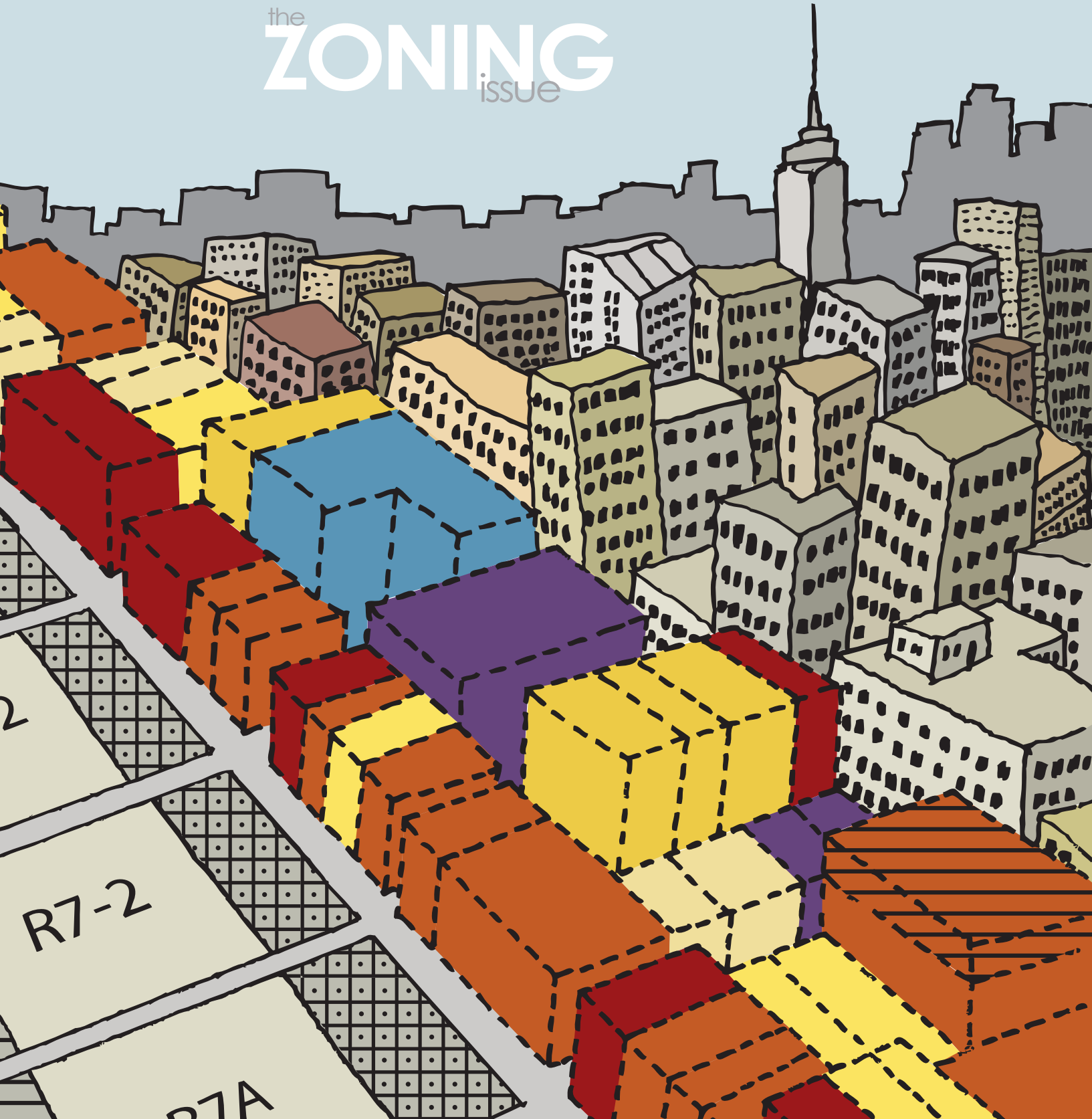
URBAN

Columbia University's Urban Planning Magazine

Fall 2011

the ZONING issue



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Graphic by Alex Wallach
Cover Graphic by Jeffrey Yuen

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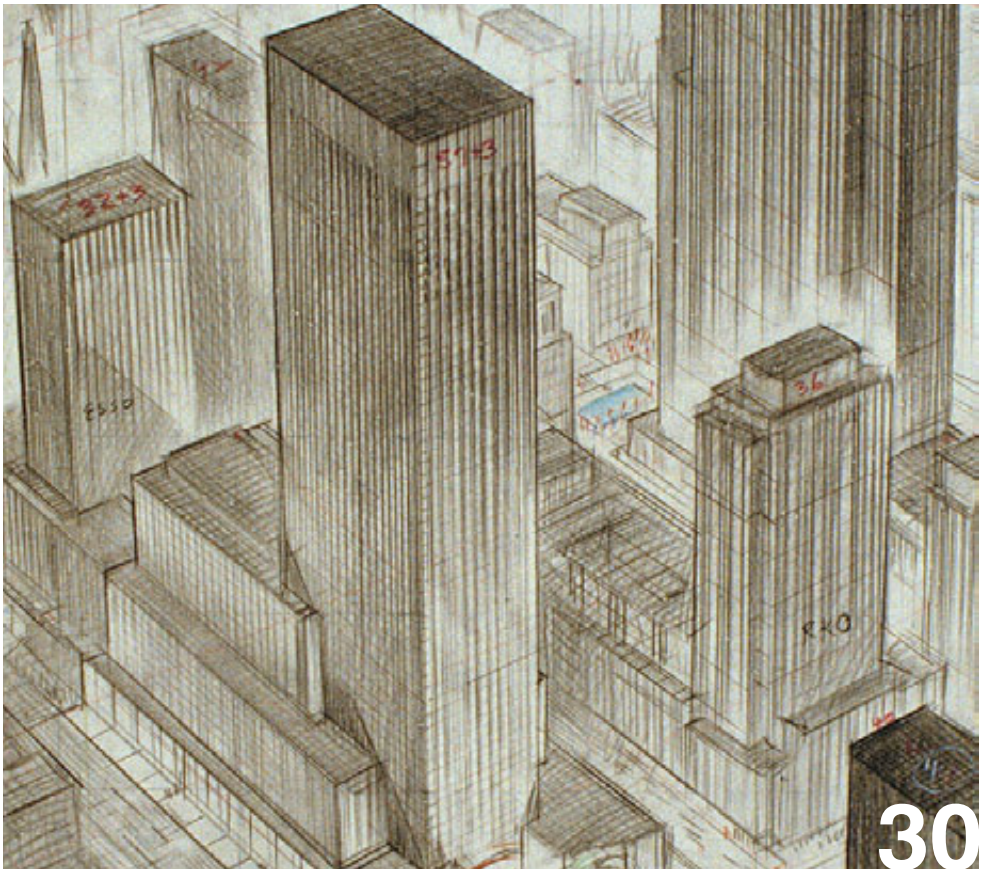

URBAN

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LETTER FROM THE EDITORS

You may have heard that the world is officially urban – 50% and growing, says the UN. Managing the development pressures that accompany this growth will continue to be a central challenge in the coming decades. As it stands today, zoning is the one comprehensive framework that attempts to organize the complexities of the urbanization process.

However, zoning itself has always been a contested method for influencing cities. Some critics view zoning as an infringement upon individual freedoms, while others case it off as a perpetuator of social stratification. At its core, zoning calls into question the doctrine of absolute land rights and nominally advocated for the greater public good. Yet history has shown that defining the 'greater public good' through zoning is extremely subjective and can produce both progressive and regressive outcomes.

In this issue, URBAN uses the 50th anniversary of New York City's 1961 Zoning resolution to investigate the role of zoning today. While the same goals of zoning have largely remained the same, the codes have undergone significant transformations over the past century. Now is an appropriate time to pause, reflect and critically assess the performance and potential of zoning to address our most pressing urban problems. Like encouraging diversity, equity and density without stifling innovation, growth or undermining personal rights. This issue features a special section tackling these and other queries related to zoning in the 21st century ranging from the micro-level – allowing solar panels on roofs – to the macro-level – incentivizing higher density developments – to the philosophical – questioning the continued existence of zoning itself.

This edition also places zoning within a context of other events taking place today like the Occupy Wall Street protests, transportation infrastructure investments in China and the potential smoking ban on Columbia campus. These issues are all subsets of larger planning questions: How will the urban experience be defined in the future, and what is the role of planning in framing this definition? This issue of URBAN tries to push the discussion forward by reflecting on the methods cities can use to attain sustainable growth.

Contested Ground

Zuccotti Park's role in Occupy Wall Street

Eric Goldwyn *PhD UP 2012*

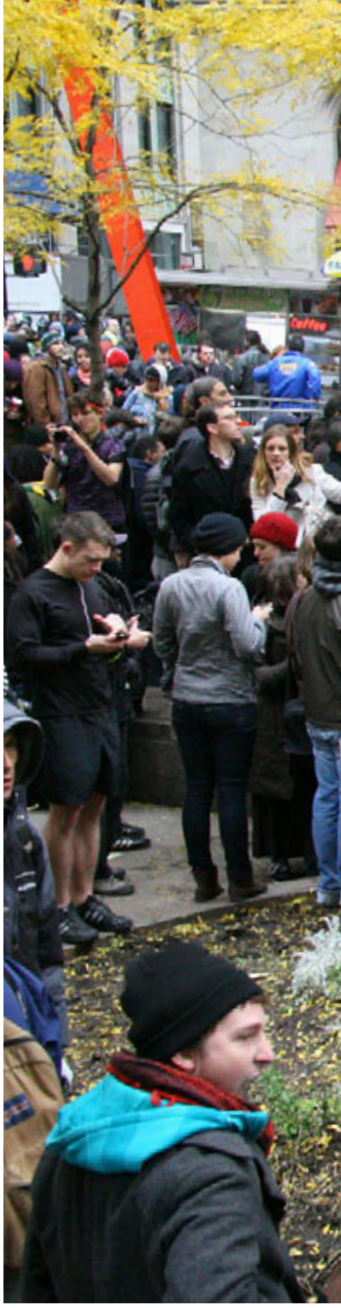
From the 33,000 square foot privately-owned public space in Lower Manhattan, Occupy Wall Streeters turned what seemed like a stunt on September 17th into a worldwide phenomenon that temporarily flummoxed New York City officials. Protesters refitted the grassless park with a kitchen, places to sleep, a lending library, areas for meetings, cell phone and laptop charging stations, a space for vendors and the weekly farmers market. Their unwavering commitment to organization, planning, and park maintenance attracted new recruits, spectators, the media, celebrities, and most important, denied the City from invoking its "police powers" to maintain public health and order for almost two months.

Occupy Wall Street gained much of its momentum because the rules that govern parks and City-owned property do not apply to privately-owned public spaces. The curfews and restrictions against large gatherings in public parks, which successfully stymied protests in Central Park against the 2004 Republican National Convention, had no bearing on the 24/7 occupation of Zuccotti Park. In early October, the park's owner, Brookfield Office Properties, enacted bans against sleeping bags and tarps, the sustenance of continuous long-term protests, but has been unable to enforce the new rules. It wasn't until early in the morning on November 15 that the City invoked health and safety concerns as a pretense for forcibly evicting protestors and permanently banning all camping equipment from the park.

Zuccotti Park is the creation of a zoning program incorporated into the 1961 Zoning Resolution. According to Jerold Kayden, a professor and co-chair of the Department of Urban Planning and Design at Harvard University and the author of Privately Owned Public Space: The New York Experience, the program encourages developers to create publicly accessible spaces in exchange for "floor area ratio" bonuses that permit them to build more square footage than the zoning code allows, and in turn, collect additional rent. Developers eager to squeeze more rent out of their office towers can build plazas, parks, galleries, and arcades that satisfied the program's loose guidelines.

There are more than 500 privately-owned public spaces that provide New Yorkers with access to open space. Many of these spaces are unremarkable entryways to office buildings. Zuccotti Park, on the other hand, provides genuine relief from the surrounding skyscrapers. Situated on a lot across the street from One Liberty Plaza and 140 Broadway, and kitty-corner from the iconic Equitable Building, whose height and bulk served as a justification for the 1916 zoning resolution, Zuccotti adequately served the needs of those looking for a spot to relax or eat lunch.

Occupy Wall Streeters capitalized on the park's separation from the hustle and bustle of busy office workers and organized the space so that all users—protestors, Greenmarket vendors, private food carts, and lunchtime tenants—could carry out their business freely. While the protestors have been banned from camping, they remain present in the park 24/7 – a reminder of the continued uncertainty surrounding the regulation of privately-owned public spaces.

