Urbanism

How to Reform Municipal Land Development Regulations



Congress for the New Urbanism

APA American Planning Association
PAS Planning Advisory Service
Report Number 526

CONGRESS
FOR THE
NEW
URBANISM



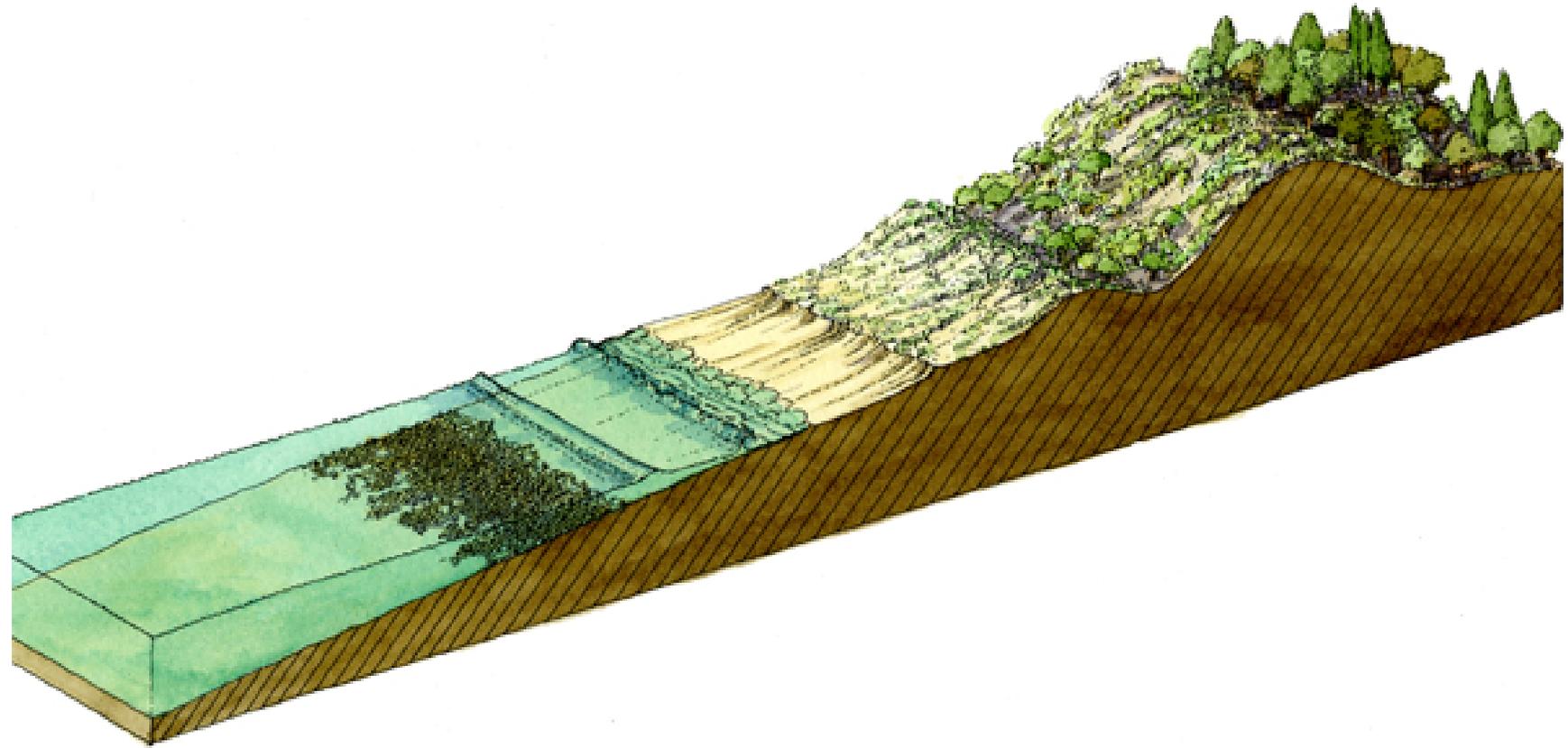
A LEGAL GUIDE TO URBAN AND SUSTAINABLE DEVELOPMENT

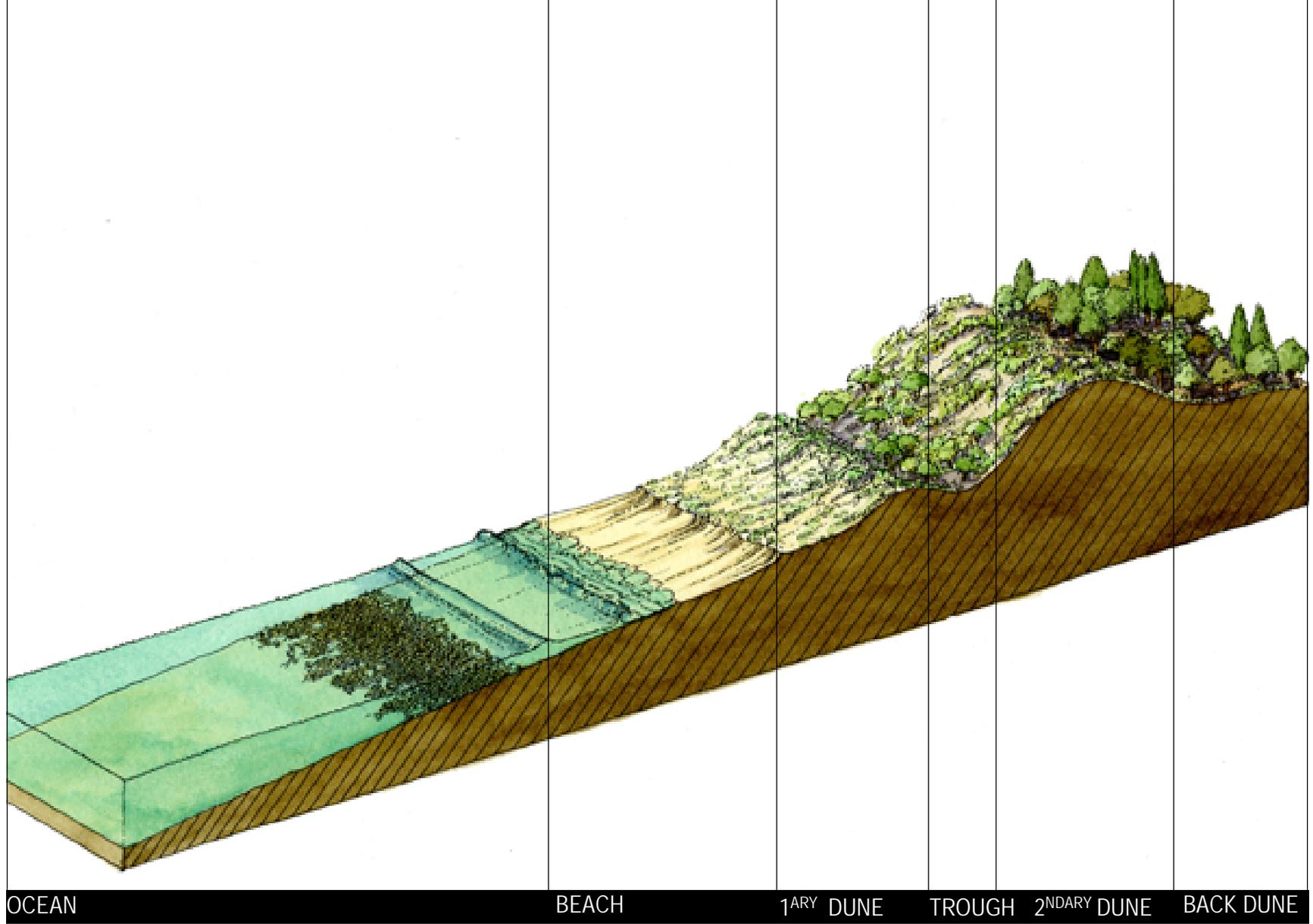
for Planners,
Developers, and
Architects

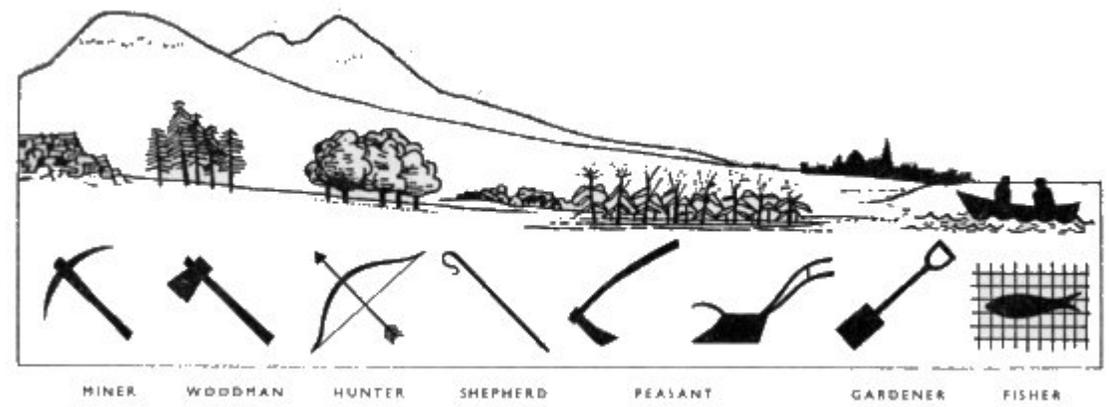
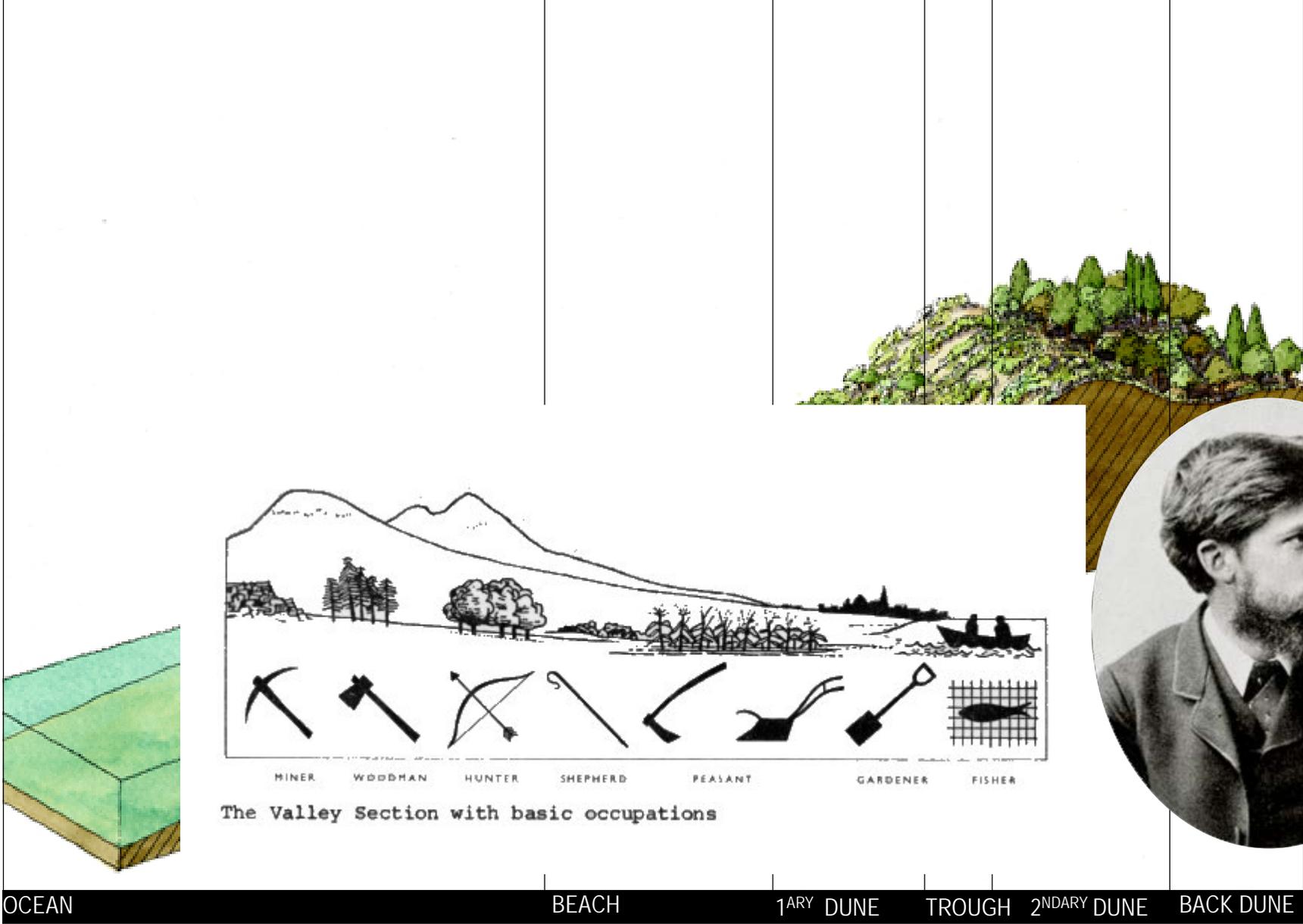
Daniel K. Slone and Doris S. Goldstein
with W. Andrew Gowder Jr.

Foreword by Andrés Duany

The Transect







The Valley Section with basic occupations

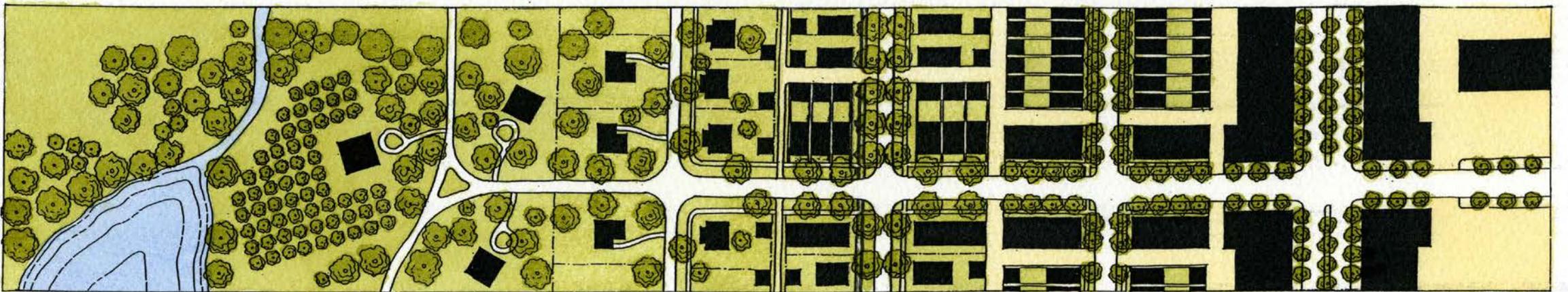


OCEAN BEACH 1ARY DUNE TROUGH 2NDARY DUNE BACK DUNE



Transect Modules

- Adaptive Agricultural Reuse
- Affordable Housing Incentives
- Affordable Housing Policy
- Agrarian Urbanism
- Architectural Standards
- Bicycling
- Building Types
- Canal Urbanism
- Civic Space
- Complete Thoroughfare Assemblies
- Comprehensive Planning
- Crime Prevention
- Existing Thoroughfares
- Fire Mitigation in the Wildland Urban Interface
- Flood Hazard Mitigation
- Generative Coding
- Incentives
- Landscape
- Lifelong Communities Tables
- Light Imprint Stormwater Matrix
- Light Levels
- Lighting Design
- Live-Work Design and Policy
- Natural Drainage
- Noise Levels
- Place Types
- Regional Watersheds
- Renewable Resources
- Residential Markets
- Retail Markets
- Retail: Sustainable Commerce
- Riparian and Wetland Buffers
- Sector Planning with Community Units
- Signs
- Sprawl Repair
- Sustainable Urbanism Performance-Based Modules
- Transit-Oriented Development
- Visitability

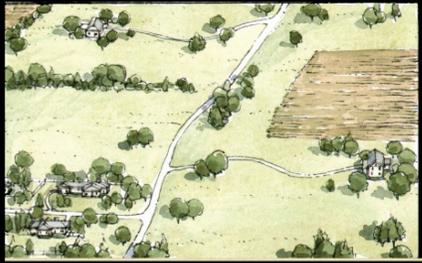




Hayward, CA



T1



T2



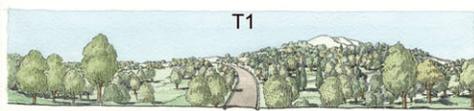
T3



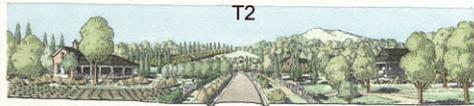
T4



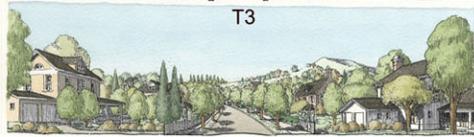
T5



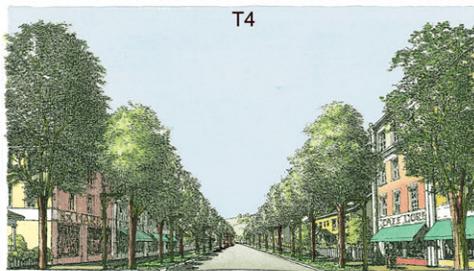
T1



T2



T3



T4



T5



T6



T-1

T-2

T-3

T-4

T-5

T-6

Form-Based Code

COURSES & WEBINARS

FBC101: Introduction

» Las Vegas, NV

September 19, 2018

[Register Now!](#)



FBC101: Online

» An online course for self-paced learning

FBC201: Design

» Montreal, QC, Canada,

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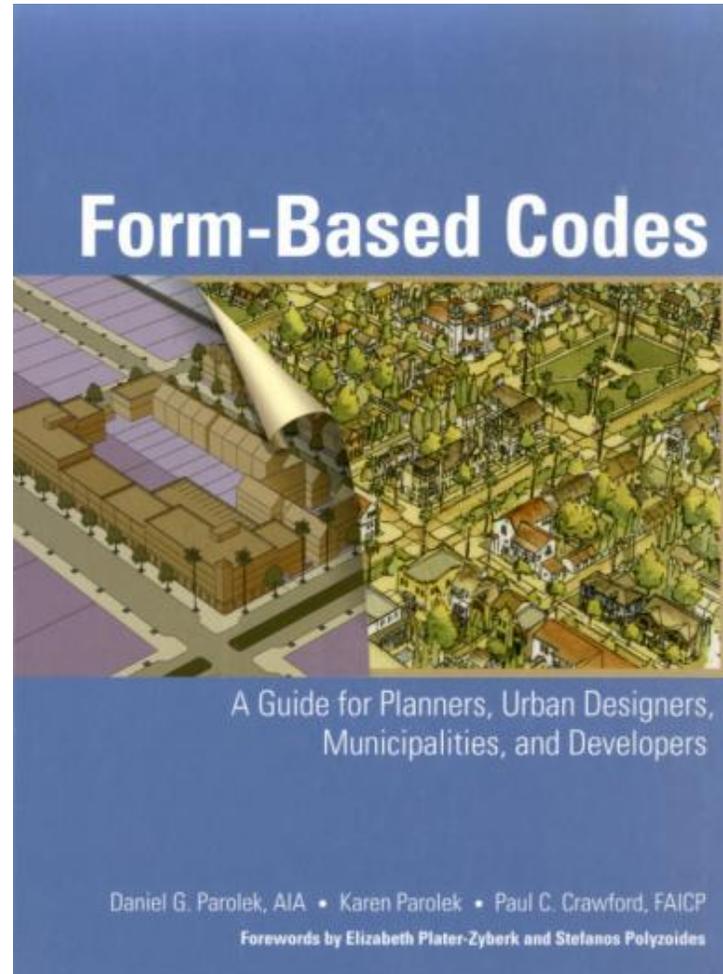
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CSD Zoning

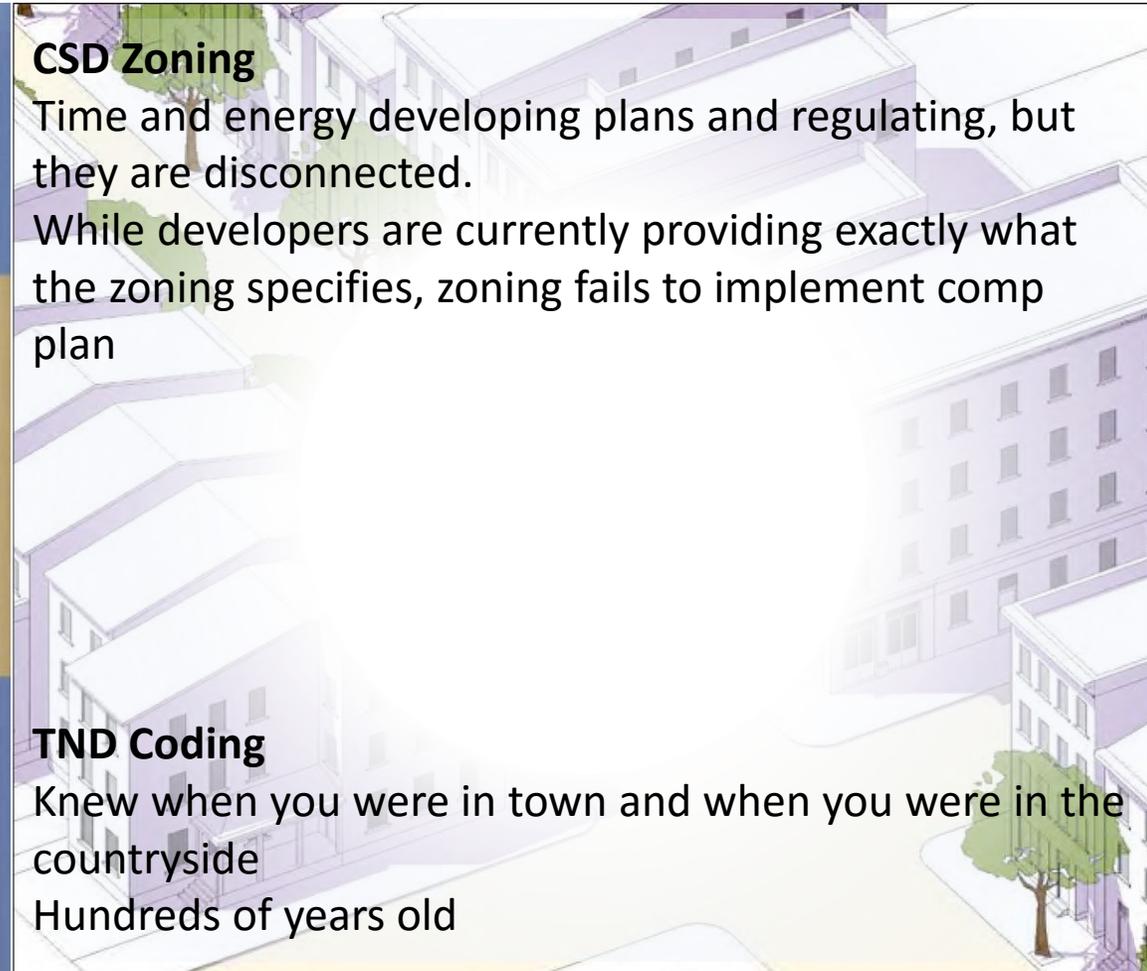
Time and energy developing plans and regulating, but they are disconnected.