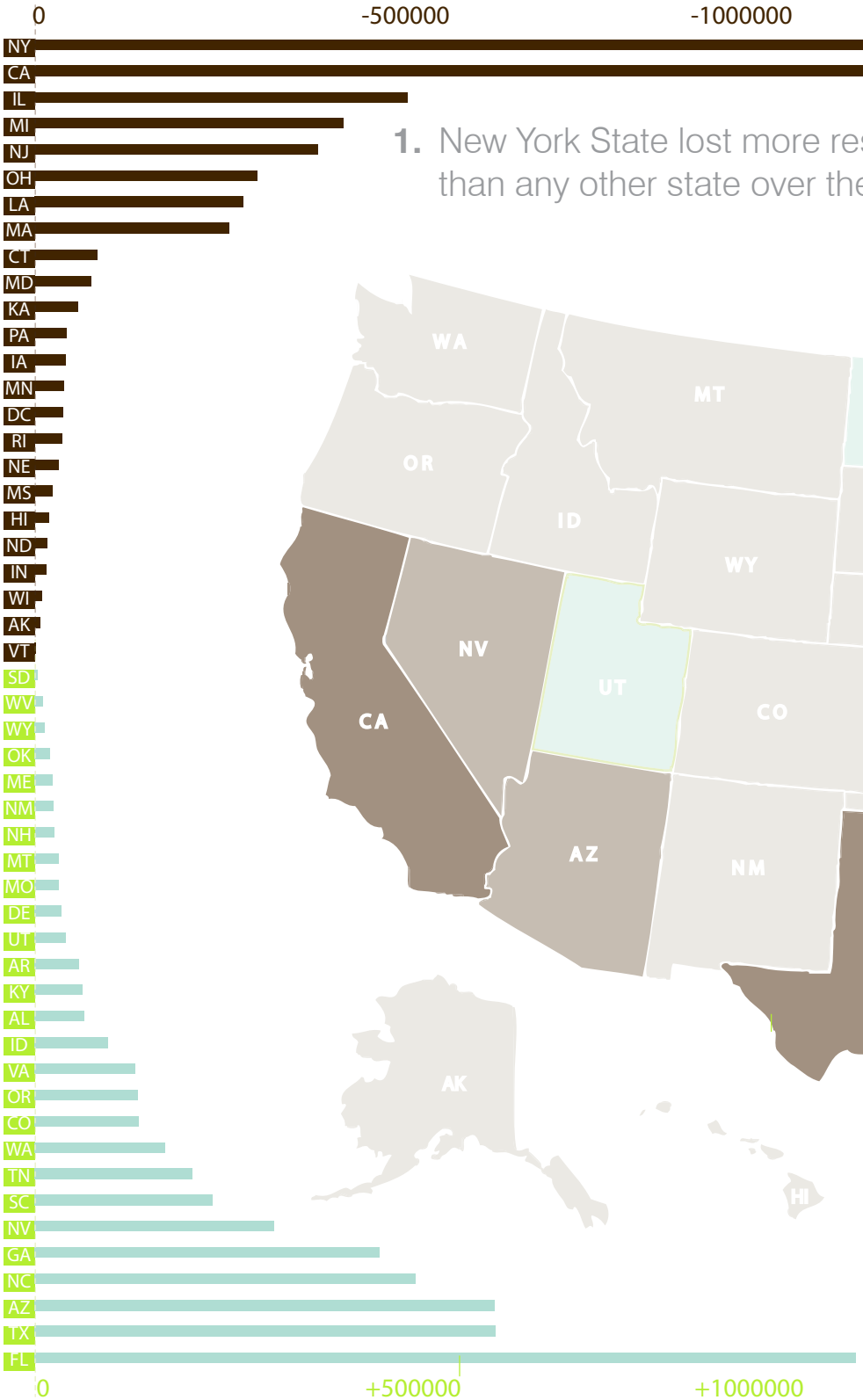


Despite their temporary eviction on November 15th, Occupy Wall Street protestors reoccupied Zuccotti Park the following day.

A tale of two New Yorkers

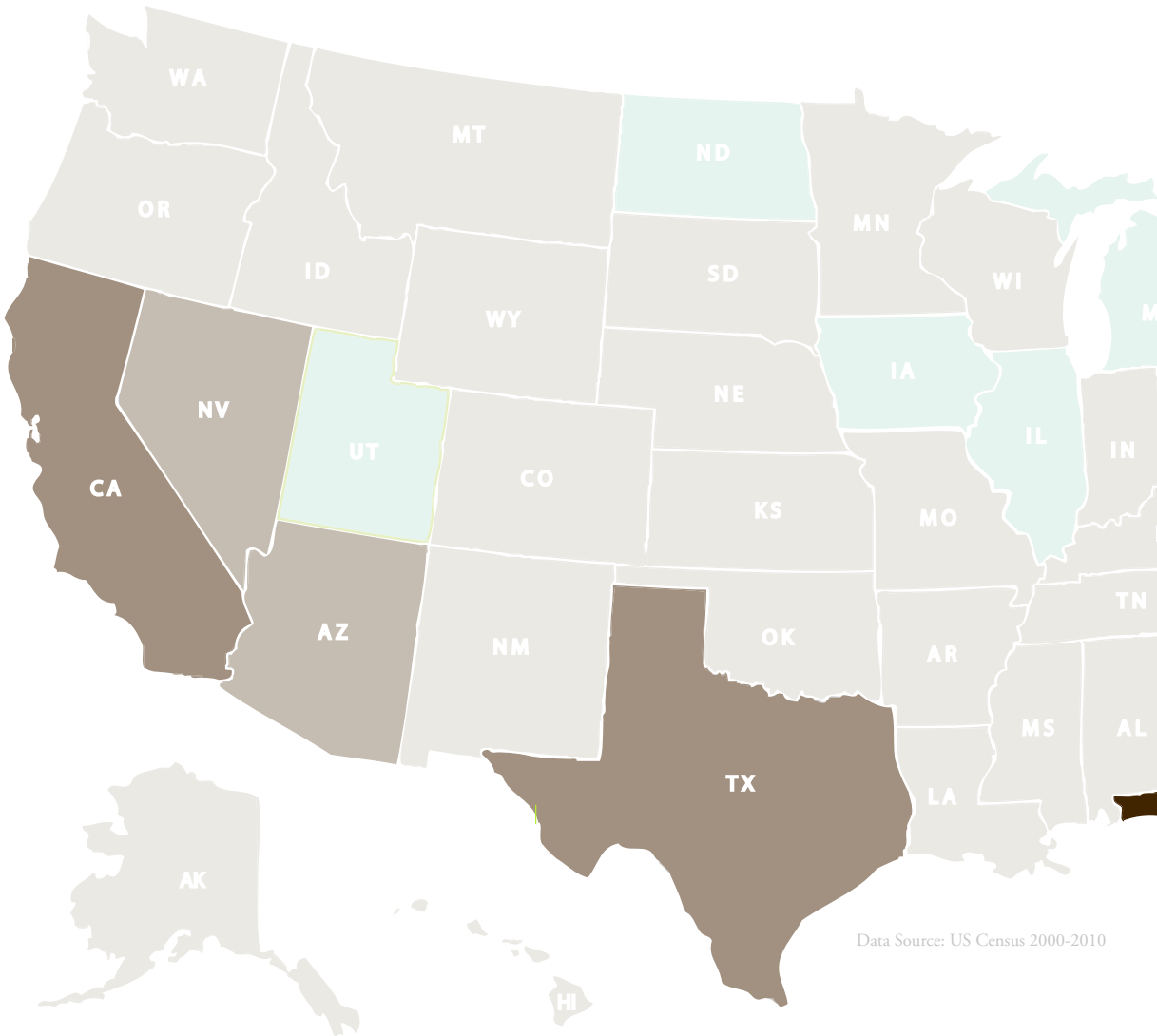
Alexander McQuilkin &
Priyanka Jain *MSUPs 2012*

According to recently released census data, 2010 was a historic year for New York State – it was the first year in decades that more Americans moved in than out. Domestic migration, just like international migration, tends to increase during economic booms, and ebb during recession. This was especially true during the recent

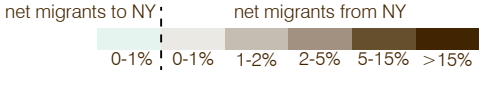


Domestic migration by state, 2000-2010

1. New York State lost more residents to out-migration than any other state over the last ten years

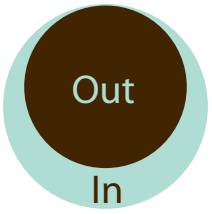


Data Source: US Census 2000-2010



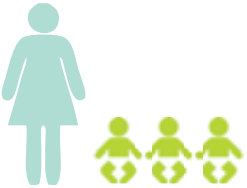
Destination of New York's migrants, 2000-2010

housing bust, when many Americans were trapped by underwater mortgages. Given that unemployment is higher than the national average and incomes are lower, what exactly is it that newcomers find so appealing about New York now? With the majority of immigrants heading to the New York City region, and out-migrants largely leaving other parts of the state, access to jobs could be one explanation. However, a recent report from the Empire Center for New York State Policy found the high tax burden (highest in the United States) and the high cost of housing to be the reasons most cited for out-migration. A cause for concern is that they are taking their above-median incomes with them, causing a "hollowing out" of the region's socioeconomic spread and potentially troublesome consequences for state tax rolls. Has this trend finally reversed? Or should New York's planners and policymakers be doing more to address increasing disparities and retain higher income residents?



Foreign immigrants outnumbered domestic out-migrants 3 to 2

In 2010, there were 5 births in New York City for every 2 deaths



The birth rate for immigrants is 3 children per woman, compared to 2 for native-born

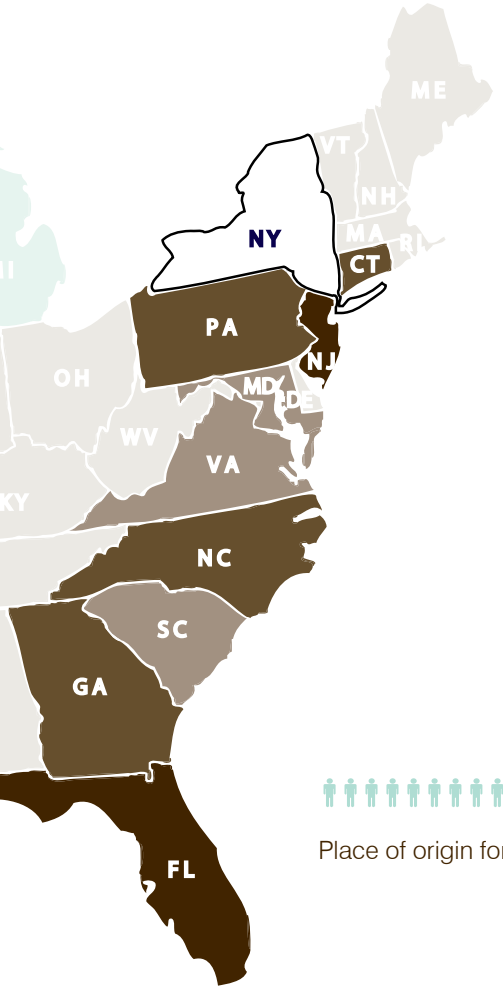
$5B

Estimated state tax revenue foregone over 10 year period

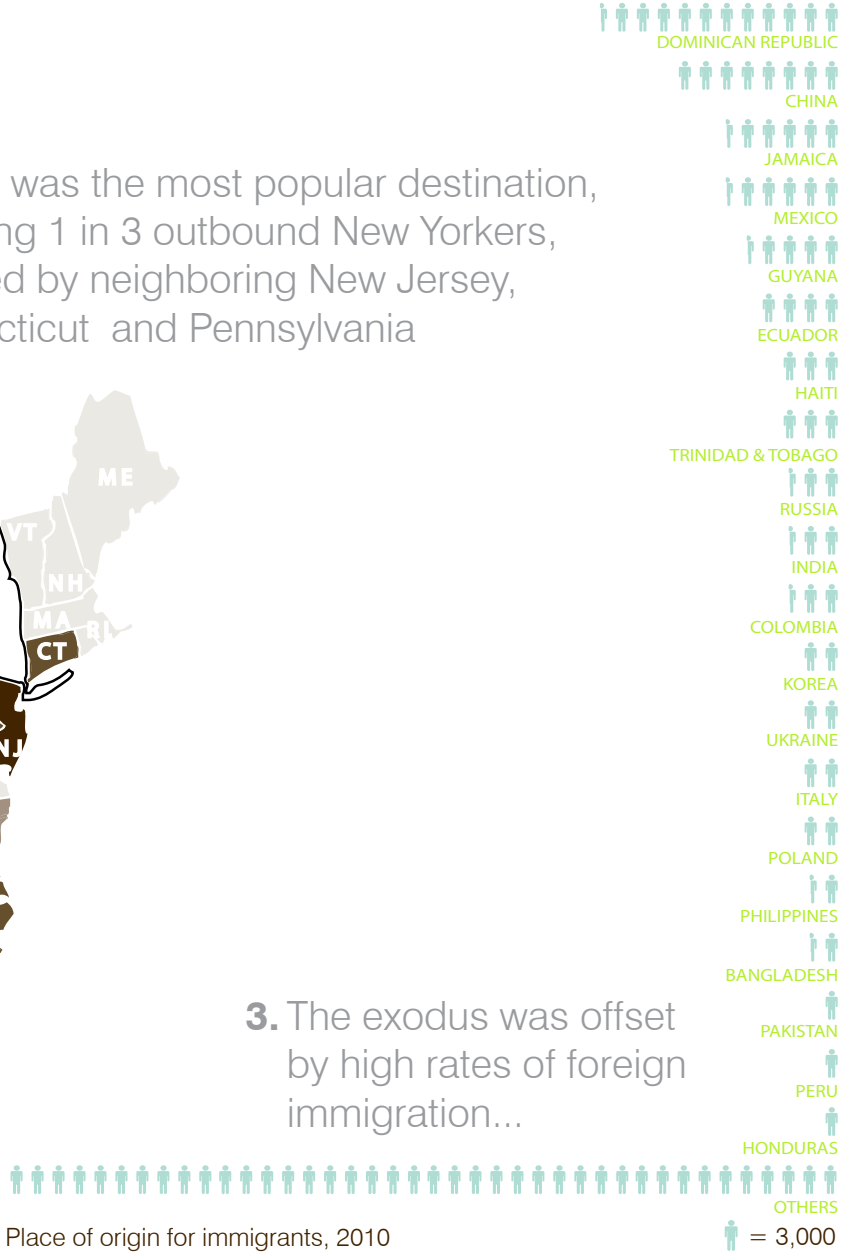
#24

New York's ranking on list of countries by income inequality, same as Zimbabwe

2. Florida was the most popular destination, receiving 1 in 3 outbound New Yorkers, followed by neighboring New Jersey, Connecticut and Pennsylvania



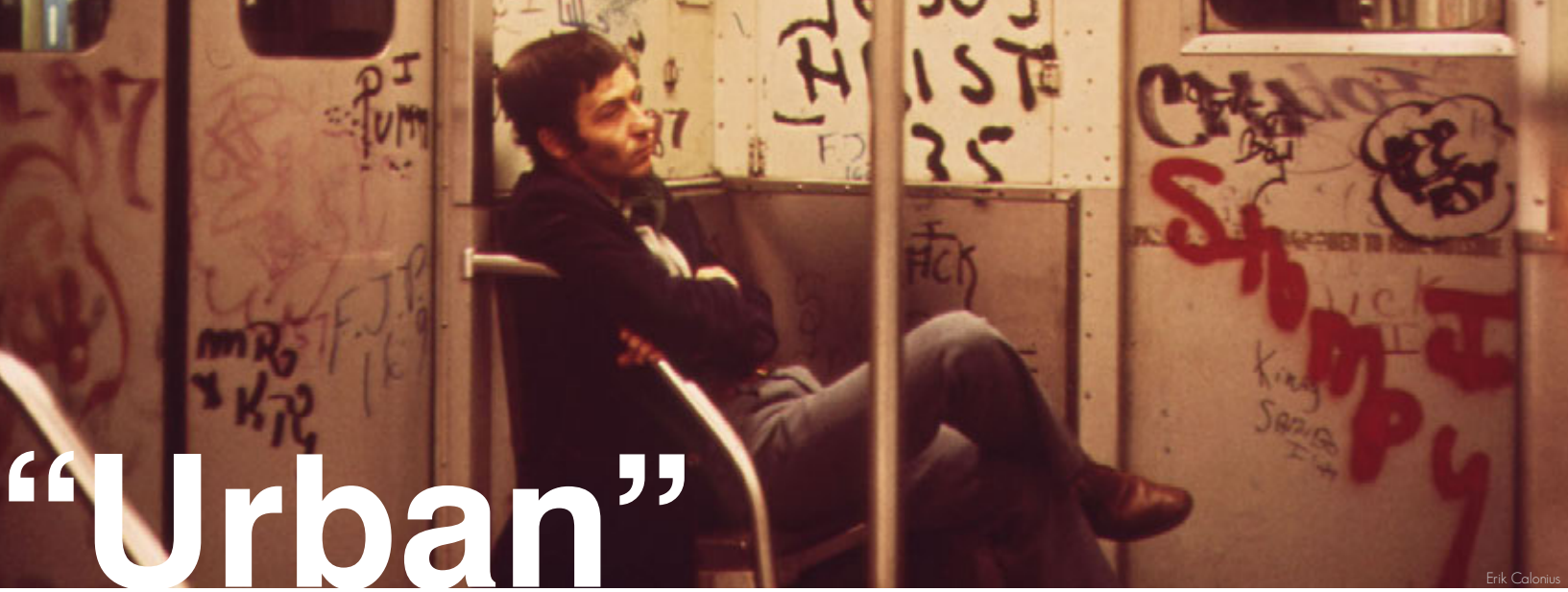
3. The exodus was offset by high rates of foreign immigration...



Place of origin for immigrants, 2010

4. ...but out-migrants boast incomes 146% higher than their foreign replacements.

Median income, immigrant vs. out-migrant, 2010



"Urban"

Unpacking the different realities of a loaded word

Rembert Brown *MSUP 2012*

Plenty of words in the modern lexicon have multiple definitions, but few have as many interestingly charged meanings as "urban." Some important facts to note: one, in six months, there's a decent chance I will graduate with a Master's in Urban Planning. Emphasis on decent; two, very now and then I walk into Urban Outfitters, but quickly leave. Shockingly overpriced; three, last summer, I applied for a job at the Urban Institute. They aren't big fans of "contacting you back," apparently; four, one of my most frequented websites is UrbanDictionary.com, mainly because a platform for user-driven slang definitions is genius. Crudely genius; five, upon seeing the way I dress, the music I listen to, and the company I keep, one could easily say I was a product of "urban culture." They could be wrong, but there's a good chance they're right.

When initially thinking about these five scenarios, my graduate school reflex caused me to search for various uses of "urban" in a variety of scholarly texts. After about 30 seconds of that, I stopped, became a Millennial again, and typed "urbandictionary.com" into Google Chrome. This site, one of the more interesting and honest ways of discovering how words are used in popular culture, became my launchpad into further investigating the term "urban." Some definitions:

ur·ban [**ur**-b*uh*'n]
adjective

a. City-like.
b. An area that has a much higher density than the surrounding area.
c. A marketing term used to hide the fact they are focusing on a particular racial group.
d. City-dwellers.
e. Black people or other minority.
f. Downtown area.
g. Used to refer to something that is not proper and lacks social standing.
h. Equal to "ghetto" in that they're both city-like, opposite of "ghetto" in that urban has a positive image.
i. Not suburban.
j. Associated with African-American or hip-hop culture.
k. Traditionally, areas where employment came from non-primary sources.
l. The politically-correct way to say Black people.
m. A word used in substitution to "ghetto."

What's interesting about these 14 diverse definitions is that they're all correct, in the sense that they all represent common ways "urban" is used. In one instance, it can be used as a technical term for describing a geographical area and in another can be subtly (or increasingly not so subtly) used to describe a particular demographic of people. In some settings, it can be used to describe a very positive, thriving place or group of individuals, and in another setting can be used as an insult or as a disparaging comment.

So what does all this mean for the many urban-related academic disciplines that exist? What does it mean for those of us attempting to one day plan in the "urban" context? What exactly do we mean when we think "urban planning?" What are our professors thinking about when they design "urban planning" curriculums? While we are often led to believe "urban planning" and "city planning" are interchangeable in their focus, the markedly different connotations of the two words make it hard to accept that as truth. When I hear "city," I don't think about much more than a vague geographic area like Atlanta or New York City (perhaps a fault of my own). When I hear urban, however, that previously populated list pops into my head and I immediately forget what exactly it is I'm attempting to study.

While getting a "Master's in Helping Poor People" or a "Master's in Minority City Equity" doesn't have the same ring as "Master's in Urban Planning," are the first two fictional graduate programs actually a more accurate description of what students are coming to school to learn about? I don't have an answer to this, or any of the previously mentioned questions, because oftentimes it's a case by case issue, but I do believe that fully unpacking the word "urban" should be priority number one of any urban-related discipline. The word is too charged to assume everyone understands it in the same way and arguably too charged of a word to base an entire discipline on.

And then again, maybe the fact that "urban" is such a convoluted word is a good thing for those attempting to wrap their heads around an urban-related discipline. Maybe if one was a candidate for a Master's in City Planning, many of those sentiments from the aforementioned list would be overlooked. Maybe using a word like "urban" forces you to take all of them into consideration when thinking about how one would go about planning or studying or designing a city.

Just something to consider, as you thumb through the pages of **URBAN**.

From Midtown To Downtowns

The future of the Long Island town

Max Sokol *MSUP 2012*

From existing conditions (above) to the proposed concept (below)

On August 16, 2011, the Regional Plan Association (RPA) convened a forum of over 60 elected and public officials to share ideas on how to create more dynamic downtown centers on Long Island. These centers will become increasingly important in fueling Long Island's future prosperity once the Long Island Rail Road (LIRR) begins to offer greatly reduced travel times to New York City as a result of the East Side Access project. With an expected completion date of 2016, East Side Access will provide a direct LIRR connection to Grand Central Terminal via a new station in Sunnyside, Queens, thereby reducing commuting time by up to 20 minutes in each direction for the roughly 40% of LIRR commuters who work on the east side of Manhattan.

In addition to leveraging the ongoing investment in East Side Access, the concept of downtown redevelopment is also timely because of the need to promote a new strategy to accommodate Long Island's projected population and employment growth. Like many mature suburbs throughout the nation, Long Island is grappling with the economic, environmental, and equity consequences of sprawling development patterns. This has led a number of progressive municipalities to pursue an alternative future based on the principles of transit-oriented development (TOD).

As uncovered in "Places to Grow," a 2010 report prepared by RPA, there is great redevelopment potential throughout Long Island. The report identified over 8,300 acres of vacant land and surface parking within a half-mile of downtown centers and LIRR stations. The challenge now is to realize this potential. One of the overriding goals of the RPA forum was for the case study presenters representing municipalities on Long Island and the Tri-State Region that are actively engaged in TOD planning to impart lessons learned and replicable strategies for success. The forum was appropriately titled *Making It Happen*, as the case study presenters were elected officials and planning directors who are doing just that. It is important to keep in mind that TOD on Long Island is a work-in-progress, and that several of the successful planning endeavors highlighted at the forum are yet to be implemented. The Ronkonkoma Hub, an approximately 54-acre redevelopment site adjacent to the Ronkonkoma LIRR station, is one such success story that continues to unfold. At Making it Happen, Brookhaven Town Supervisor Mark Lesko offered an overview of the process followed, the strategies pursued, and the expected outcomes of the Ronkonkoma Hub redevelopment.

A July *New York Times* editorial about the Ronkonkoma TOD project concluded with an interesting blend of pessimism and possibility: "Resistance to change, and tolerance of stagnation, have trapped many old suburbs in a downward cycle. Here's hoping Mr. Lesko can break it." To put a more positive spin on the Ronkonkoma Hub redevelopment, one could counter that the ongoing efforts to plan and implement the vision contained within the Town's TOD Land Use Plan serve as proof that Supervisor Lesko has already bucked the trend and broken the downward cycle. Here's hoping Mr. Lesko, through such opportunities as Making it Happen, can inspire other municipal elected officials on Long Island to follow suit.

U.S. Library of Congress

Meng He

Today, popular food trucks face the same parking conflicts as New York City's bygone lunch wagons (above)

An Appetite for Parking

New York City's food trucks still struggle with a century-old problem

Sara Beth Rosenberg *MSUP 2012*

With thousands of Twitter followers, flashy exteriors, and innovative menu selections, food trucks are hotter than freshly deep-fried falafel right now. Across the country, they are making headlines. In New York City, they have become the outlaws of Midtown — bandits of the metered parking spots. Since the New York State Supreme Court ruling in May against Patricia Monroy of Patty's Taco Truck, the police have begun to more vigorously enforce the bylaw that "no hawker or vendor may vend from a metered parking spot" regardless of the nature of merchandise they are selling.

Despite the recent crack-down, the law on the books is nothing new. The regulation was part of the major parking and zoning regulation overhaul under Mayor Robert Wagner Jr.'s administration in the 1950s and 60s.

Conflicts between street vendors and parking actually predate the installation of parking meters in New York City to when "lunch wagons" roamed the streets and ice-cream trucks stopped traffic to make sales. As early as the 1920s, *New York Times* articles reported on the rising fad of street-side hot dog stands and lunch wagons. Their increasing popularity was linked to the building of the automobile highways. Rather than take a walk with a picnic basket, a family or individual could pull over to the side of the road wherever they spotted a stand, buy their food and eat it in the car.

The prophetic signs of the parking problem street vendors would later create can be spotted early on. In 1935, an ice cream truck vendor received a summons for "improper parking." The vendor was in fact interfering with traffic, but not because of where he was parked. Patrolman Ralph Stone, who delivered the vendor his summons, reported that the vendor had parked at a busy intersection where he "would pull a lever on the traffic light box, placed there as a convenience for pedestrians, and thus stop cars, the occupants of which would be offered his products." While a great sales technique, it also turned out to be an illegal disruption to the flow of traffic. In the end, the judge fined the vendor $1 and reportedly "told him to leave the lever alone."

U.S. Library of Congress

Turn of the century street vendors on Broad Street

In 1948, Wagner Jr., then the chairman of the City Planning Commission of New York City, announced that major revisions in zoning regulations would be undertaken to modernize the 1916 Zoning Resolution and to stimulate private real estate and building investments. Wagner opposed the proposal to form a parking authority, which proponents claimed would enable the government to issue bonds for garage construction — as was being done by Robert Moses to construct bridges and highways — to solve the city's traffic problem. Wagner saw that the so-called "Garage Plan" would only work if the Parking Authority was given monopolies on land for parking garages in the same areas where he hoped to promote private investments and enterprises with the revised zoning regulations. This move, Wagner Jr. predicted, would "eliminate private investment and enterprise in that segment of our economy."

Despite Wagner's misgivings, the Parking Authority came to be, and in 1949 Mayor O'Dwyer created the Traffic Commission to advise the City on policies, plans, and regulations for the control of traffic. The Commission's first order of business was to authorize a study of the feasibility of installing parking meters to provide on-street parking facilities. The Commission was also immediately responsible for requesting legislation to provide off-street parking facilities and consider including parking requirements in the zoning code. These provisions have had the unintended consequence of making development more costly, again restricting private investments and enterprise.

Today, there are approximately four million estimated curbside parking spaces in New York City as calculated by University of Pennsylvania Professor Rachel Weinberger. This calculation is based on the 10,000 miles of street in the city. Some say the City's 50,402 single-space meters — currently being phased out — and the newer 4,834 multi-space Muni Meters could command at least $5 billion if sold to a private firm. The long-term lease of this public asset to a private entity could save the City the cost and hassle of operations and maintenance and loosen restrictions on vendors. However, selling parking meters would mean the loss of a continuous municipal revenue source as well as significant control of the streets. On the other hand, a well-written contract could foster private enterprise and benefit the City. While precedents such as Chicago's privatization of parking meters have not been successful at accomplishing these goals, allowing vendors to pay for parking while generating revenue that they give back to the City in income and sales taxes seems like common sense.

The "no vending from metered parking" regulation is a complex issue, but the question at its heart is whether parking should be characterized as a distinct land use and, if so, what the nature of that land use should be. This philosophical debate is complicated by the ambiguity of whether a food truck parked at a parking spot and open for business counts as the same use as an unoccupied parked vehicle. What about an idling truck parked for deliveries? Each use has costs and benefits to be debated.

If You See Something Say Nothing

Arvind Murthy *MSUP 2012*

Since September 11th, New Yorkers have become more attuned to potential security threats on public transit.

Who here has ever 'said something' as a result of 'seeing something?' I know that I haven't. What bothers me is that I've seen *plenty*.

The New York Metropolitan Transportation Authority's "if you see something, say something" safety slogan is almost as tied to the city's subway system as "mind the gap" is to the London Underground. Created by Allen Kay of the Madison Avenue advertising firm Korey Kay & Partners the day after September 11, 2001, the saying has won numerous awards and is becoming a defining slogan of the post-9/11 era.

However, seeing *something* is the last thing riders of the bus or subway want to worry about. Instead, an efficient public transportation network that works can make your day. It certainly made mine during the US Open this past September when I was able to commute seamlessly from the Upper West Side to Queens in less than an hour.

While en route, I sat next to an abandoned suitcase on the #7 train. The carry-on suitcase, black and nondescript, sat two feet from me under the subway car's bench.

I had assumed, rather naively, that the suitcase belonged to the older woman sitting adjacent to the bag and just a few feet farther away from it than I was. When she got off her stop and didn't take 'her' bag, I astutely alerted her to her missing luggage to which she queried, "Isn't that bag yours?"