While developers are currently providing exactly what the zoning specifies, zoning fails to implement comp plan

TND Coding

Knew when you were in town and when you were in the countryside

Hundreds of years old





FBCI Form-Based Codes Institute



COURSES & WEBINARS

FBC101: Introduction

» Las Vegas, NV

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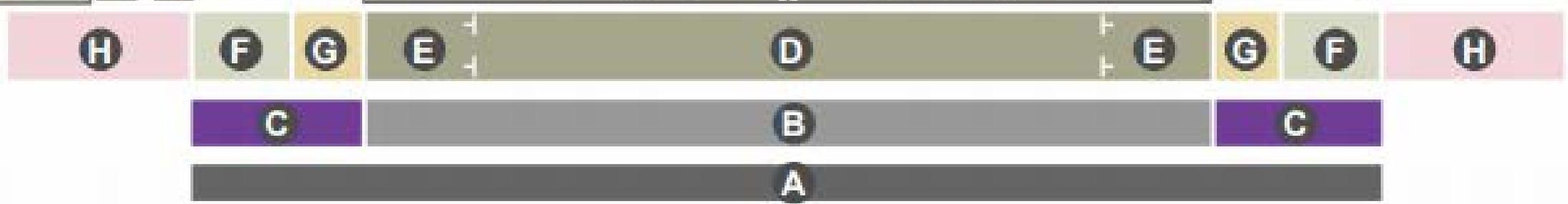
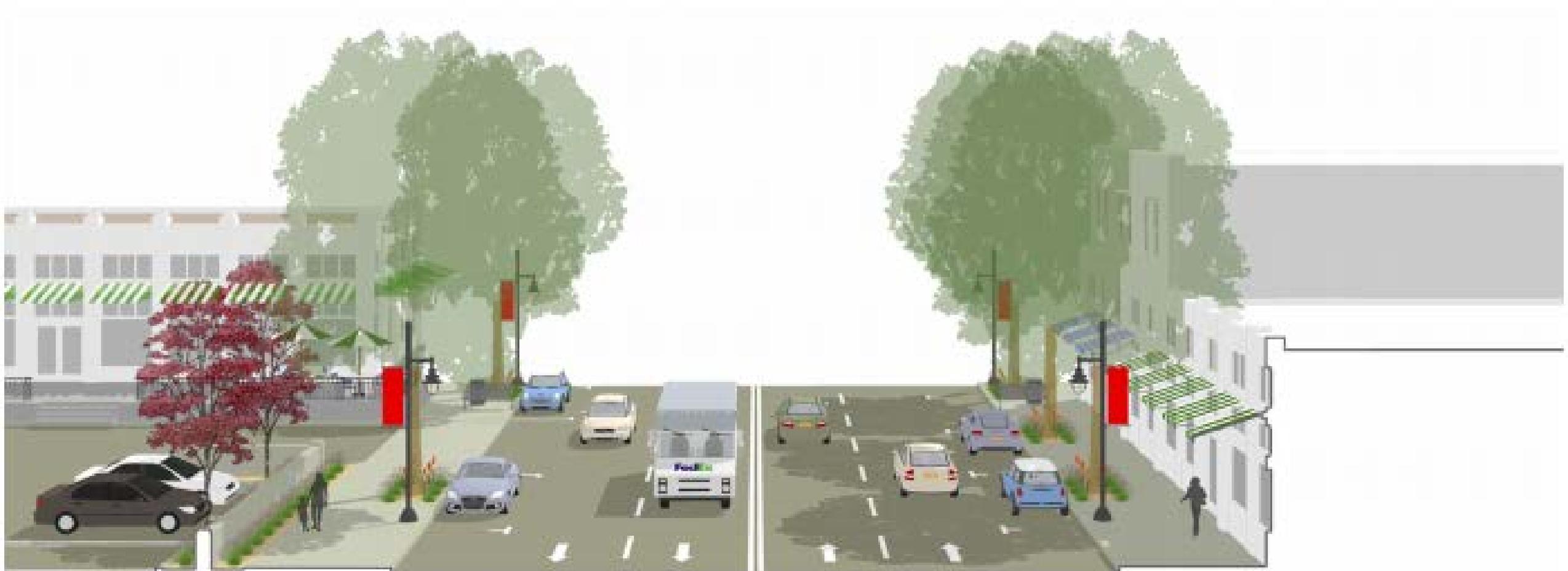
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Form-Based Codes

A Guide for Planners, Urban Designers, Municipalities, and Developers

Daniel G. Parolek, AIA • Karen Parolek • Paul C. Crawford, FAICP
Forewords by Elizabeth Plater-Zyberk and Stefanos Polyzoides





- A) Right-of-Way
- B) Curb-to-Curb
- C) Public Frontage

- D) Vehicular Lanes
- E) Parking Facilities
- F) Sidewalk

- G) Planters
- H) Frontage Types



- A) Right-of-Way
- B) Curb-to-Curb
- C) Public Frontage

- D) Vehicular Lanes
- E) Parking Facilities
- F) Sidewalk

- G) Planters
- H) Frontage Types





Fire rips through student housing construction site, causing \$1 million in damages



By Gloria Knott and Caitlin Schmidt Arizona Daily Star Jun 19, 2018

















By the year 2020, more than 1 million affordable housing units are aging out of their federal affordable compliance period....





Policy Statement



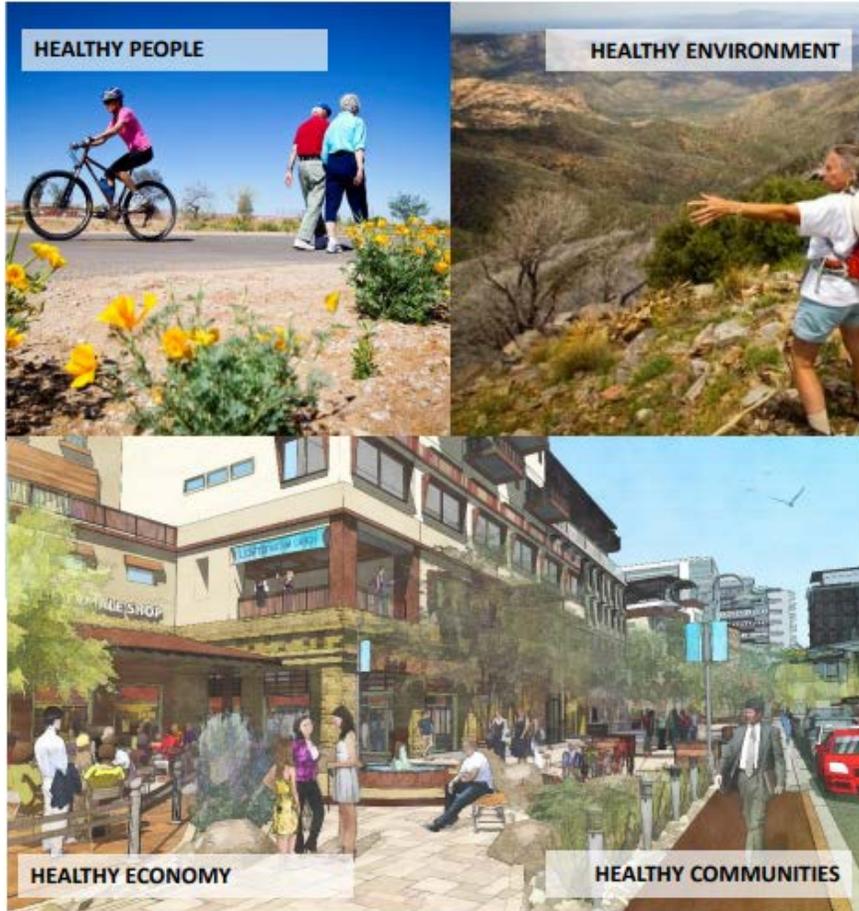


Mixed-Use 'Medium' Density Transportation Corridor



Mixed-Use 'Medium' Density Transportation Corridor



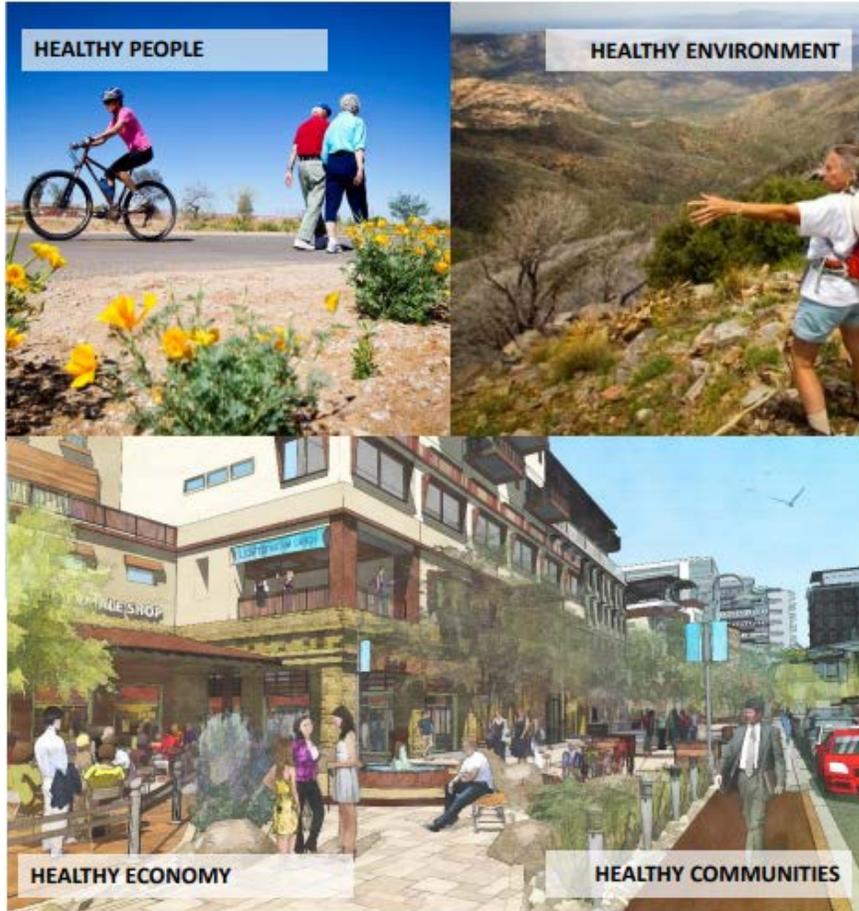


NOVEMBER 13, 2013

PLAN TUCSON

CITY OF TUCSON GENERAL & SUSTAINABILITY PLAN 2013





Chapter 3: Use of Land

3.5 Housing and Community Design Element

Goal 9 – Quality Development

Support quality development at appropriate scales in urban and suburban areas

Policy 1: Support urban development patterns that exhibit the physical design characteristics of pedestrian-oriented, store front-style retail and encourage physical activity, alternative transportation, social interaction and activation of the public realm where appropriate.

Title 22
before

Title 22
after

Fair account of expense
Time interpreting
Legal
Rulings
Guidelines to interpreting
Blackbelt

“Expensive”
1/3 size



Title	St / Prov / Co	Largest Scale	Implementation Strategy	Type	Adopt Year	Acres	Population at time of Adoption	Smart Code Adopted	Smart Code in Process	Transect FBCs	Other FBCs
Flagstaff 2011 Zoning Update	AZ	City	Updated and simplified conventional zoning districts (previous performance zones removed) with FBC for downtown & surrounding historic neighborhoods. Fully integrated hybrid code. Optional and incentivized.	Transect-based	2011	n/a	62,000			1	
Flagstaff: SmartCode Floating Zone	AZ	City	Floating zone for areas designated Mixed Use or TND in Regional Plan	SmartCode	2007	40,896	n/a	1			
Marana	AZ	City	Downtown	Other FBC							1
Mesa	AZ	City	Downtown. Also Mesa Proving Grounds project (now known as Eastmark) in the far eastern portion of Mesa uses and earlier FBC.	Other FBC	2012	3,200	463,552				1
Phoenix: Downtown Phoenix Urban Form Project	AZ	Neighborhood	The Downtown Phoenix Urban Form Project implements the Downtown Strategic Vision	Other FBC	2010	1,500	39,584				1
Phoenix: Reinvent Phoenix	AZ	Neighborhood	Will apply to TODs	SmartCode	2015			1			
Prescott	AZ	City		SC & FBC Discussion	2010	25,676	39,843				1
Sedona	AZ	City	Consultant selected May 2009	SmartCode					1		
Tempe	AZ	Neighborhood	Optional overlay	Other FBC	2005	4,000	100,000				1

Pattern Zone



Pattern zones

Neighborhoods & NIMBYs

Background

Relevant to all these issues

- Lower income households have fewer choices in where they can afford to live and how they can afford to travel...
- More people are living in rental housing than ever before...
- Vacancy rates have declined...
- NIMBYs have used increased traffic concerns to constrain building...
- And most developers cannot build new affordable housing stock without subsidies to close the gap between construction costs and tenants' affordable rents.

Want to help poor kids? Help their parents move to a better neighborhood.

By Matthew Yglesias | @mattyglesias | matt@vox.com | May 4, 2015, 3:00pm EDT

f   SHARE

But how will you ever get the wealthy neighborhoods to accept new development? Particularly anything besides single family detached (which is expensive)?