"Now I'm in trouble," I thought. Here I am on my way to watch Roger Federer crush Novak Djokovic and it's just my luck that I'm stuck on a train with what could possibly be an explosives-laden suitcase. Where's Jack Bauer when you really need him? Apparently not on the Queens-bound #7 train.

OK dude, relax. It's probably just somebody who left their suitcase on the train by mistake. No big deal. Relax.

So now, I've seen something. Who exactly do I say something to? Would this action delay me from some awesome tennis at Arthur Ashe Stadium? What if 'they' think that I placed the suitcase in the train?

As I got to my stop and exited the train in a rather expeditious manner, another gentleman who got on at the previous stop notified me that I was leaving my bag on the train. When I told him it wasn't mine, he did exactly what I did with the little old lady: absolutely nothing.

Our current 'see something, say something' system is too passive and well, doesn't account for the fact that New Yorkers have to be places five minutes ago. Terrorists love to target public transit systems — remember the London Tube bombing in 2007 or the Madrid train bombing in 2004 — because they are symbolic targets with large payoffs in terms of conveying their message. Just like most people, terrorists, especially suicide bombers, are very risk-averse.

They were, for the most part, normal people. Normal people take chances that are guaranteed to result in successful outcomes. Planners, policymakers and transportation analysts need to figure out ways to make the risk of terror on transit high enough that these acts become so unattractive as to not even cross the minds of future terrorists. This has been done to great success, and the consternation of users, in air travel, where no terrorists have carried out a successful attack since 9/11.

A big dilemma facing public transit authorities today is how to keep transit open and secure at the same time. Should we, as New Yorkers and Americans, concede more privacy in return for more security? Should we say *something,* and to whom?

50th Anniversary of the
1961 New York City Zoning Resolution

ZONING

SPECIAL SECTION

Illustration by
Jeffrey Yuen

Jack Delano

What is Zoning?

Jake Schabas & Jeffrey Yuen *MSUPs 2012*

"Intricate minglings of different uses in cities are not a form of chaos. On the contrary, they represent a complex and highly developed form of order."

- Jane Jacobs

Zoning is one of the most contentious and frequently misunderstood concepts in the planning and real estate discourse. Technically speaking, zoning is the body of property rights granted by a jurisdiction dictating how land can be used. It is the main tool of local governments to regulate the built form and use of land.

Zoning first arose in New York City in response to calls by residents to make the city healthier by segregating land uses and provide adequate light and air by controlling building bulk. Following enabling legislation at the state, New York City adopted the continent's first Zoning Resolution in 1916, which separated residential, commercial and manufacturing land uses and set varying density caps across the city. Since 1916, most local governments in the developed world have adopted zoning codes, with some notable exceptions like Houston, Texas. However, in 1926 the *Euclid v. Ambler* Supreme Court case established the constitutionality of zoning across America, leading to its uptake in towns and cities across the country. Today, American towns and cities without zoning are the exception, not the rule.

Zoning codes have evolved a great deal since their birth, becoming far more complex in the process. Today zoning is often used to provide affordable housing, incentivize economic development, preserve neighborhood character, protect green space and influence transportation patterns through parking and density levels. For instance, additional density bonuses above and beyond the existing 'as-of-right' zoning can be given to developers in exchange for provision of public amenities like affordable housing, streetscape improvements, public parks, plazas and libraries. Density limits can also be extremely contentious: in 1986, the top 12 floors of an almost completed condo development in New York City's Upper East Side were removed when local residents discovered they surpassed the site's allowable building bulk.

Urban design guidelines are typically included within zoning codes to prevent shadows and wind corridors through the use of setbacks, where the front wall of a building steps back like a wedding cake. Design guidelines can also mandate that new buildings follow certain styles — as in historical neighborhoods — that look to preserve anything from fixtures to entire buildings and neighborhoods. A recent exhibit by Rem Koolhaas at the New Museum reported that as much as 12% of the world's surface is currently under landmark designation.

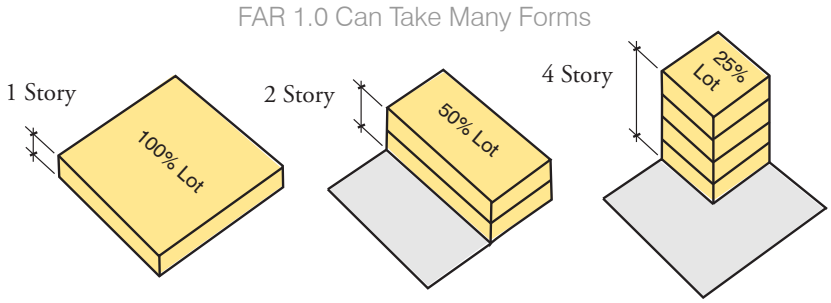
Zoning codes specify how buildings interface with streets — whether front lawns, parking

Zoning Glossary of Terms

Illustrations by Jeffrey Yuen

Floor Area Ratio (FAR)

The primary mechanism used in zoning to control the size and bulk of buildings. It is a ratio of the maximum allowable floor area divided by the area of the entire lot. Any given FAR can be manifested in many different ways depending on the height and lot coverage of the building (see right).

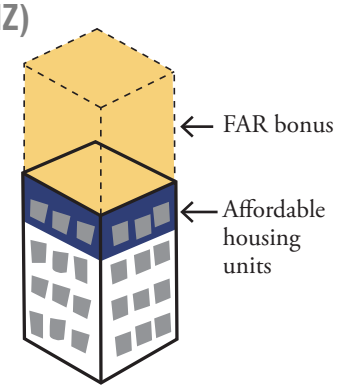


Bulk

Regulations that dictate the density, maximum size and placement of buildings. These include restrictions on height, lot coverage, setbacks and open space requirements.

Inclusionary Zoning (IZ)

A form of zoning that provides developers with an FAR bonus in exchange for either reserving a portion of housing units as 'affordable' or paying fees into an affordable housing fund. In New York City, the Inclusionary Zoning program, also known as Inclusionary Housing, is optional for developers.



Overlay District

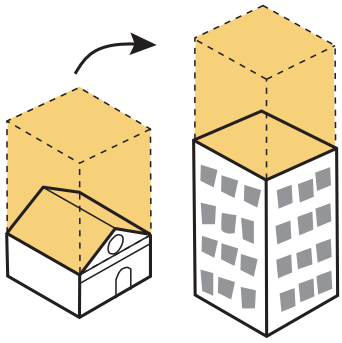
An additional zoning requirement that is superimposed onto an existing zoning statute for a particular geographic area. It can complement or supersede the underlying zoning but does not change it. In New York City, overlays are used for limited height and commercial activity districts.

Special Purpose District

A type of overlay district (see above) that superimposes special zoning strictures tailored to the distinctive characteristics and needs of specific neighborhoods. There are dozens of such districts across New York City.

Transfer of Development Rights (TDR)

Allows for the transfer of unused FAR — also known as air rights — from one parcel to another, usually to assist in historic preservation efforts. The receiving site is then able to build to a higher FAR than would be otherwise allowable. TDR is used when the sending and receiving sites are in the same area but are not eligible for a Zoning Lot Merger (See below).

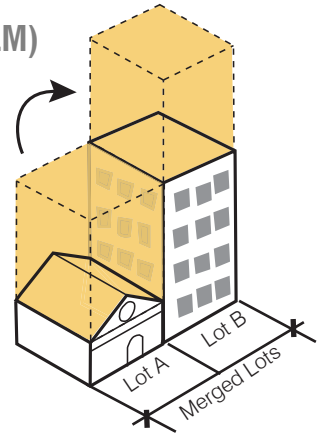


Variance

A zoning variance provides an exemption from the typical land use and bulk regulations of the zoning resolution. A variance is granted under unique circumstances where zoning strictures cause 'undue hardship' for the property owner. In New York City a zoning variance requires a public hearing.

Zoning Lot Merger (ZLM)

A type of transfer of development rights, where two or more adjacent lots are combined into a single zoning lot. Through this merger, unused FAR can be shifted from one building to another. These lot mergers often enhance the value of the merged parcels.



lots or building façades. Enforcement of certain urban design features has become so important in some circles that in 1993 the Congress for the New Urbanism formed with a charter outlining a long list of design principles to which they adhere.

Zoning also has an impact on the transportation habits of a community. City officials often 'upzone' areas around public transit to create higher densities in order to discourage car use. Parking requirements are ubiquitous in most zoning codes and do exactly the opposite by mandating a certain number of car parking spaces for each housing unit built. Combined with the ability to set how much industry will be allowed in certain areas, zoning codes are perhaps local government's most powerful planning tool to affect the built environment of a community and the city as a whole.

From the design and feel of its streets to the affordability of its housing and movement of its residents, zoning codes seek to organize uncertainty. In doing so, zoning can both help or hinder the development of cities and be used towards progressive ends or to protect the status quo. Regardless of ideology, it is clear that zoning plays a crucial role in determining whether places flourish or decline. U

Professor's Corner

GSAPP professors weigh in on the legacy of zoning and offer new perspectives on how it should evolve to help deal with urban issues in the 21st century.

Zoning on Autopilot

Parking minimums limit progressive transportation planning

David King

The New York City zoning code turns 50 years old in 2011. That's a long time to stick around. Yet the code is hardly in the same form it was in 1961. Under the Bloomberg administration the City has rezoned about 20 percent of its land area. In many cases these rezonings have upzoned underutilized sites, creating places where dense development can be built in areas previously off-limits. We can assume that these upzonings reflect land uses that the City currently desires, but we cannot be as confident that the zoning changes reflect the desires of real estate developers, or more importantly, of residents and businesses.

An open question for planners is how flexible the zoning code is with regard to public preferences and market forces, especially for issues of sustainability and environmental concerns. After all, the City has used spot zoning to achieve many regulatory goals but has stayed away from a complete revision of the code. Whose priorities are reflected through the recent changes?

Many scholars subscribe to the concept of a "growth machine," where elites including elected officials, real estate professionals, corporate interests and the media control the land development process at the expense of the best interests of the public. In the case of the growth machine we expect that zoning regulations are fungible so that public preferences can be subverted. A growing body of literature is beginning to challenge the growth machine idea. They show that the zoning code and local regulations inhibit developers from constructing the types of buildings they want or the kinds that may move municipal environmental and affordable housing goals forward. One major way the zoning code distorts the real estate market is minimum parking requirements.

"the code is not flexible enough to meaningfully help the City achieve many of its goals for housing, transportation and economic improvements."

Parking requirements are a particularly tricky concern within zoning. Originally intended to reduce spillover parking by requiring businesses in dense areas to construct off-street spaces, minimum parking requirements are now pervasive. While setting and enforcing parking requirements is treated as a technical exercise, there is little evidence of a lack of parking supply in most areas of the country. Worse, parking minima increase parking supply in walkable, transit-rich communities while degrading the design qualities of the built environment by forcing curb cuts and limiting space available for street level retail.

Reforming off-street parking can go a long way toward realizing many of the sustainability goals of the City, but achieving reform is challenging. Much opposition to new development is based on potential traffic effects, in particular spillover parking. As such, potential neighbors often argue for parking minima, as required in the zoning code, and these actions represent an additional obstacle to parking reform. Other obstacles include banks and other real estate lenders, who are hesitant to finance non-conforming uses precisely because they think that the zoning code reflects market demands.

Ultimately, zoning regulations are relatively rigid and difficult to change. There is little evidence that the code in its current form reflects public preferences, developer preferences or lender preferences. Worse, the code is not flexible enough to meaningfully help the City achieve many of its goals for housing, transportation and economic improvements. Understanding that the current zoning code is sometimes a regulatory obstacle to positive change is an important idea for planners to consider.

David King is an Assistant Professor of Urban Planning at Columbia University.

Zoning for the Competitive City

Vishaan P. Chakrabarti

"People don't remain static. And in fact we want to grow. We want to grow because the marginal benefit, the marginal revenue, from that additional person, is greater than the marginal cost. Those increased net revenues can be reinvested in improving the quality of life, which in turn attracts more people. Growth is a very healthy sign of success, but growth has to be managed intelligently."

- Daniel L. Doctoroff

The latest rendering of the high density Atlantic Yards project in Brooklyn.

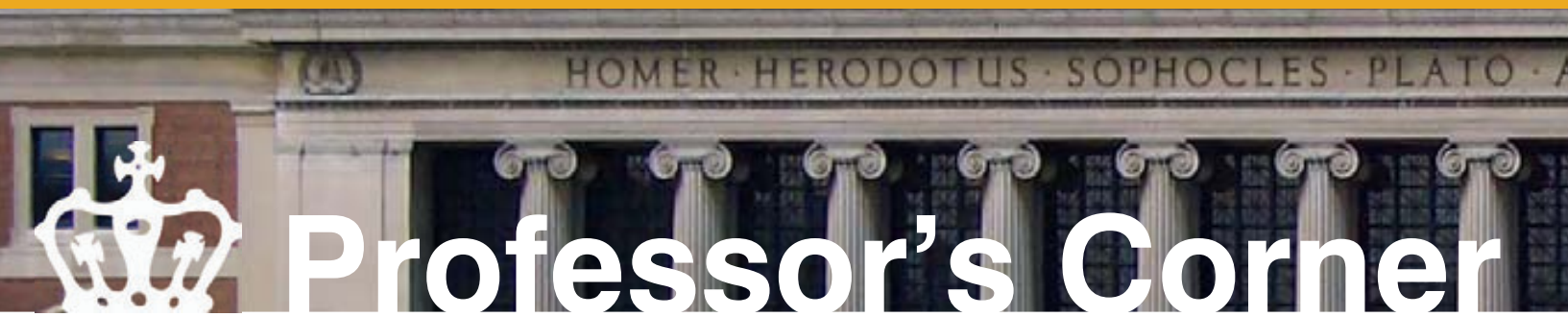
During his tenure as Deputy Mayor for the City of New York, Dan Doctoroff led efforts to grow the city under the premise that growth would equate to increased global competitiveness in our economy, our environment and our hopes for social equity. It is well known that PlaNYC, his most citywide initiative in this regard, called us to plan for a city of 9.1 million people by 2030, a growth of some 11% from the current population of 8.2 million. At about the same time, the Regional Plan Association issued America 2050, a broad look at the demographic shifts occurring nationally, with a primary focus on the growing regional clusters in the United States. The report suggested that the northeast corridor will grow by over 21% by 2030, nearly double the growth rate of New York City during the same timeframe.