So far, our CSD zoning has failed to accomplish integrative development



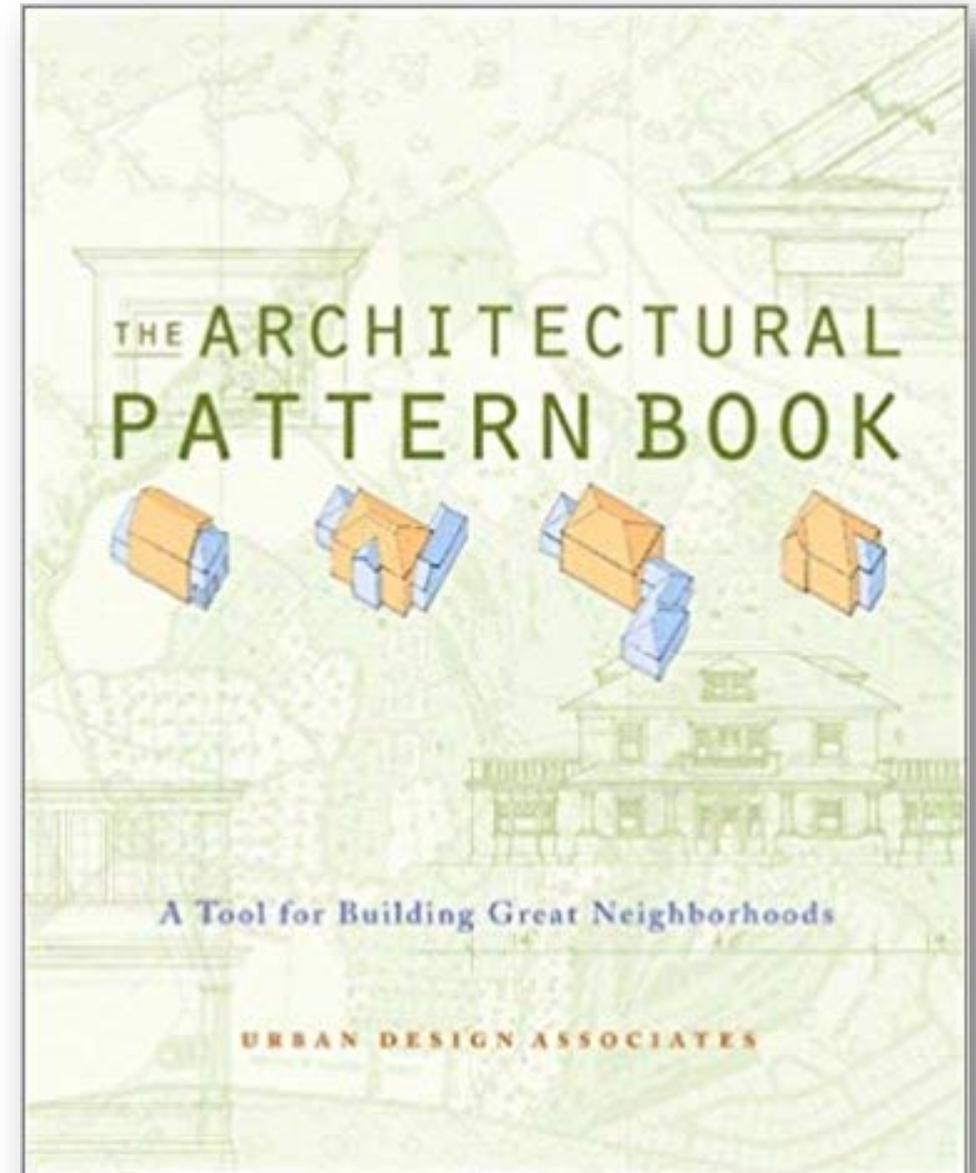
Pattern zones

Neighborhoods & NIMBYs

Background **Relevant to all these issues**

- Lower income households have fewer choices in where they can afford to live and how they can afford to travel...
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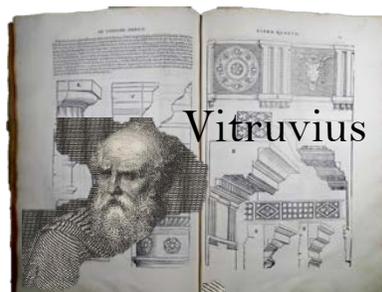
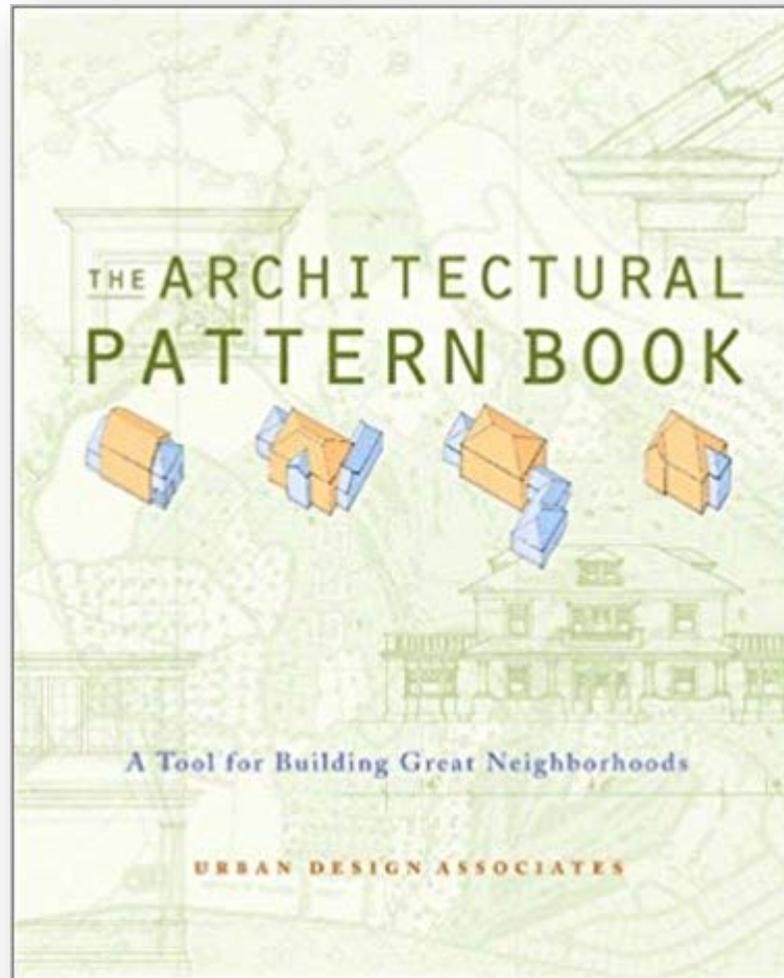
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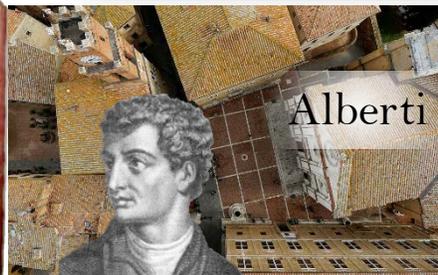


Pattern zones

Neighborhoods & NIMBYs



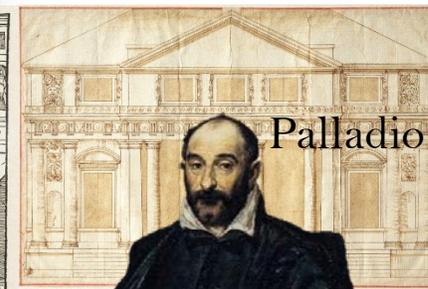
Vitruvius



Alberti



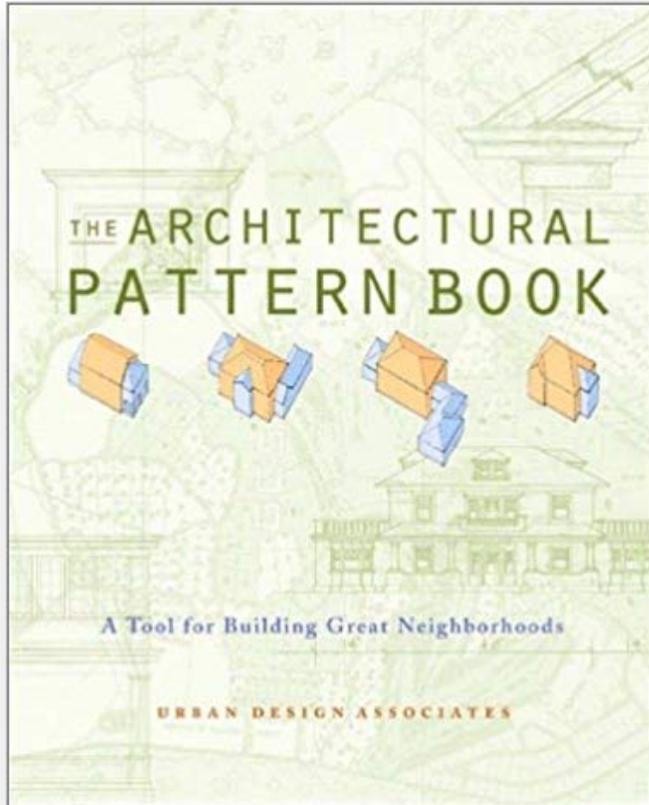
Serlio



Palladio

Pattern zones

Neighborhoods & NIMBYs



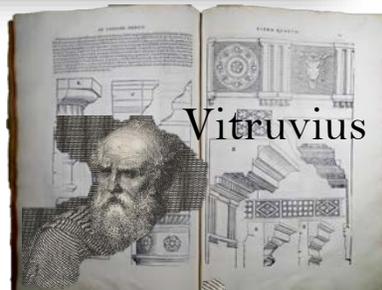
Treatises present a theory of building or building design. Many of these describe and illustrate the elements of classical architecture which, of all the approaches to architectural style, seems to be the most susceptible to objective and mathematical description.

Precedent Books provide plans, elevations, and details of historic buildings, intended to be used as models for projects that follow.

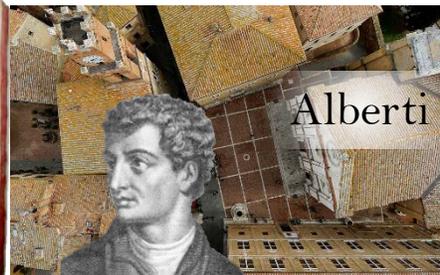
Plan books provide plans, elevations, and three-dimensional representations of exemplary buildings that the authors encourage readers to emulate or use directly.

Construction Manuals provide practical information on how to design and construct buildings

Catalogs describe standard parts and illustrate how to use them in a number of designs. Typically, catalogs were created to sell building materials but, in some cases, companies like Sears & Roebuck sold the whole house in a kit.



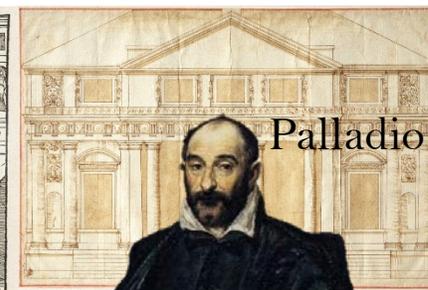
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Alberti



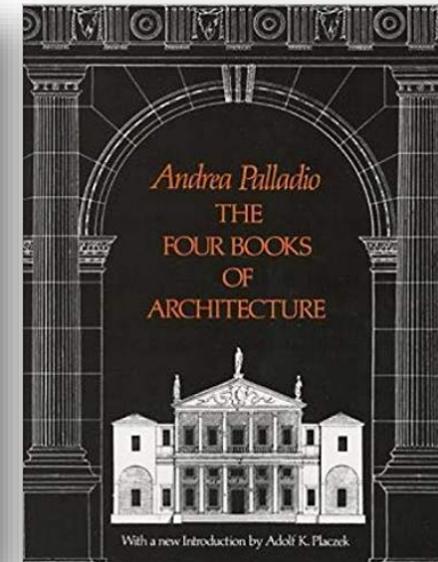
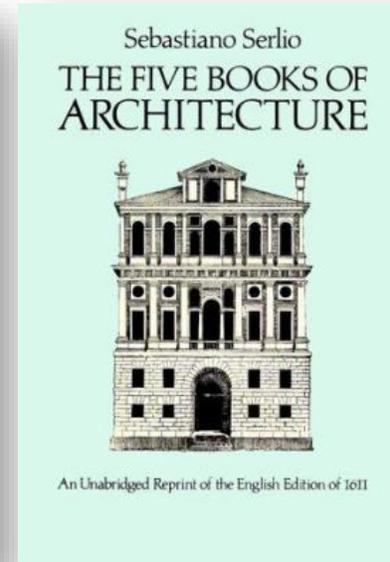
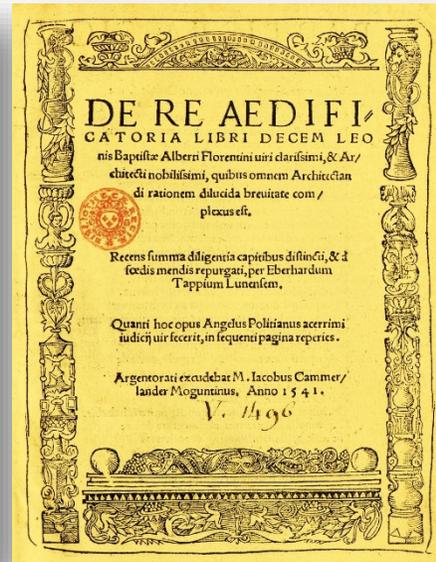
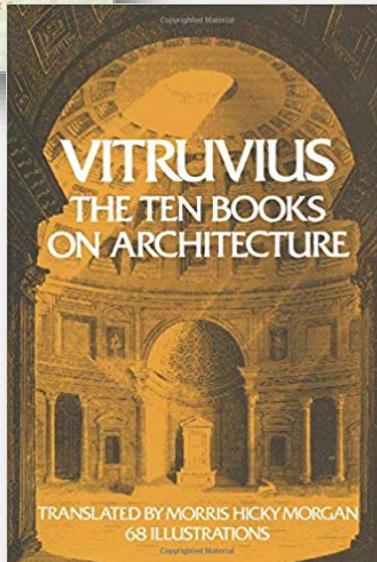
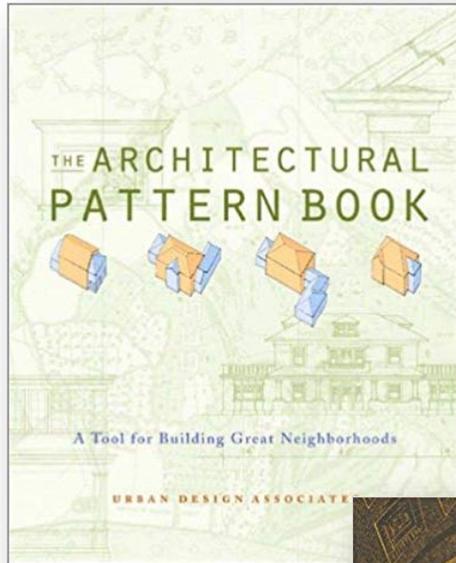
Serlio