Put more simply, the New York metropolitan region is growing faster than New York City, which is losing new residents to the region in terms of its share of population growth. Instead of urbanizing, what we are doing is suburbanizing – as a nation, region and city, we are building sprawl instead of building tall.

Many factors account for this. At the Federal level, we have favored suburban development over urban development through a vast array of subsidies – the Federal mortgage tax deduction, the policies of Fannie Mae and Freddie Mac, the suppression of energy prices, and the disproportionate public funding of highways and airports over mass transit and high speed rail. At a local level, our policies have both countered and countenanced Federal policy. Prior to the Bloomberg Administration, little had been done to upzone for growth, and the region prior to 2000 indeed sprawled with 17 million square feet of new, auto-oriented office and housing built on the New Jersey side of the Hudson, all while Brooklyn and Queens, far better connected by mass transit, attracted little new development.

Much changed with the Bloomberg Administration, but a dichotomy emerged in their approach to the central business district versus the rest of the city. In Manhattan, the administration upzoned vast areas like the Hudson Yards and West Chelsea, but in the outer boroughs they largely downzoned in response to political pressure. In fact, a recent report by the Furman Center for Real Estate and Urban Policy indicated that the net impact has been a negligible increase in the city's overall new development capacity, although some new density has been added around transit nodes.

It is difficult to fault municipal policy makers for this dichotomy given the intense anti-development sentiment in the outer boroughs. Yet when we consider zoning through the lens of competitiveness, we must ask ourselves whether bowing to this sentiment is in our best interests. Today much of the boroughs have a density equivalent to Los Angeles, with traffic congestion dominant. Subway service outside of Manhattan remains heavily congested as well, with budget cuts impacting weekend and



Professor's Corner

evening service. Affordable housing production is slower than it should be. Because of these and other factors, our tax base, which relies heavily on growth, and funds all the social goods we hold dear, remains vulnerable.

"Instead of urbanizing, what we are doing is suburbanizing – as a nation, region and city, we are building sprawl instead of building tall."

If we are to build upon the advancements of the Bloomberg Administration and consider a truly competitive framework for zoning in New York City, we should consider the following reforms in five broad categories.

Zoning for Growth: Using the model for Hudson Yards where future growth funds subway and park improvements, we should consider significant upzonings along Park Avenue near Grand Central (under which $8 billion is being spent to create a Long Island Rail Road terminus), Long Island City, Queens Boulevard, Secaucus, NJ, and other transit rich areas, with an understanding that some of the underlying value creation will be dedicated to improve mass transit and parks.

Zoning for Livability: Emulating the fluid air rights transfer model surrounding the High Line, we should create a "cap and trade" zoning mechanism for special districts in which FAR can be bought and sold within a district under an overall cap, incentivizing a "high-low" city with light and air, innovative architecture, a mix of building ages, socioeconomic diversity, and urban character.

Zoning for Affordability: We should build upon existing incentive systems to create far more affordable housing, particularly in underdeveloped areas of the city and tie subway construction to the creation of affordable housing (for instance, new housing in East Harlem and Seward Park related to the Second Avenue Subway). Other proposals like Quadriad's "the New Strategy," which proposes outer borough densification with new middle class housing, should be carefully considered. Approved affordable housing projects in Hunters Point South or developments like Via Verde in the South Bronx should be emulated.

Zoning for Infrastructure: We should create a new zoning designation that allows the as-of-right construction of waste-to-energy and water treatment plants, such as "living machines" rather than relegate such infrastructure to steadily disappearing manufacturing zones.

Zoning for Resilience: Green buildings should be incentivized, along with soft waterfront edges, and innovative technologies in response to climate change and sea level rise. We should rezone the water to allow for environmentally sensitive landfill in Lower Manhattan and along the Brooklyn waterfront. More radical still, we should consider connecting Lower Manhattan to Governors Island with newly created land, much as our competitors are doing in Hong Kong and Tokyo.

A globally competitive New York is within our grasp. The assertion that growth, when well-managed, is a path to an economically stronger, environmentally safer, and socially more equitable city is sound in theory but tremendously challenging in practice. We must use all of our tools, including zoning, to make this assertion a reality.

Vishaan P. Chakrabarti is the Director of the Real Estate Development Program at Columbia University.

Regulating the 21st Century City

Land use controls still promoting urban well-being

Elliott Sclar

The creation of land use regulation tools were an inevitable concomitant of the rapid industrial urbanization that modern cities underwent in the 19th and early 20th centuries. Absent such techniques, modern and efficient high-density cities would not have been possible. To live well in tightly packed urban spaces, however, requires much in the way of regulated or cooperative behavior, since how individuals choose to use their spaces can have a lasting and major impact on their neighbors' well-being. And the higher the density, the more urgent the need.

It was because these spillover effects were so palpable that in 1926 the United States Supreme Court held that zoning was a legitimate exercise of the police power of states and municipalities. Viewed in isolation, it might appear that an otherwise very conservative court had launched a suicide attack on the sacred notion of "private property." But in fact the decision was taken in defense of the equally sacred notion of preserving property values, proving that the link between well-functioning urban density and prosperity is more than mere correlation. It is cause and effect.

"How individuals choose to use their spaces can have a lasting and major impact on their neighbors' well-being. And the higher the density the more urgent the need."

Today, zoning is one of the principal tools in the kit of the practicing planner. It is therefore worth pausing at this moment in which we mark the fiftieth anniversary of the establishment of New York City's current zoning ordinance to reflect on zoning's evolution that properly began almost a full century ago.

The 1961 ordinance evolved out of its 1916 predecessor, which is recognized as the nation's first comprehensive zoning ordinance to regulate both the developable height and use of land. It viewed the city as a collection of individually owned land parcels that each had to precisely conform to the regulations for height and use for the zone in which it sat. The 1961 ordinance radically changed this. While individual parcels still characterize the 1961 zoning map, the spaces they inhabit became fungible mainly in terms of permitted bulk through the introduction of floor area ratios (FAR) as the measure of building bulk. FAR permitted a radical reconceptualization of the notion of the urban built environment. It opened the door to the notion that building bulk within a given zone need not be tied to a given land parcel as long as the overall zoning envelope conforms to the total bulk for the given zone.

The ultimate shape of any given zoning district is now in part a matter of overall regulation, but increasingly it is also reflective of the ways in which market forces value various spatial locations at different moments in time. In essence, the 1961 ordinance shifted the regulatory balance from what might be termed a command regime to a more market-oriented one. It was of little consequence to City Planning whether the bulk was on parcel A or parcel B as long as the envelope was respected. Once this concept became the standard, devices such as zoning lot mergers (ZLMs) of adjacent properties and transferable development rights (TDR) could be introduced into land use.

Although there is a temptation to view this change as one more variation on the theme of markets versus regulation, that is really not the case. In the end it is all governed by regulation, the only relevant question is regulation in whose interest? A city is always an amalgam of interests. TDR has been used to preserve historic landmarks. ZLM has been used to break neighborhood context. The real challenge going forward is to understand how to use zoning to further the interests of sustainability, an urgent global priority, and further enhance the equity of urban life, the two keys to society's long term well-being.

High density on Mulberry Street, New York City circa 1900

U.S. Library of Congress

Elliott Sclar is a Professor of Urban Planning at Columbia University.

In Queens, the City has recently rezoned parts of the Sunnyside and Woodside neighborhoods as they have grown in popularity.

Tomoji Hirakata

Sunnyside Up?

Balancing neighborhood character and development pressures in Queens

Steven Loehr *MSUP 2013*

Widely-considered to be two of the outer boroughs' finest hidden gems, the Sunnyside and Woodside neighborhoods in Queens offer top-notch transit access, affordable rents, low crime rates, well-regarded schools, and remarkable ethnic and economic diversity less than twenty minutes from Times Square. Accordingly, *New York Magazine* ranked Sunnyside and Woodside third and thirteenth respectively, in its 2010 "Best Places to Live in NYC" survey.

Then why should the New York City Department of City Planning (DCP) mess with success, you ask? Quite simply, as long as New York real estate patterns threaten to turn any "hidden gem" into "the next big thing" (see: Williamsburg, Greenpoint, Park Slope, Astoria, etc.) gentrification and development pressures are inevitable fears. In response to community concerns, over the past year the DCP embarked on a sweeping initiative to update the area's zoning designations that mostly have not been changed since the adoption of the current zoning resolution in 1961. The city council approved these changes on July 28, which will affect all or portions of the 130 blocks in these two western Queens neighborhoods.

The major objectives in the Sunnyside and Woodside project — protecting the existing character of the neighborhoods, strategically concentrating new development along transit corridors and providing incentives for affordable housing — have been hallmarks of most DCP rezoning efforts of the past decade. In order to prevent out-of-character development from occurring on the area's generally low- to medium-density residential streets, contextual zoning changes have reinforced height limits and restricted housing types to one- and two-family detached and semi-detached homes. In contrast, zoning modifications along Queens Boulevard have enabled denser development in the growth-targeted corridor from 39th Place to 50th Street where one- and two-story commercial structures, fast food outlets, and gas stations remain prevalent despite high levels of pedestrians and the presence of the #7 subway train.

DCP Project Manager Tom Smith found the most challenging component of the rezoning project was the "wide variety of zoning districts" at the department's disposal. Appropriately utilizing the intricacies of these designations required "extensive field work, detailed analysis of…city databases [and] a considerable amount of outreach to the community."

In total, six new zoning districts and three new commercial overlays were incorporated into the neighborhood. However, in the final phase of approval, the City Council modified two districts along Queens Boulevard to reduce maximum building heights and densities in response to concerns from area councilman Jimmy Van Bramer.

Two additional components of the plan aim to preserve economic diversity and add to the vibrancy of street life in Sunnyside and Woodside. An Inclusionary Housing bonus was established for new residential construction along Queens Boulevard, providing an increase in floor area ratio to developers who preserve a share of their projects for low-income households. In addition, a new zoning amendment allows small sidewalk cafes along Queens Boulevard, previously prohibited due to the existence of an elevated rail line. This motion comes in conjunction with DCP's efforts to reduce restrictions on sidewalk cafes.

Perhaps the most impressive component of the rezoning has been the community's response, described by Smith as "overwhelmingly positive." This comes even amidst the myriad of voices associated with the two most economically and racially diverse neighborhoods in the city, according to *New York Magazine's* rankings.

Sunnyside resident Christina Walters believes the plan is "a positive step towards our future," and specifically referenced the tremendous opportunity for new neighborhood assets. "I look forward to being part of this growth, especially the potential for some sidewalk cafés." Describing the City's planning methods as "innovative," local tenant Meredith Leverich expressed hope that community members will not be "resistant to change" and will "embrace the opportunities" the new zoning creates for the community.

Given the emphasis on protecting the neighborhood's character while building on its strengths, the community and the city hope that Sunnyside and Woodside will remain neighborhoods on the rise, even if their building heights are not.

PEOPLE BEFORE PROFIT

Illustrations by Jeffrey Yuen

Zoning creates but doesn't always preserve affordable housing

Jeffrey Yuen *MSUP 2012*

Housing is expensive. Some would even say its too damn expensive, as suggested by recent New York gubernatorial candidate Jimmy McMillan of the Rent is Too Damn High Party. As to the source of this problem, many cite basic economics – high demand to live in places like New York City and not enough housing supply due to strict government regulation. This theory is flawed.

In reality, the American private housing sector is unable and unwilling to address the housing needs of the poor without significant public subsidies. Further, in an era of fiscal austerity, cash-strapped cities are increasingly limited in their ability to address affordability problems. Many cities, like New York, are turning to Inclusionary Zoning programs to boost production of affordable housing.

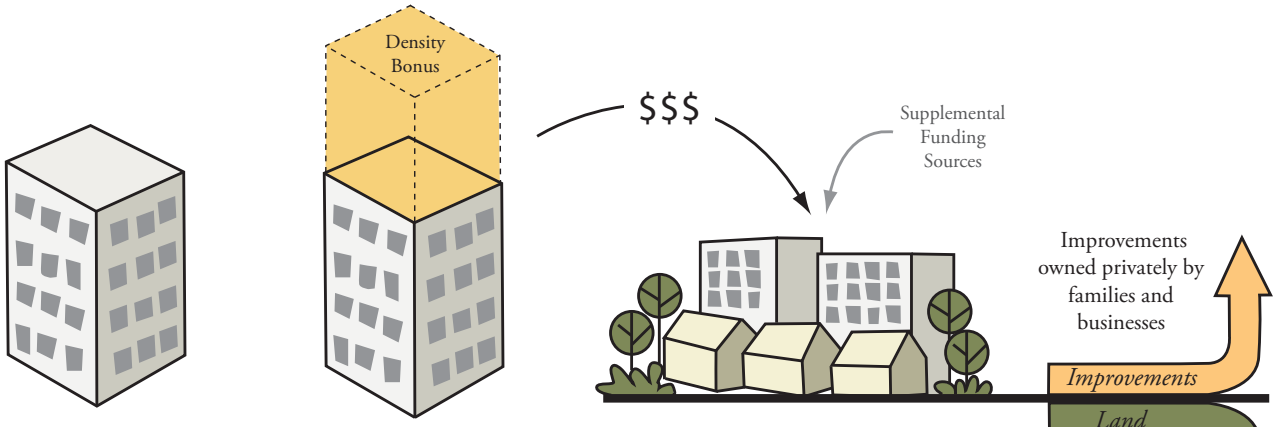
In Inclusionary Zoning (IZ), market-rate housing developers receive incentives for reserving a percentage of units for modest income households generally making less than the local area's average income. Incentives include density bonuses, waivers on fees, and streamlined paperwork to help offset the costs of producing affordable housing units. For example, a density bonus can allow a developer to build larger buildings and thus reap greater profits. Nationally, there is huge variation in local IZ programs: mandatory vs. voluntary, differences in the percentage of affordable units required, definitions of 'affordability,' and the length of affordability restrictions.

IZ 's growth in popularity over the past decade is attributable to one basic fact: its ability to finance affordable housing with minimal direct government expenditures. Opponents argue that IZ programs, especially mandatory ones, unfairly put the burden of affordability on the backs of developers. Their argument is, if society believes in the virtues of affordable housing, then society at large should have to pay for it. In this regard the critics are right. Socially determined needs, like affordable housing, should be paid for collectively, and ideally in a progressive manner. Nevertheless, there are two more practical responses to the IZ opposition.

First, housing developers (and the entire for-profit housing industry) are in fact a major contributor to the affordability problem. The 'unaffordability' of housing largely stems from the profit-maximizing actions of private actors, whether they be developers, landlords or sub-lessors. In every step of the finance, construction, distribution, and maintenance processes, housing is seen primarily as a vehicle for private profits and only secondarily as shelter for human habitation. This perverse logic allocates housing based on the ability to pay and, not surprisingly, consistently yields socially unsatisfactory results.

Second, nearly all IZ programs do offer incentives to developers. Given these compensations, the burden of affordable housing is no longer shouldered by developers, but shifted back to the government. In this case, the question becomes clear: since we have already paid developers with incentives, what do we have to show for it? How much affordable housing have we secured?

New York City's IZ program is voluntary and very ineffective. Since its inception in 1987 (and expansion in 2005) a mere 3,200 units have been built, which represents 1/1000 of the city's housing stock. Experience in other hot housing markets suggests that mandatory programs are the best way to produce substantial units. Of course, production is only part of the equation — the real trick is preserving affordable units. When IZ is implemented, most cities require units to remain 'affordable' for a specified length of time — usually 10-30 years — after which rents can revert back to market rates. As these restrictions expire and rents suddenly increase, cities are faced with a conundrum; either moderate-income tenants will be displaced



Existing Zoning +
Start with existing zoning with a given as-of-right floor area ratio (FAR).

Inclusionary Zoning +
Inclusionary Zoning regulations provide a density bonus of increased FAR in exchange for in-lieu fees to a Community Land Trust affordable housing fund.

Community Land Trust =
Inclusionary Zoning fees fund partnerships between CLTs and developers to construct housing. Land is leased - not sold - from the CLT to homeowners. Additional sources of funding can supplement in-lieu fees such as the CBDG and HOME program.

Permanent Affordability
Resale restrictions limit profits from land appreciation. Subsidies are passed on in perpetuity.

or the City has to pump in more subsidies to extend the length of the affordability period. While New York's current IZ program has permanent affordability restrictions, the city has already lost over 9,000 formerly affordable units to expiring restrictions on other affordable housing programs. Meanwhile, tens of thousands more are still at risk. What is a city to do?

To get out of this pickle, some cities have chosen a third option. Using IZ in tandem with the Community Land Trust model (CLTs), cities have been able to create and preserve affordable housing in perpetuity. CLTs are private, non-profit, community organizations with the explicit goal of preserving affordable housing opportunities. CLTs make the crucial distinction between community ownership of land and individual ownership of buildings. This unique model allows for one of the CLT's key traits: profit-restriction. A homeowner who purchases a CLT house gives up the right to unlimited resale profits in exchange for an affordable home and security of tenure. Limited profits are typically allowed, but the idea is to pass affordability on from one tenant to the next. This is a powerful ownership model when coupled with a program such as IZ that can produce affordable units.

There are several examples of cities that have successfully combined IZ with the CLT model. Burlington, Virginia has been the gold standard of this innovative system and is celebrating nearly 30 years of continued affordable housing. More recently, Irvine, California has created a CLT to go along with its 15% mandatory IZ program. In-lieu cash payments are being used to fund the CLT operation aimed at creating 5,000 permanently affordable units, or 5% of the city's housing stock.

It should be made clear that IZ is not a silver bullet. It is dependent on the strength of real estate markets and has limited ability to reach very low-income households. But despite its flaws, IZ has the potential to be an important part of a multi-pronged affordable housing system. Combining mandatory IZ with the CLT model could be the most practical means to improving current IZ policies to provide long-term solutions rather than temporary band-aids. Cities now have a choice to make: their hard-won housing subsidies can be recycled again and again ad infinitum, or they can become one-time transfers used to line the pockets of the private housing industry. In the end, this is fundamentally a social question: is housing for people or profits?

Edge Condominiums in Burlington, Vermont successfully combines inclusionary zoning with Community Land Trust principles.

The Not So Invisible Hand

How zoning is contributing to the decline of manufacturing

Vivienne Gucwa

Caroline Massa *MSUP 2012*

Industrial uses in New York City are typically located in zoned manufacturing districts. This has been the case since New York City's 1916 Zoning Resolution, which required that manufacturing and residential land uses be separated from each other in response to increasing knowledge about the impacts of air and water quality on public health.

Before the City invoked zoning power, manufacturing businesses located near transport routes, especially bodies of water, a resource which was also needed for industrial operations. For these reasons, the waterfront of New York City was prime real estate for manufacturing land uses. As the city grew and alternative transport routes were built, manufacturing areas spread inland. Zoning mandates funneled the manufacturing uses into the areas deemed best suited for manufacturing by the city's formerly powerful budgeting and land use approvals body, the Board of Estimate.

One of the problems with these designations was that these areas often existed in or around established neighborhoods inhabited by new immigrants and people of color. These low income neighborhoods were viewed as blighted, and it was believed that a new use would increase their production value, and thus benefit the city's economy at large. Today, blight designations are an extremely contentious issue; but in 1916, few citizens felt empowered to question these findings.

"Today people are moving back into areas previously deemed 'blighted.' This begs the question: had they been left alone in 1916, might they have evolved into vibrant neighborhoods?"

Residential land uses existing within newly created manufacturing zones were 'grandfathered' in, meaning they were allowed to remain. Many of these 'nonconforming' homes within the manufacturing zones were later abandoned due to the noxious operations around them and soon replaced by auto dismantling scrap yards and other industrial land uses.

Today people are moving back into areas previously deemed 'blighted' at such a rapid rate that the Department of City Planning (DCP) is allowing new residential land uses in the underutilized manufacturing zones. This begs the question: had these areas been left alone in 1916, might they have evolved into vibrant neighborhoods with strong communities?

The 1916 Zoning Resolution's neglect of equity issues has brought new problems to the table today. Currently, DCP is working to figure out how to regulate the manufacturing zones so that the noxious uses will not negatively impact the growing communities that surround them. Challenges for urban planners include remediation of the brownfields created by industrial uses and the alleviation of current environmental degradation, all while attempting to retain industrial operations in New York City.

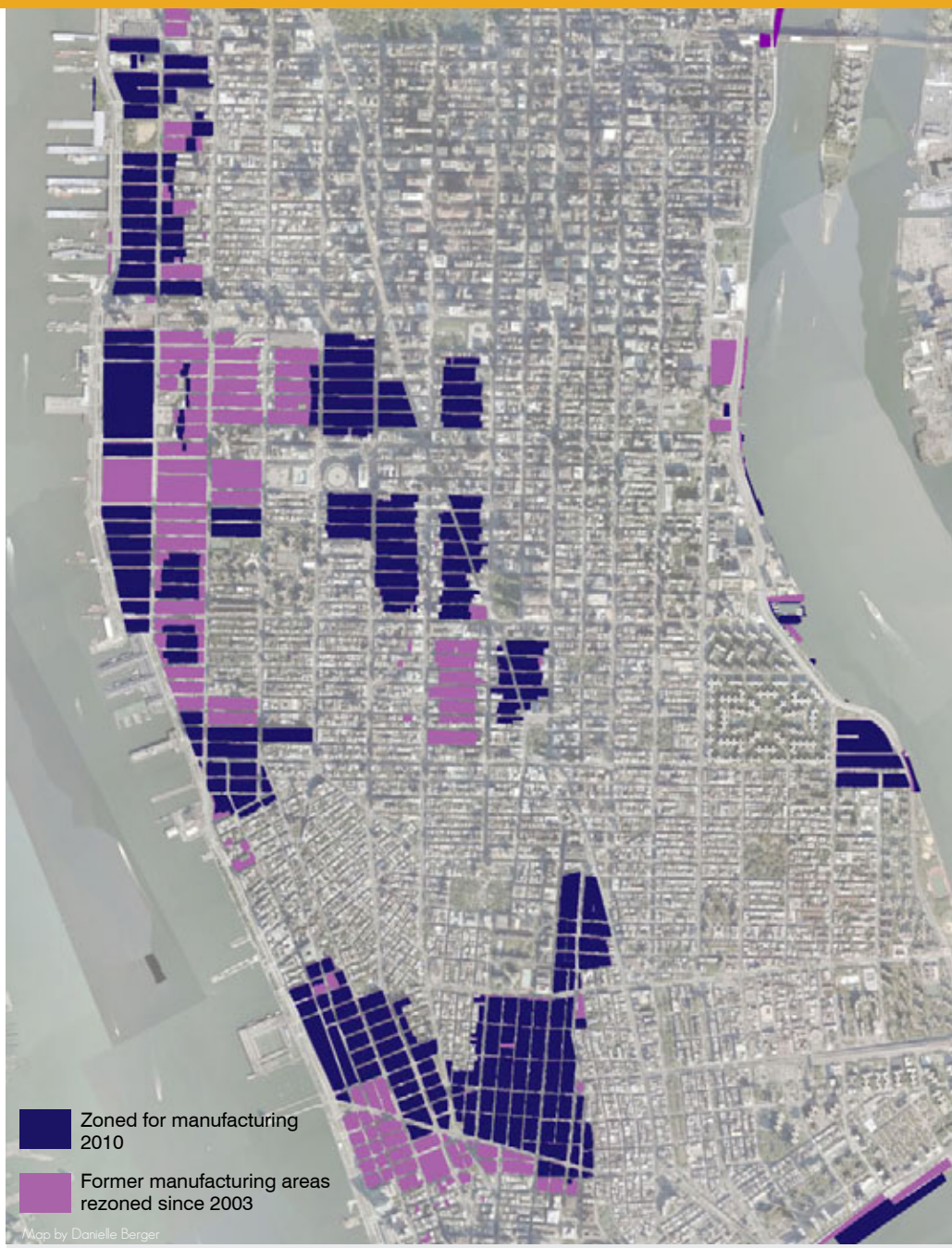
Manufacturing zones and the industrial businesses that locate within them are important components of the city. The Economic Development Corporation has created Industrial Business Zones to support and protect these businesses in the face of encroaching residential development. Industrial operations such as car dismantlers and scrap metal processors create jobs for residents and

Left: The Domino Sugar Factory in Williamsburg shut down in 2003 and is being converted for residential use.

enable the recycling of metal and other limited natural resources the City needs. But they can have many negative impacts on the surrounding environment. Dust and fluids from dismantled cars, oil tanks, and construction demolition debris can infiltrate the air and water around these operations.

The New York State Department of Environmental Protection (DEC) has extensive provisions to regulate industrial operations, but does not have the financial ability or manpower to keep track of the smaller, more numerous car dismantlers, scrap metal processors, and other industrial businesses in New York City. The Department of Sanitation has also adopted many of these regulations, and has authority to enforce them.

Although the DCP researches and recommends regulations, it is often up to other city agencies to enforce them. Zoning is one of the main environmental tools used by urban planners, but does it really have the capacity to address this issue? In the future, as in the past, it may be necessary for other agencies or new coalitions to step forward as industrial regulators to support the environmental and social sustainability of these businesses.

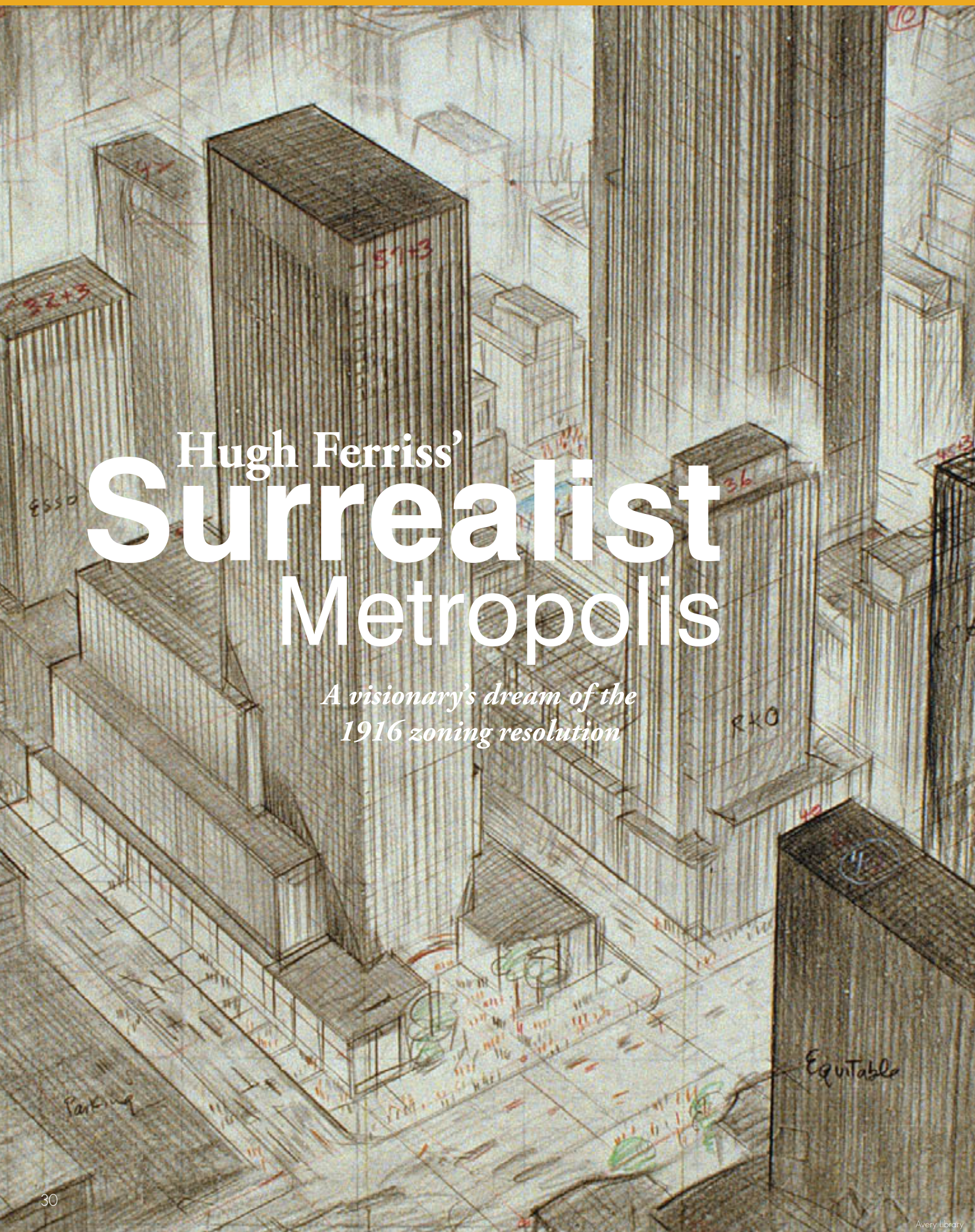


The Ghost of Manufacturing's Past

Danielle Berger *MSUP 2013*

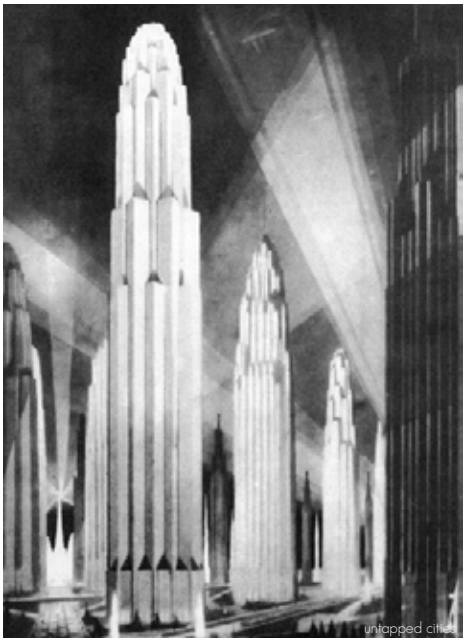
In a place like Manhattan where skyscrapers dominate the skyline, creating a new vertical landscape to feed a market where real estate prices are the highest in the country, it is hard to imagine land disappearing. However, land zoned for manufacturing is quickly becoming part of New York City history.