Palladio

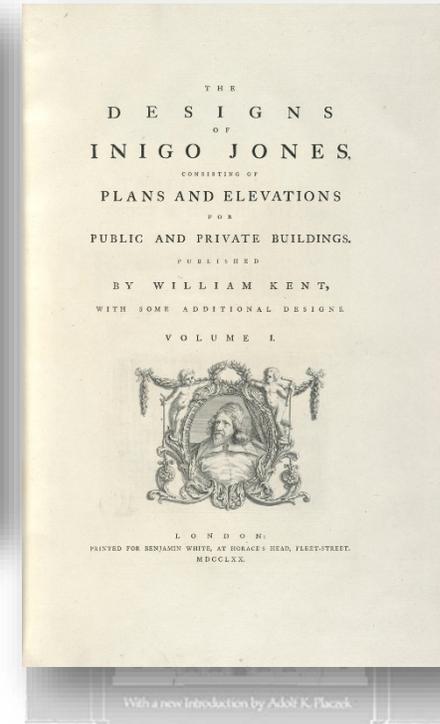
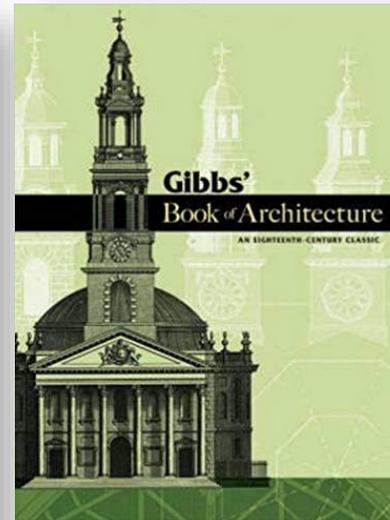
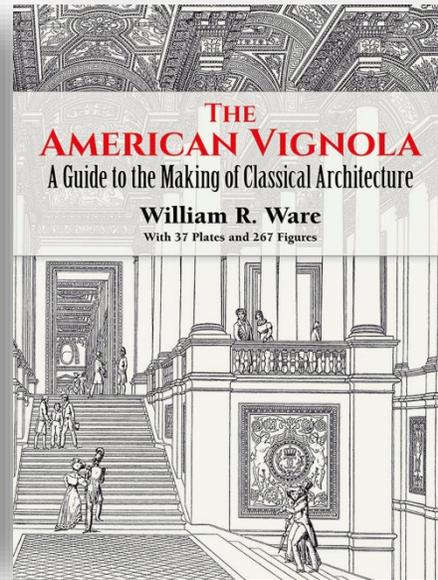
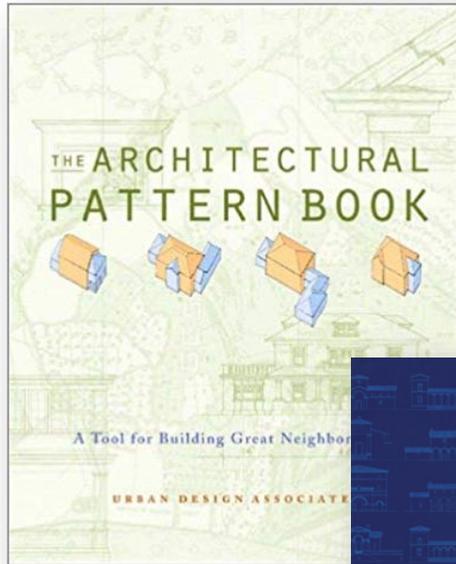
Pattern zones

Neighborhoods & NIMBYs



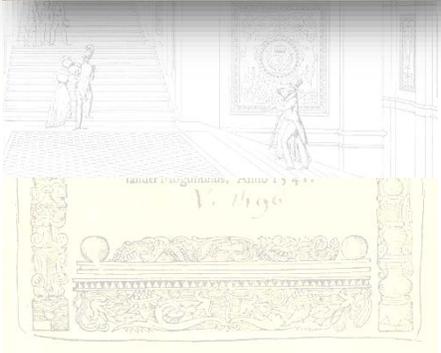
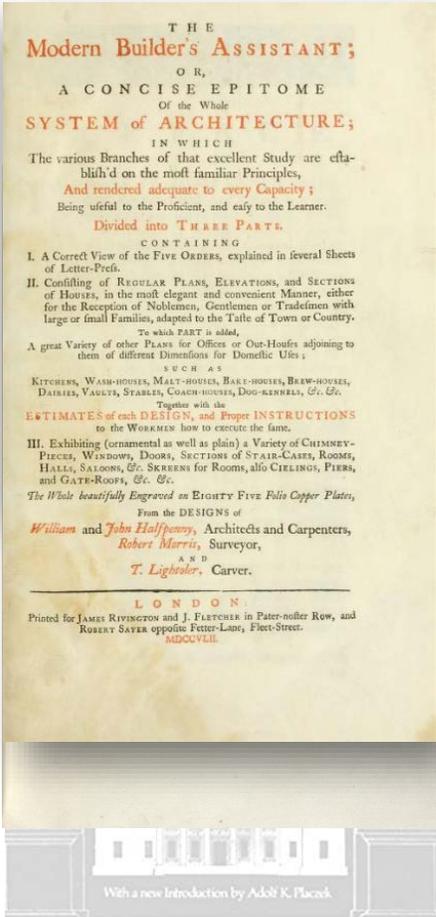
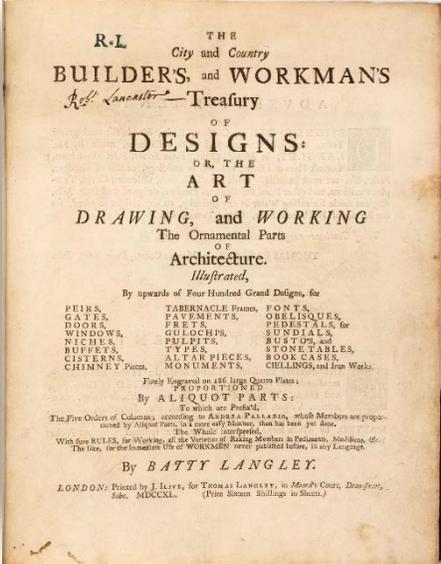
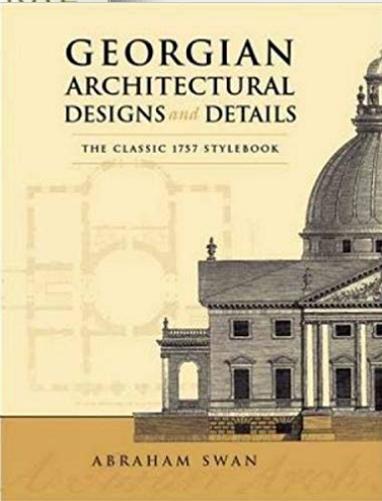
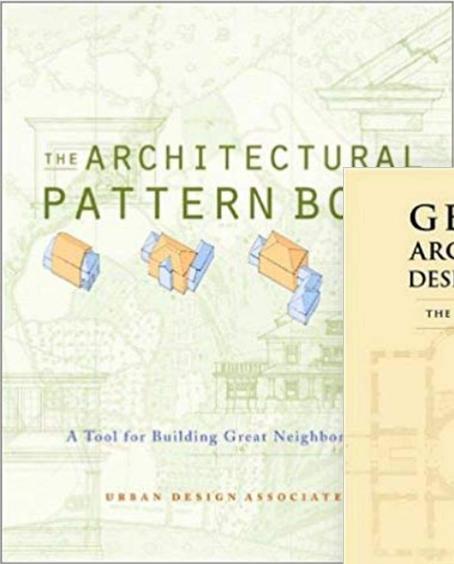
Pattern zones

Neighborhoods & NIMBYs



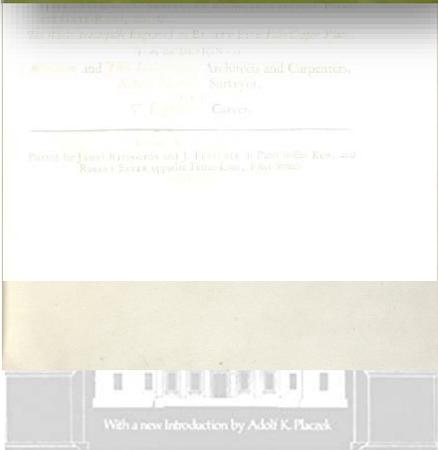
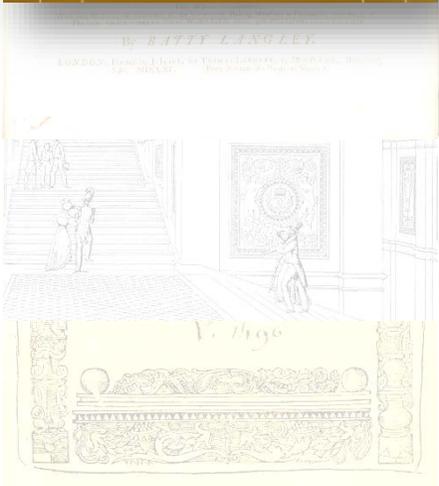
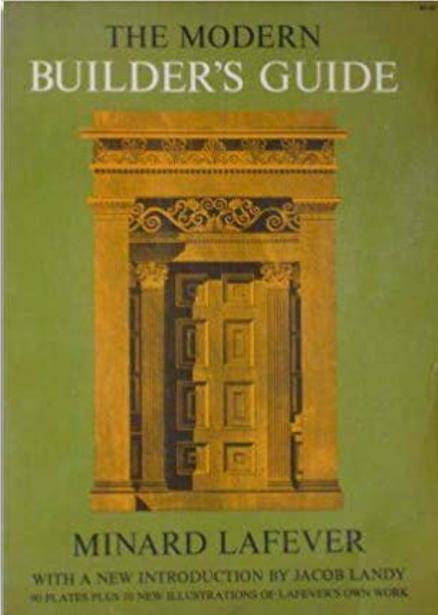
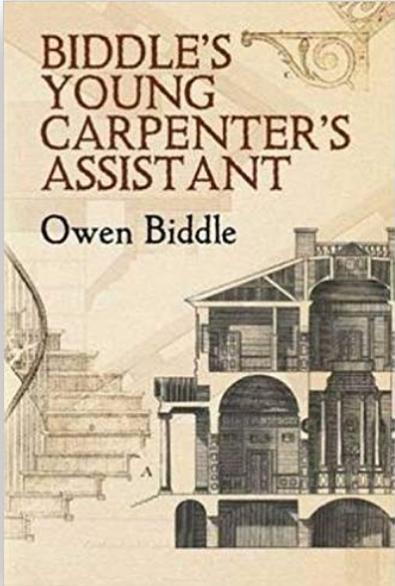
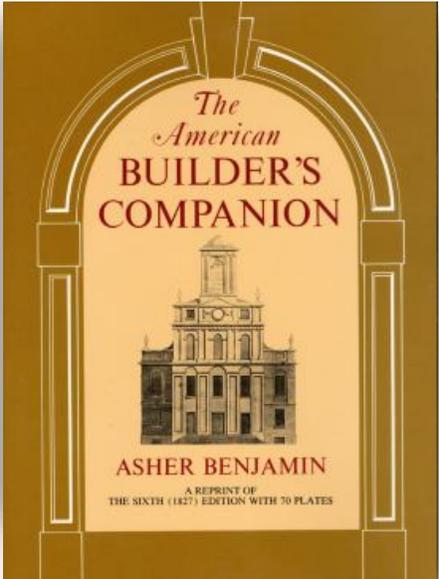
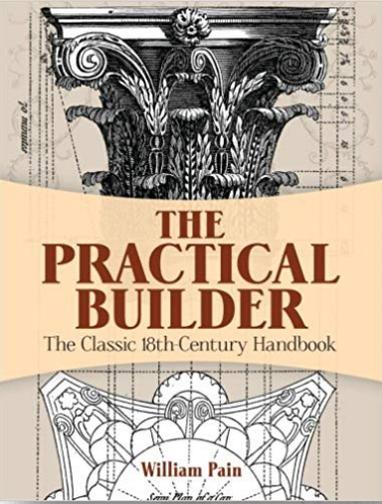
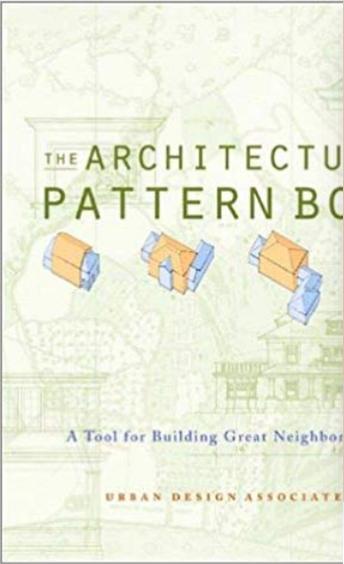
Pattern zones

Neighborhoods & NIMBYs



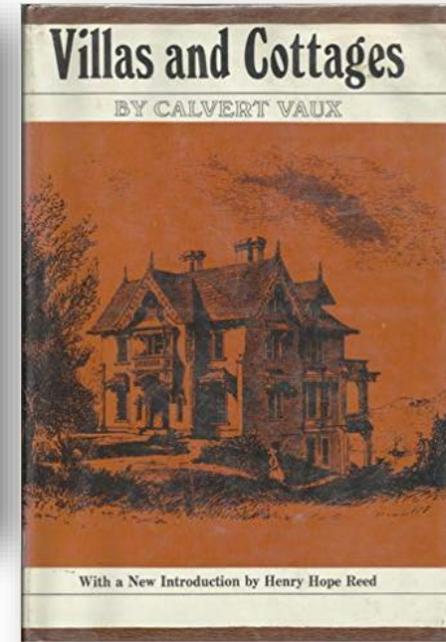
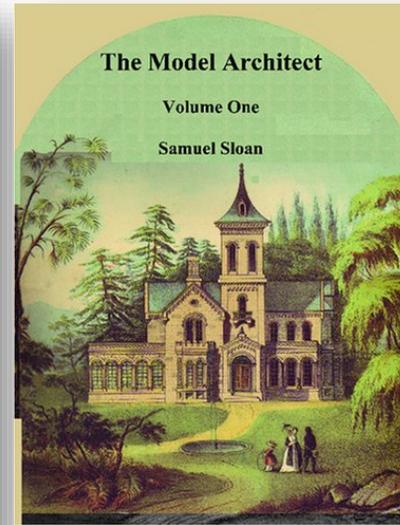
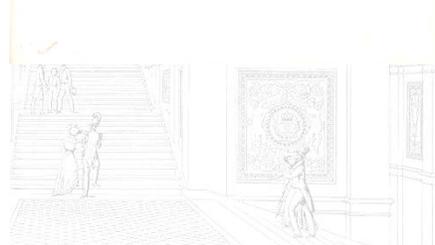
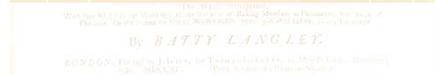
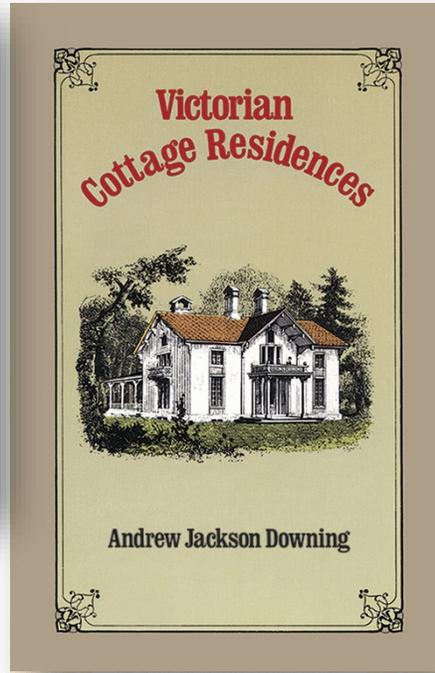
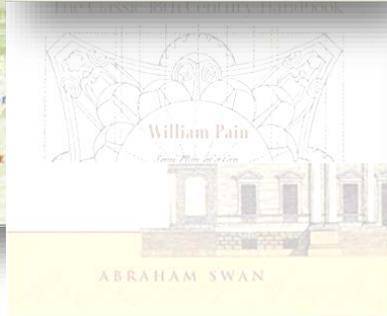
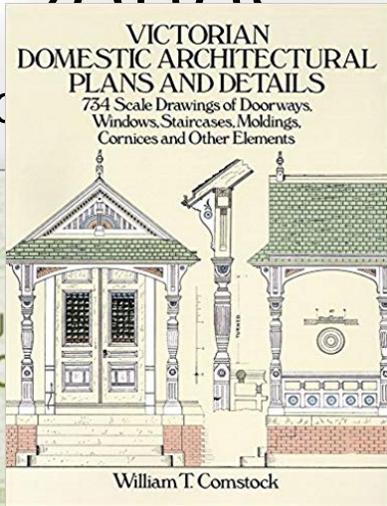
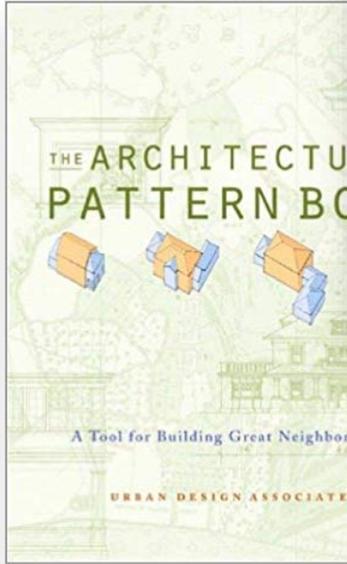
Pattern zones

Neighborhoods & NIMBYs



Pattern zones

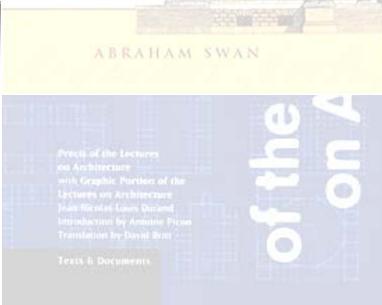
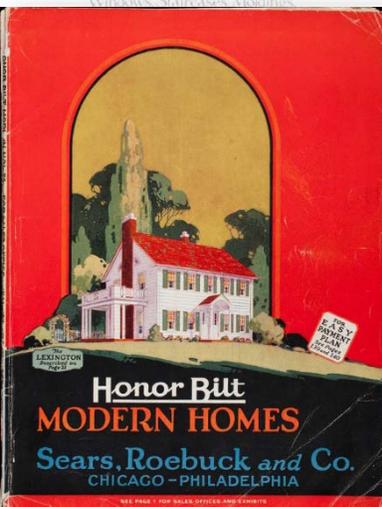
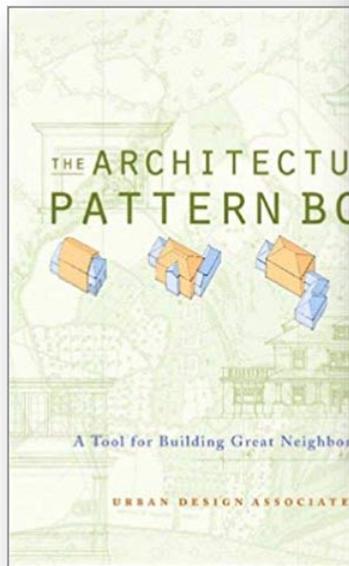
Neighborhood



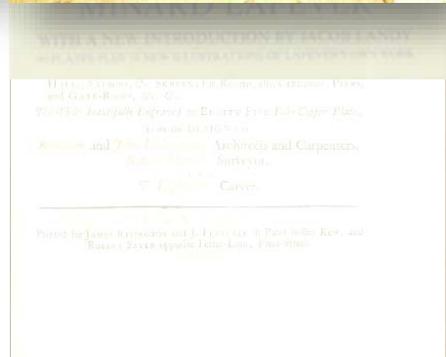
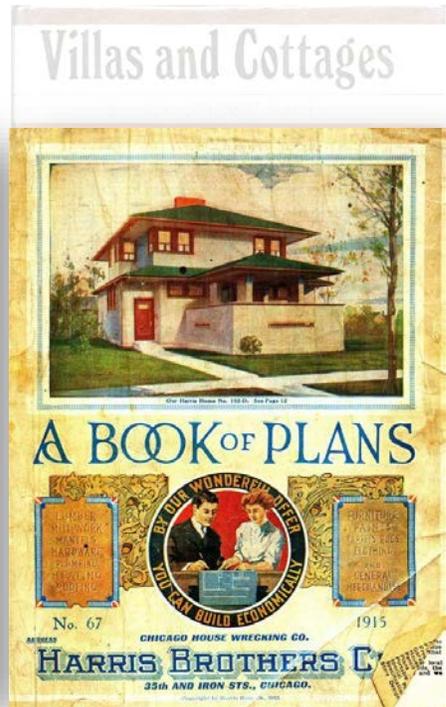
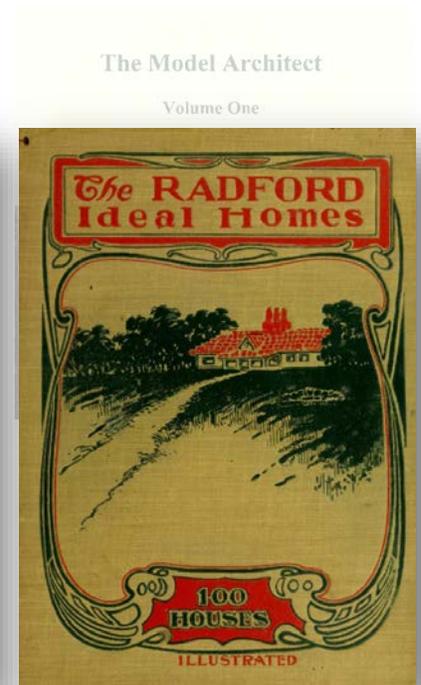
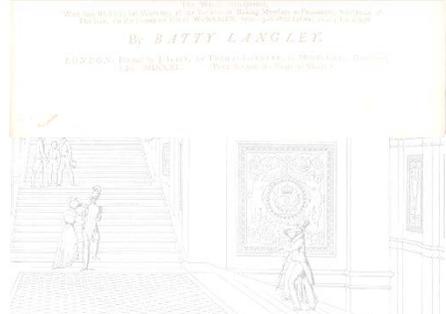
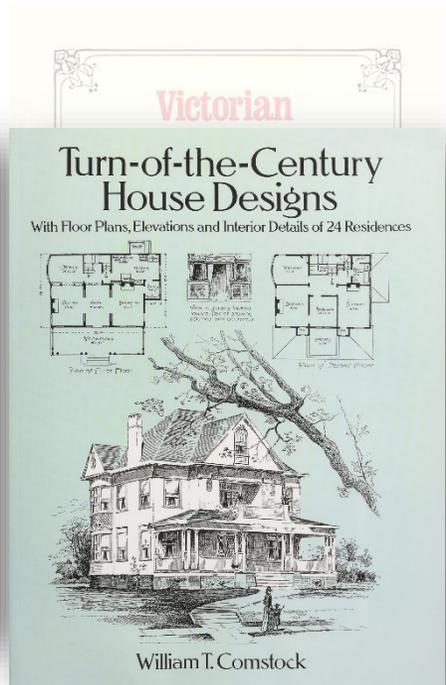