Since 2002, over one fifth of the city has been rezoned, often transforming manufacturing lands into commercial, residential and mixed-use space. This has made it harder and harder for the local manufacturing economy to remain, meaning reductions in well-paying manufacturing employment, and a decreasing availability of locally made goods. In a global economy where oil prices are on the rise and there is a push to buy local, it seems counterintuitive to rezone some of the most productive land in Manhattan. Additionally, once land is zoned for commercial or residential it is nearly impossible for it to be rezoned as manufacturing. Thus rezoning is irrevocably changing the economic landscape of Manhattan.



Hugh Ferriss' Surrealist Metropolis

A visionary's dream of the 1916 zoning resolution



Hugh Ferriss painting his surrealist images in his studio,1922.

Benjamin Waldman and
Michelle Young *MSUP 2012*

When it was completed, the 1915 Equitable Building had the largest total floor area in the world. Although it could never claim the title as the world's tallest building, the skyscraper was nevertheless a behemoth that eclipsed the sun and cast a shadow onto its neighbors. Many New Yorkers feared that the carte blanche power held by developers would result in a city in which sunlight was a luxury, plunging residents into a world of darkness. The time for intervention was ripe, and the government stepped up to the plate with a novel idea — the first comprehensive zoning resolution in the country.

The 1916 New York City Zoning Resolution imposed height and setback limits and distinguished between residential and industrial districts. Its purpose was clear — to prevent buildings at the scale of the Equitable Building; but figuring out how to implement the resolution was a different story. Architects began navigating ways to master the resolution, and in so doing, usher in a new era in New York City building.

In 1922, architect and delineator Hugh Ferriss was commissioned by the famous architect Harvey Wiley Corbett to draw a series of step-by-step perspectives demonstrating the consequences and potential of the new 1916 zoning laws. Ferriss envisioned New York as a marvelous city of skyscrapers. As a result of those initial drawings, Ferriss produced a remarkable book entitled T*he Metropolis of Tomorrow* in 1929. It portrayed how New York City would look in the future and how it would change over the course of the proceeding decades. His vision of the city possesses a beautifully eerie yet calm feel. The drawings, which eschew a human presence, have a post-apocalyptic quality reminiscent of the city of Fritz Lang's classic film, *Metropolis*.

Ferriss' drawings were produced in an age when architecture was synonymous with vision. Radical social changes resulting from the industrial age led to the belief that if an architect could dream it, it could be built. A lack of imagination was the only impediment to outdoing one's rivals, and the skyline of New York City was reshaped with such vision.

In the end, many of the buildings based on Ferriss' drawings were never realized. They epitomized a grand vision of New York City that was not firmly codified. As the priorities of urban planners changed, it only became a matter of time before the city's zoning regulations would be given a fresh start.

In 1961, New York City reformed its zoning code, doing away with the archaic 1916 regulations. Many of the 1916 Zoning Resolution's underlying planning principles had failed the test of time since they did not allow for the city to grow sustainably. The 1961 code attempted to remedy this problem by encouraging privately owned public spaces and was based on floor area ratio instead of setbacks. Zoning now served not only to ease the density of the city, but also to better integrate buildings and their individual environments. This revision serves as the basis for how the New York City Department of City Planning oversees the zoning process today.

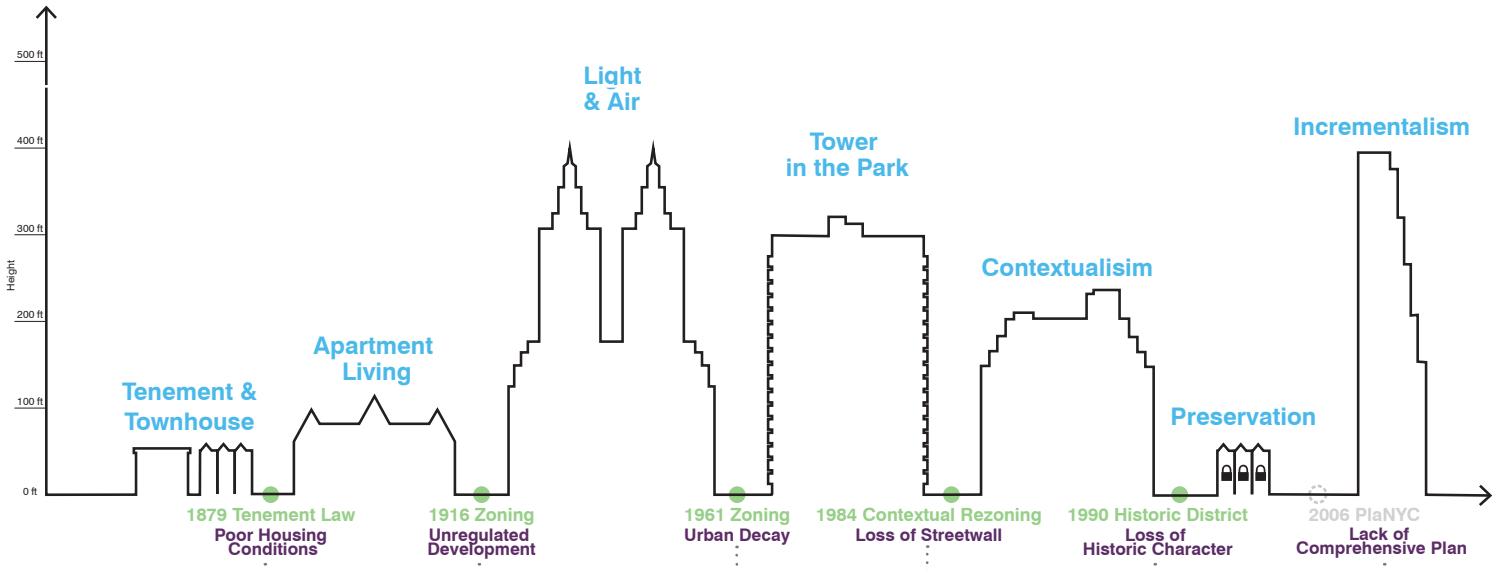
The New York City Department of City Planning stresses the importance of sustainability in its description of how the present zoning code works. While zoning laws originally focused on skyscrapers and individual buildings, today, the regulations attempt to comprehensively address a myriad of urban planning issues from affordable housing to promoting fresh food stores in underserved areas to requiring bicycle parking in some buildings.

Each zoning law has left a distinctive mark on the city. From the Daily News Building to the Chrysler Building to the Empire State Building, the 1916 zoning laws demonstrated, with help from the ingenuity of Hugh Ferriss, that buildings should be cognizant of the space around them. Today's zoning laws attempt to make the city more than the sum of its parts, encouraging development that is integrated with its local environments. As urban planners and architects, it is important to remember that zoning laws are not set in stone. Based on the changes over the past hundred years, one can only wonder what the future may bring.

Zoning Shapes the City

Alex Wallach *MSUP 2012*

As seen in the different residential building typologies of Manhattan's Upper West Side, the form of the built environment is constantly being shaped by zoning and land use regulation. The types of residences on the Upper West Side can be summarized by seven different **theories of urbanism**, punctuated by **government interventions** that responded to specific **problems of urban life**.



Housing in old New York City consisted of townhouses for the rich and tenements for the poor. In response to unhealthy housing conditions, the City enacted tenement laws, ensuring that these buildings had air shafts so that every room had access to a window.

At the turn of the century, apartment buildings with courtyards became popular for the wealthy and the emerging middle class. Unregulated development helped prompt the City to enact zoning that protected residential neighborhoods from noxious uses.

Later apartment buildings took advantage of the 1916 zoning ordinance, which allowed for soaring residential towers to ensure access to light and air. After the city began suffering from urban decay, the 1961 zoning allowed for large-scale urban renewal.

Inspired by Le Corbusier's "Tower in the Park" idea, the 1961 zoning encouraged large towers surrounded by opens space. When this created isolating spaces, contextual zoning was enacted to ensure buildings would maintain a consistent streetwall and height.

Contextual buildings were more consistent with the traditional city, yet there was no protection of the neighborhood's historic character. A historic district designation ensured that new development would be appropriate to the area's historic resources.

Today, new development occurs in the area incrementally, without a comprehensive plan. Instead, the municipal planning document PlaNYC addresses the City's priorities but does not fully address the effects of incremental development, which strains infrastructure.

The Legacy of the 1916 Zoning Ordinance

New York City owes its signature "wedding cake" architecture to the Equitable Building

120 Wall Street, 1929

After the previous headquarters for the Equitable Life Assurance Society of the United States burned down in 1912, the site at 120 Broadway near Trinity Church was selected as the location for its replacement. The new Equitable building reached an unprecedented scale, and at 28,000 square meters, was the largest office building in the world. Because it occupied the entire block and rose 38 stories straight up, it cast a 7-acre shadow, shrouding Lower Manhattan's narrow streets in darkness and blocking sunlight to the lower floors of surrounding buildings.

Opponents feared that if more Equitable-like buildings were constructed, the city would be left in a state of permanent darkness. Within a year, the City passed the first zoning legislation in the nation, citing the Equitable Building to justify requirements that new buildings have setbacks along a "sky exposure plane" to allow light and air to reach the streets. As a result, when new skyscrapers emerged in the 1920s and '30s, architects worked within these setback requirements, creating the unique tiered "wedding cake" building that defined the Art Deco style and became a fixture of the New York City landscape.

"By the end of the 1920s the setback skyscraper, originally built in response to a New York zoning code, became a style that caught on from Chicago to Shanghai"

- Eric Peter Nash

The Building that started it all

The Equitable Building (1915) at 120 Broadway helped trigger New York City's 1916 Zoning Ordinance that shaped the iconic Manhattan skyline

Library of Congress

New York City's Energy Frontier

Cool rooftop solutions to a hot city problem

Lisa Blake *MSUP 2012*

This past summer, the Mayor's Office, in cooperation with the NYCEDC and other organizations, launched the NYC Solar Map website (nycsolarmap.com), one of the City's most innovative environmental sustainability solutions to date. This interactive GIS map depicts existing solar photovoltaic systems (solar PV) and thermal installations throughout New York City and allows users to click on buildings to determine the costs, incentives, and payback period of installing solar PV on each building's rooftop. To further assist building owners, the website provides additional informational resources such as a list of approved solar PV installers, a description of different solar technologies, and assistance with rooftop energy efficiency measures

The Mayor's Office also oversaw the enactment of the "Greener, Greater, Buildings Plan" this summer, an aggressive energy efficiency plan for buildings in New York City. This plan is the most comprehensive set of building energy efficiency laws in the nation. It rectifies loopholes in New York City's energy code for construction projects, requires that annual energy efficiency benchmarking (recording baseline levels) be publicly disclosed, and mandates a set of cost-effective energy efficiency upgrades and evaluations for the city's largest buildings, both public and private. Using 2005 levels as the baseline year, this plan is anticipated to reduce CO_2 emission citywide by 7.5 percent by the year 2030.

Along with City initiatives, community groups also joined the environmental effort. One example was the Model Block Project; an ongoing demonstration project that seeks to showcase what communities can do when they work collectively towards environmental goals.

The Model Block Project, a movement loosely coordinated by Manhattan Borough President Scott Stringer's office, is carried out through the actions and innovative ideas of community groups such as Go Green! Lower East Side and the White Roof Project, a non-profit dedicated to reducing energy costs and carbon emissions by painting New York City rooftops white. As Heather James, the Executive Director of the White Roof Project, explains, the Lower East Side was chosen for this project because it has a high incidence of environmental injustice and, due in part to its many tenement buildings, is considered an urban heat island hotspot.

"While none of these initiatives will solve all of New York's environmental challenges, when viewed comprehensively, these programs can have a huge impact."

On August 22nd, the Model Block Project was officially launched when the White Roof Project's coordinated volunteer effort began. Over 150 volunteers worked to coat the roofs of all of the buildings on one entire New York City block - a cost effective method for reducing the urban heat island effect. (Note: with the passage of Local Law 21, building codes now require that all new buildings or old ones whose roofs are being renovated must have a certain percentage of their roofs coated with reflective paint). In addition to the coordinated white roof painting, other environmental initiatives are in store for the Lower East Side, including helping residents get energy audits and creating a more comprehensive recycling program.