Pattern zones

Neighborhood



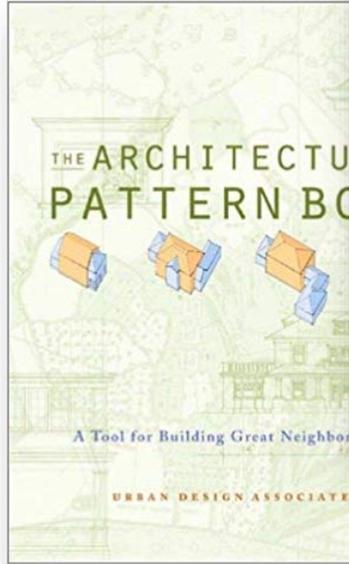
VICTORIAN DOMESTIC ARCHITECTURAL PLANS AND DETAILS
75-1 Scale Drawings of Doorways, Windows, Staircases, Moldings



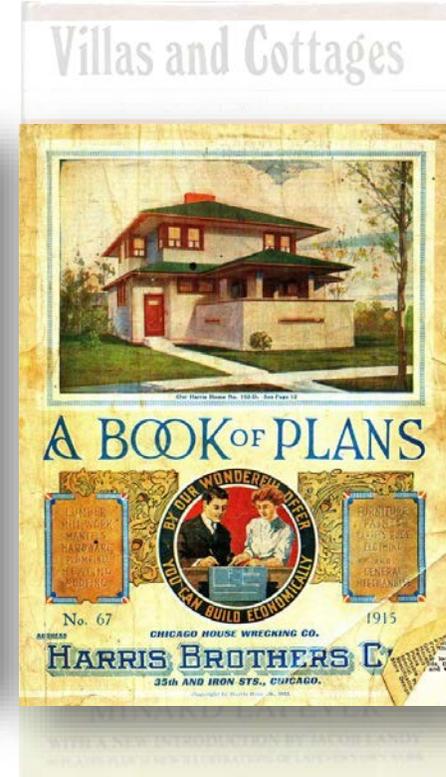
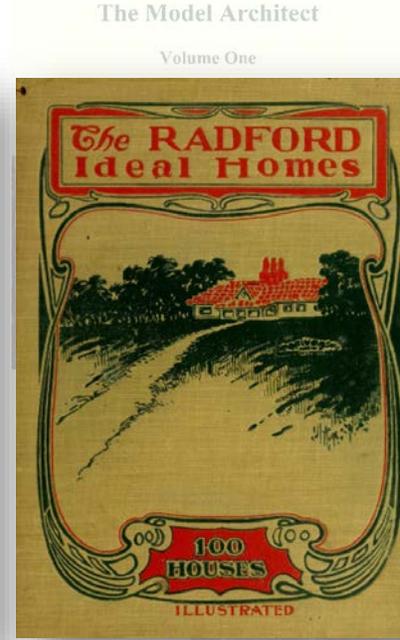
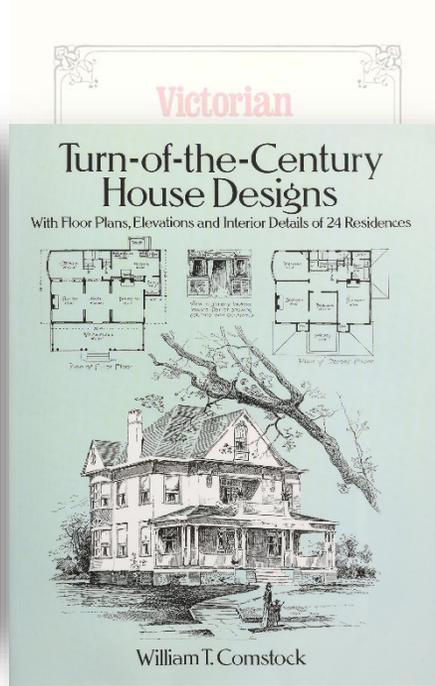
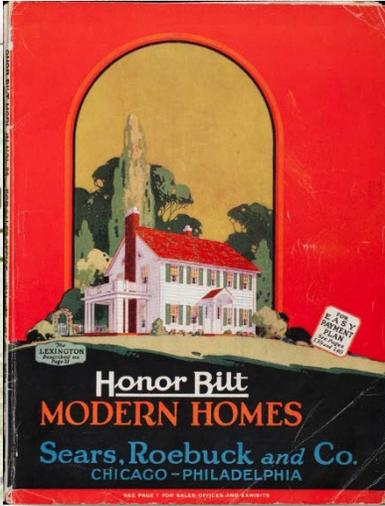


Pattern zones

Neighborhood

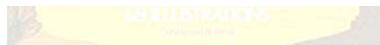


VICTORIAN DOMESTIC ARCHITECTURAL PLANS AND DETAILS
754 Scale Drawings of Doorways, Windows, Staircases, Moldings



The History of Sears Predicts Nearly Everything Amazon Is Doing

One hundred years ago, a retail giant that shipped millions of products by mail moved swiftly into the brick-and-mortar business, changing it forever. Is that happening again?



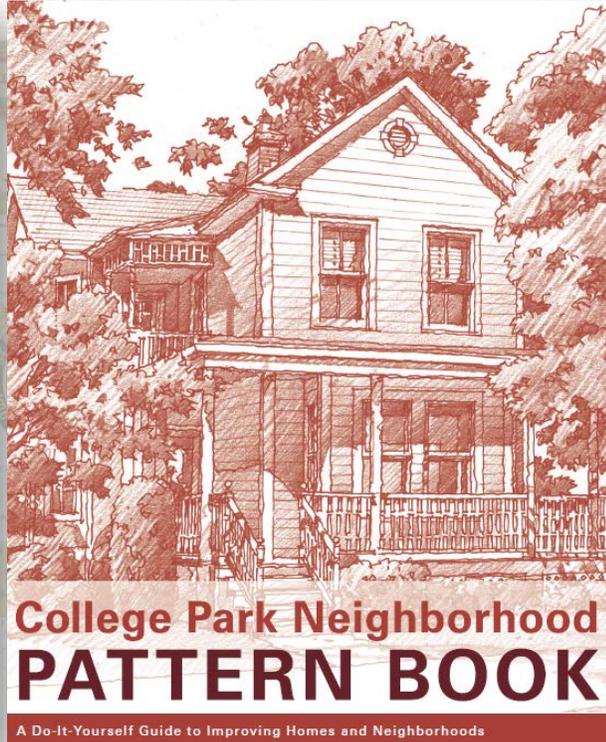
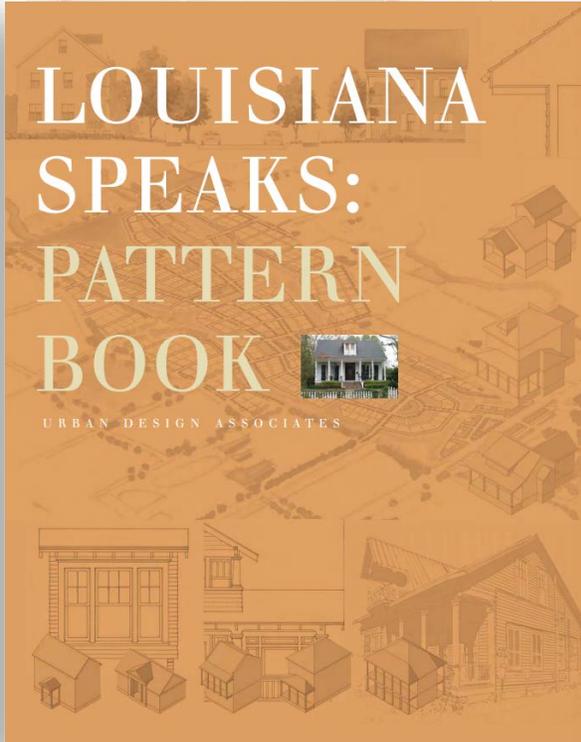
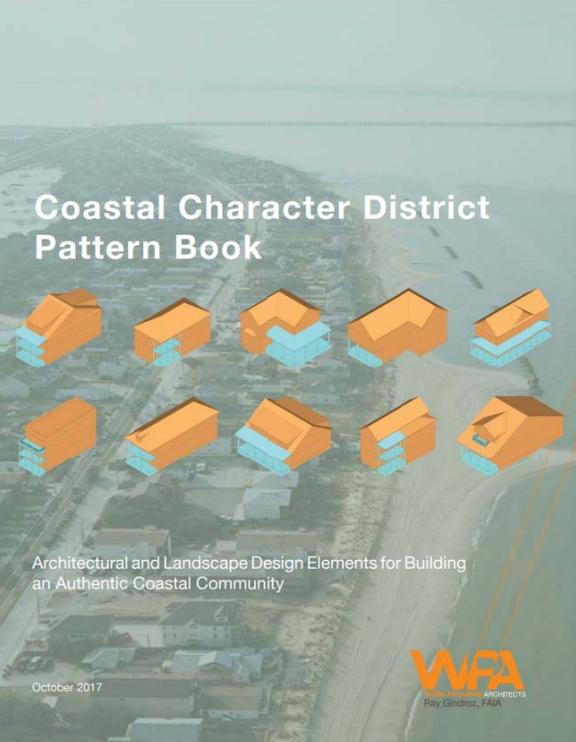
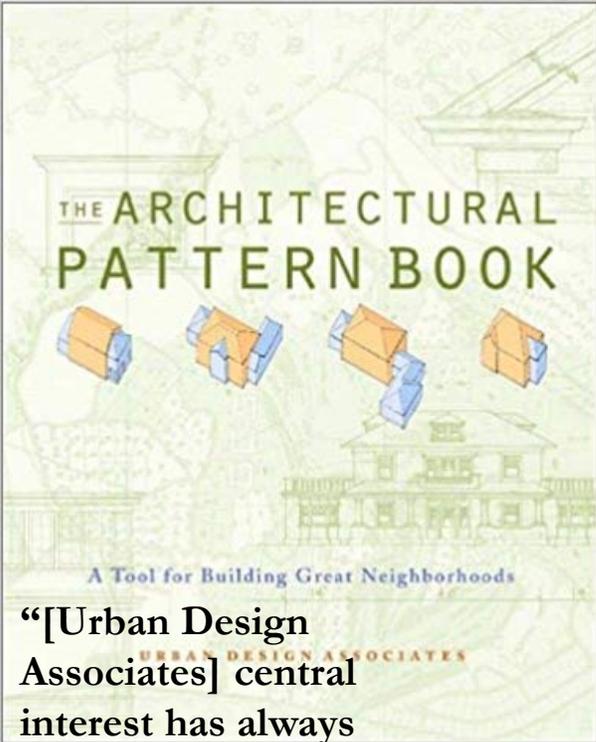
Pattern zones

DOMESTIC ARCHITECTURAL
PLANS AND DETAILS
754 Scale Drawings of Doorways,
Windows, Staircases, Moldings

Victorian
Turn-of-the-Century

The Model Architect
Volume One

Villas and Cottages



“[Urban Design Associates] central interest has always been the design of the public realm and environments that support the creation of social capital.”

Texts & Documents
TRANSLATED BY MORIS HOYME AN
AND ILLUSTRATED

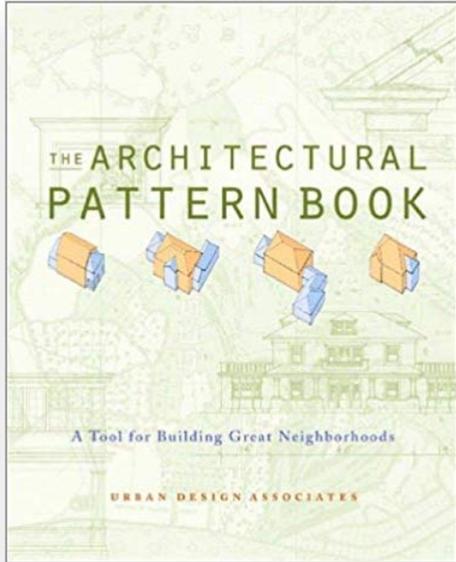
V. Hugo
An Unabridged Reproduction of the English Edition

An Unabridged Reproduction of the English Edition

With a new Introduction by Adolf K. Placzek

Pattern zones

Neighborhoods & NIMBYs



“[Urban Design Associates] central interest has always been the design of the public realm and environments that support the creation of social capital.”

X types

fast tracking small scale development

Saves time and money, savings passed onto renter

Means more development

Design is preapproved by the public, “By Right”

Simple vs custom, simple = affordable



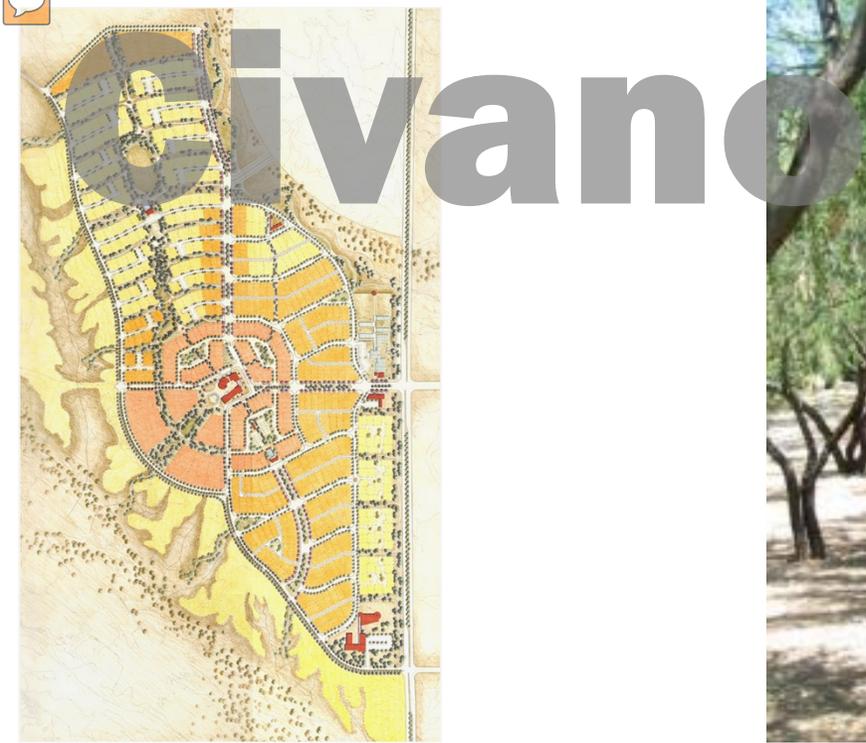


Tucson/Pima Form-Based Precedents



Mercado







Importer

Culture

Exporter



Phoenix



Tucson



Santa Fe



Charleston

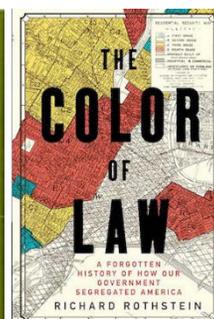
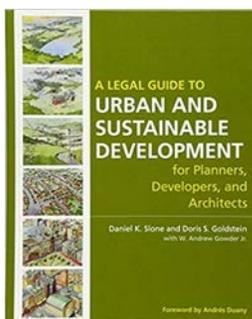
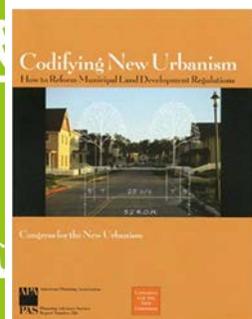
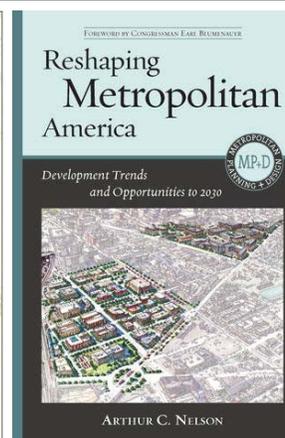
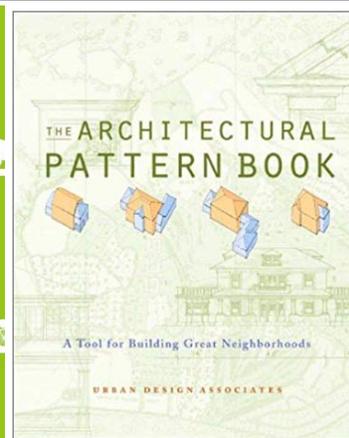
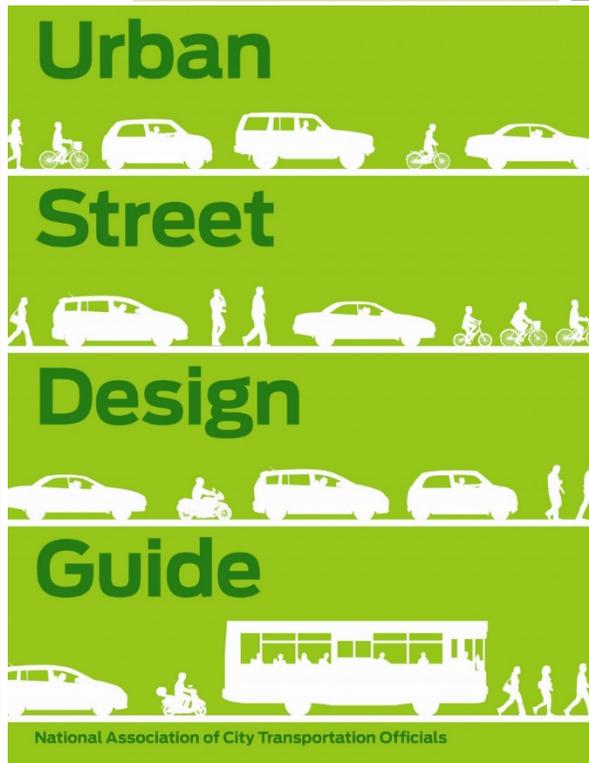
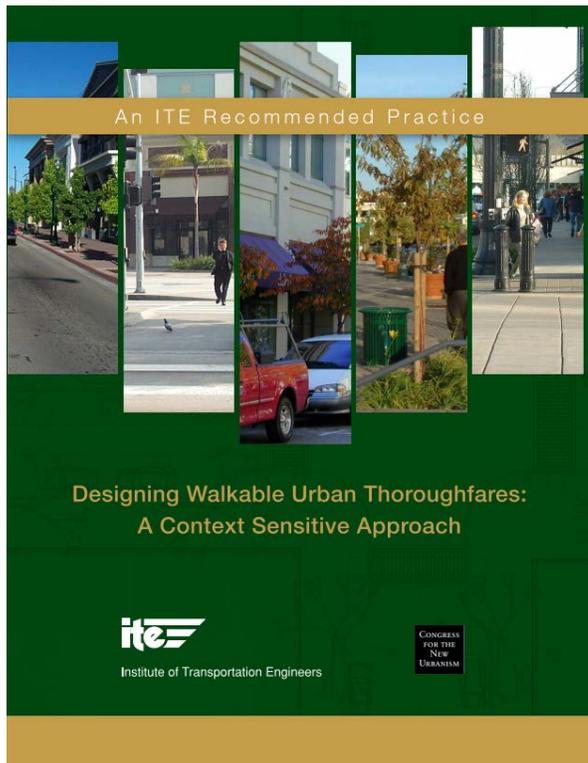
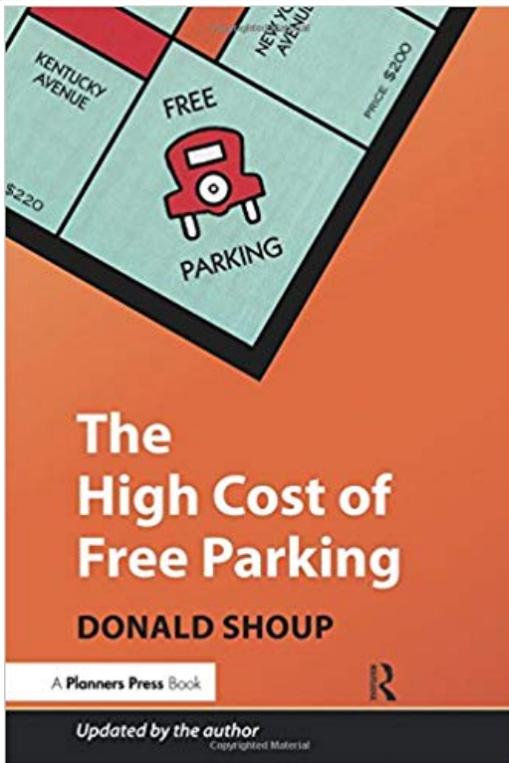
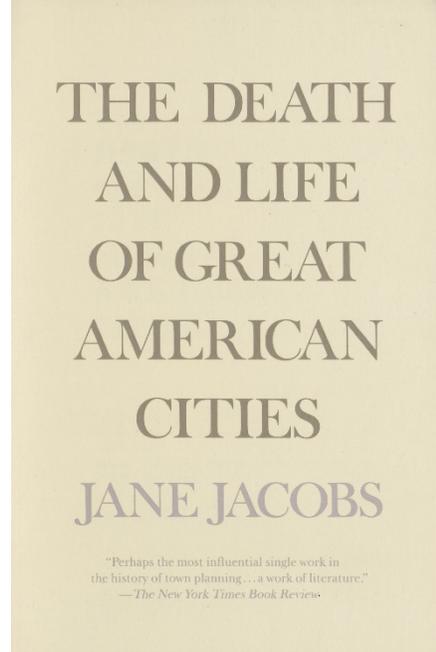
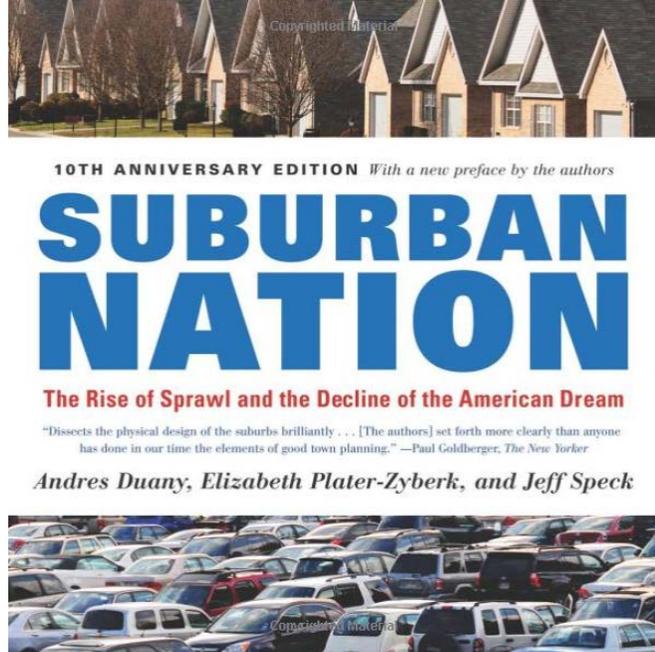
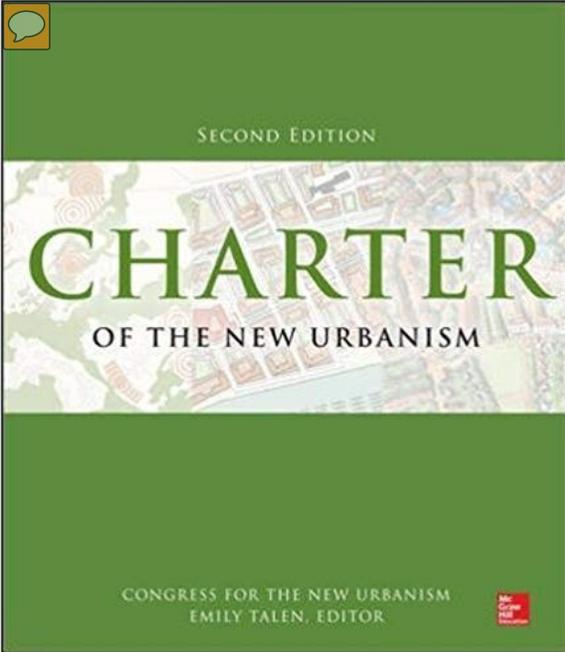
Weak

Identity

Strong

#missingmiddleton

#barrioanita





Mandate “social engineering,” as described by Ben Carson, to the benefit of minority populations, with new mortgage products.

Hold Impact Fee BB featuring Kristina Currans.

REVIEW existing methods for developing our impact fees (ITE Trip Generation Manual) and **DEVELOP** our own.

Inventory our parking supply. Reform and update parking standards. Stop subsidizing parking, introduce to the market.

Create and adopt a Pattern Zone.

Update ADU code.

Adopt SmartCode (Transect model/TND), and modules, including the Light Imprint Module.

Write and adopt a Form-Based Code to implement Pima Prospers and Plan Tucson.

Adopt ITE’s Designing Walkable Urban Thoroughfares: A Context Sensitive Approach.

Adopt National Association of City Transportation Officials’ (NACTO) Urban Street Design Guide.

Host Brownbag with Phoenix Tree & Shade leadership; Share GILID Manual with City of Phoenix and Phoenix Tree & Shade leadership