Another innovative environmental rooftop initiative in New York City is Eagle Street Rooftop Farm, an organic farm located in Greenpoint, Brooklyn. This 6,000 square foot farm is located on a warehouse rooftop. It provides the environmental benefits typically associated with traditional green roofs, such as reducing the urban heat island effect and preventing storm water runoff. But it also distributes fresh produce to local residents and nearby restaurants through its community agriculture program and onsite farm market. Using its educational and volunteer programs, initiatives like Eagle Street Rooftop Farm also help the public learn about urban food systems.

While none of these initiatives above will solve all of New York's environmental challenges, when viewed comprehensively, these programs can have a huge impact. Even more encouraging is the existence of both top-down and bottom-up solutions. Together, this combination will undoubtedly produce the most effective sustainability solutions.


Lisa Blake

Is White the New Green?

Comparison of Roofs - Air Temp 90°

WHITE ROOF		BLACK ROOF
100°	*Roof Temp*	180°
80°	*Inside Temp*	115°
85%	*Reflected Sunlight*	20%
Reduces Electricity 40%		*Heats Storm Water* 30%

Source: www.whiteroofproject.com

Code Green

Lawyers debate the future of the City's zoning

Claudia Huerta *MSUP 2012*

In September, the New York City Bar Association Committee on Land Use, Planning, and Zoning published a paper about the future of zoning titled "Further Utilizing the Zoning Resolution to Create a More Sustainable New York City, Better Prepared to Adapt to Climate Change." The paper was based on ideas presented at recent forums held at City College that brought together planning minds from throughout New York City to discuss how the 50 year-old Zoning Resolution can be used to reduce carbon emissions, improve sustainability and help the city address climate change realities.

At its core, zoning designates and defines residential, commercial, and manufacturing districts throughout a city. In New York City it also regulates the use of land, the size, height and even shape of buildings, grants bonuses for amenities and social equity provisions like affordable housing, and outlines the approval processes for special permits and variances. The NYC Bar Association Committee advocated that amending the current Zoning Resolution could make the city more sustainable.

The call for sustainable zoning amendments is long overdue. Since the release of PlaNYC in 2007, the City's overarching sustainability document, "green" stipulations have been added to the Resolution. These include encouraging transit oriented development (TOD), requiring bicycle parking in new buildings and garages, and calling for stricter permeable surface regulations. Mayor Michael Bloomberg and Council Speaker Christine Quinn have also put together a Green Codes Task Force to update the Building Codes to include new green sustainable standards and rules.

One particular strategy that seems reasonable as an incentive to help produce more sustainable development is the "Sustainable Building Program." The program would provide additional incentives for developers to exceed required energy and emissions standards by providing similar incentives like the current affordable housing provision bonuses like additional FAR (floor area ratio) bonuses, permitted obstructions (like solar panels), or waivers of certain height and setback requirements. While these policies sound like no-brainers, setting sustainability standards for developers to meet can be difficult. As more "green" policies take effect and newer more sustainable technologies hit the marketplace, choosing the most effective "sustainability" amendment for a long-term zoning code is becoming increasingly difficult.

With such high growth in green technology markets, sustainable products are becoming more economically competitive with their non-green counterparts. As the playing field levels, setting sustainability performance system goals also becomes more complicated than simply demanding a higher energy performance matrix of today's mainstream systems. If goals are set too low they will have to be updated more regularly in order for the sustainability code benefits to outperform what the market is otherwise producing without government intervention. Moreover, policy and regulation change in the public sector tends to be time-intensive, thus choosing optimum sustainability performance goals becomes even more paramount for policy makers.

> *"Building owners face an uphill battle of zoning disincentives that make going green onerous"*

Last year in 2010 the New York City Solar America City Partnership selected several neighborhoods that are susceptible to brownouts and blackouts but could support large-scale solar energy production as Solar Empowerment Zones. However, current height and setback provisions and yard regulations

What is the Sustainable Future of New York City?

Illustration by Jeffrey Yuen

Status Quo

Green Density Bonus

Transit Oriented Development

Solar

Literally Green

Wind

Modular Tree Houses

prohibit solar panels on rooftops or in yards because solar panels or wind turbines are not part of the permitted obstructions that can exceed maximum building heights. This means that if building owners want to make their buildings greener by installing solar panels or wind turbines, they are likely to face an uphill battle of zoning disincentives that make going green onerous.

While this might seem perverse, it is understandable why some policy makers are weary of permitting solar panels and wind turbines installations on top of New York City roofs. Enormous solar panels or wind turbines could forever transform the New York City skyline in an aesthetically negative way. Solar panels and wind turbines have already faced staunch opposition from politicians, preservationists, developers and community members. If they are to take off in cities less environmentally progressive than Portland, Oregon, they might need to be even smaller than the current small wind turbines and solar panels made for urban renewable energy farms.

Today, 50 years after New York City's second official Zoning Resolution in 1961, the question many planning professionals, professors and policy makers are asking is: "What is the future of zoning for New York City?" The New York City Bar Association takes a stab at delineating a current issue that zoning has so far not adequately addressed: sustainability. New York City has changed drastically since 1961, and as it continues to change amidst growing concerns for climate change, the Zoning Resolution should change with it. This means deciding what amendments should be added to help promote and create a greener, more sustainable environment and mitigate climate change impacts in New York City.

Illustration by Jeffrey Yuen

Butt Out!

Governing smokers on Columbia's Morningside campus

Jigar Bhatt *UP PhD*

On Monday, November 15, 2010 the *Columbia Daily Spectator*, Columbia University's independent newspaper, headlined an article titled 'USenate debates campus smoking ban.' The article outlined the resolution to ban smoking within 50 feet of all buildings on Columbia's Morningside Heights campus recently proposed by the University Senate's External Relations Committee. Immediately after the policy was proposed, Michael Adler, a Columbia Business School professor and self-proclaimed smoker, spoke out against the proposal. He offered an amendment that would include building

small umbrella-like huts around campus painted in "Columbia blue" that would serve as weather-protected designated smoking areas. Such a suggestion begs the question, what led a professor and member of the University Senate to so easily accept further curtailments on his ability to smoke tobacco, with even his proposal presenting a radical departure from previous smoking freedoms?

Attempts at managing tobacco are as old as tobacco itself. The sovereign King James I of England published a diatribe against smoking in 1604. What is different about the policies, regulations, and associations made today compared to those made by King James I and earlier governments? Governments today are legislating, regulating, and disciplining not just tobacco but the smokers themselves. We are witnessing a slow and subtle transformation in the way that the government and public come together to brand smokers and control the way they can occupy space.

Taxation of tobacco was common in Prussia and Italy in the early 1800s and could be found in some North American states as early as the 1850s. Despite these taxes, there was little stopping the exponential rise in tobacco use to the point where it became nearly ubiquitous in American society during the early 20th century. This changed mid-century with the percentage of Americans smoking being cut in half between 1965 and 2008 from about 40% to 21%. Today, approximately 45 million Americans smoke.

Smoking cigarettes in the United States is a legal activity despite considerable regulation in recent decades. Up until the 1960s, smoking tobacco was not only legal, but highly encouraged. While unimaginable today, during the 1940s doctors were used to promote and market cigarettes. This all started to change in 1950 when medical researchers in the United States and the United Kingdom almost simultaneously discovered a causal link between smoking tobacco and lung cancer. In the 1960s, new findings from clinical trials spawned anti-smoking advocates, paving the way for the 1964 US Surgeon General's decision to unequivocally recommend that the public stop smoking because of the links between cigarette use and lung cancer.

As a result of this medical research, the government, particularly health departments, began intervening to control tobacco use in earnest. Tobacco control regulation can be roughly divided into two general strategies: those directed at tobacco itself and those against its smokers. The very first tobacco control efforts were aimed at tobacco companies through regulation and elimination of tax breaks and subsidies. By the early 1990s, state governments were passing legislation making it illegal for anyone to sell cigarettes or tobacco products to minors under 18 years of age.

A different set of government strategies is aimed at the smoker. These include cigarette taxes and Clean Air Acts. Clean Air Act legislation appeared after evidence that secondhand smoke affects others' health and aimed at banning smoking in areas to ensure that the air is tobacco smoke free. Evidence on the effects of second hand smoke dates to as early as 1963 but has not been as widely accepted as the direct link between smokers and their own health.

Since the 1975 Minnesota Clean Indoor Air Act, the first of its kind to separate smokers from non-smokers, smoking has been banned in the US on public buses, trains, buildings, and other public property such as schools,

Alexander McQuilkin

hospitals, and universities. Smoking is also banned on private property such as apartment buildings and condominiums, and increasingly on commonly held property such as parks, sidewalks, and beaches.

Strategies aimed at tobacco companies and retailers have been adamantly enforced while those aimed at smokers and smoke-free areas have only been loosely, inconsistently, or indirectly enforced. Most often, authorities leave policing of conduct up to the lay public by establishing norms and expectations. Formal authorities stay on standby as a final recourse. This is the case with Columbia University's Tobacco Working Group proposal, which states that "after the [smoking ban] policy has been better advertised, enforcement will fall to Public Safety, although Vice President for Campus Services Scott Wright said he is hoping the policy will be enforced by students and faculty themselves."

"Increasingly, employers are targeting smokers, from increasing the premiums on their paid health insurance to outright refusals to hire. According to the American Civil Liberties Union, at least 6000 companies refuse to hire smokers."

This has the effect of handing down the costs and responsibilities of smoking to ordinary citizens. Smoking is taxed, space is regulated, and information campaigns relay messages centered on health and productivity. Everyone is to some extent caught up around the problem of smoking. Ordinary citizens become engaged in correcting behavior for 'a smoker's own good' but often with a stigmatizing subtext couched in moral norms.

The paradox of this form of governance is that participation is voluntary yet nearly universal. Ordinary smokers and non-smokers are compelled to discipline themselves because we internalize the messages and practices of the institutions that govern us (e.g. Columbia University, the New York City government). These messages and practices related to smoking work particularly well in the West where caring for the physical body and prolonging life are primary, if not overriding, values.

Anti-smoking advocates wishing to reduce tobacco consumption largely come from the middle and upper middle classes, and this can be seen in the way boundaries are developed around where smoking is prohibited. Smoking bans have been most enthusiastically applied to spaces occupied by white-collar professionals, such as office environments. A similar enthusiasm is not displayed for spaces predominated by lower-middle- and lower-income groups such as bingo halls, pool halls, and taverns.

This anti-smoking bias in agencies, institutions, and the media has also given birth to the creation of a new public identity – the polluting smoker: someone who pollutes her own body and the environment around her through second-hand smoke, threatening not only her own welfare but the smooth functioning of a productive society. However, while car exhaust also contains carbon monoxide, idling vehicles and their operators are not the object of intense regulation. Faced with the knowledge that smoking pollutes, those who continue to smoke faced a heightened level of moral outrage.

Some argue that the issue of stigmatized smokers is overdrawn. After all, the stigma associated with smoking and smokers has reduced smoking rates and potentially saved lives. However, those critical of stigmatization argue that new anti-smoking policies are failing to lower stubborn smoking rates among lower income groups and youth.

Policies designed to punish or segregate a designated group of individuals from others, such as Clean Air Acts, stigmatize. Whether they are indoor smoking sections, outdoor loading docks, or umbrella shaped huts painted Columbia blue, they exclude certain groups from areas where non-smokers — the majority of Americans — can freely occupy. This sets off a particular set of power relations where stigmatization contributes to entrenching existing socioeconomic inequalities.

Stigma has led to isolated cases of smokers being discriminated by health care service providers. Increasingly, employers are targeting smokers, from increasing the premiums on their paid health insurance to outright refusals to hire. According to the American Civil Liberties Union, at least 6000 companies refuse to hire smokers. Despite these figures, discussion of the social and environmental risks that could be contributing to sustained smoking levels among marginalized groups like low-income single mothers remains absent from anti-smoking legislation.

After rancorous debate in the University Senate, the fifty foot ban was voted down. However, buttressed by Mayor Bloomberg's May 2011 ban on smoking in all public parks, Columbia's anti-smoking advocates are reenergized to reach their ultimate objective – a campus-wide smoking ban. Like most anti-smoking legislation, these bans and the debates they generate are much less about public health and much more about how citizens want to relate to each other in public and semi-public spaces. The outcome of these struggles will demonstrate how much official institutions and a select stratum of society can rely on ordinary citizens to carry out policies at their behest.

Putting a Price on Va¢ancy

Roadblocks to converting New York City's abandoned lots into affordable housing

Caroline Bauer *MSUP 2012*

Utilizing vacant and abandoned buildings is an important policy move as the scarcity of land increases, especially in New York City. In 2007, the New York-based NGO Picture the Homeless published the policy report, "Homeless People Count: Vacant Properties in Manhattan," arguing for the redevelopment of vacant/abandoned sites as affordable housing units. Picture the Homeless conducted a vacant site count in Manhattan, finding that in 2006 there were 1,723 vacant lots and buildings, totaling 11,170 vacant units. In a snapshot study of the issue for East Harlem, the group found that of the 109 vacant sites in the neighborhood, 94% were privately owned, with many owners of each building owing $2,220 in taxes and fines at the time for keeping the property vacant, an indication that the landlords are financially able to hold out for desired rents.

The cover page of the report is a bolded quote by Peter Marcuse, a Professor Emeritus of Urban Planning at Columbia University: "The housing crisis does not exist because the system isn't working. It exists because that's the way the system works." Tucked away on page nine of the report, HPD Commissioner Shaun Donovan responds to Picture The Homeless' request for a city-wide building count: "A comprehensive count, in our opinion, would not be cost effective. Such an effort would be labor intensive and time consuming and would not add appreciably to our understanding of the issue. In the end, because our housing market is so dynamic, any count would only represent a snapshot. *In addition, housing and neighborhood development in our city requires that some property be temporarily held off the market to assemble development opportunities*" (emphasis added). Case in point, Marcuse.

Not surprisingly, the report generated substantial support for the redevelopment of vacant buildings into affordable housing units. In 2007, the New York-based think tank Drum Major Institute hosted a forum on reuse of vacant buildings as affordable housing featuring Thomas Menino, former Boston mayor responsible for the city's successful building census and Abandoned Housing Strategy. His user-friendly policy suggestion provoked a holistic discussion on the prevalent homelessness problem in the current era; the forum covered topics including how to appropriately set income brackets for housing assistance eligibility and the energy efficiency gains from retrofitting abandoned properties.

Interestingly, continued political support for the issue has focused more on getting missing vacancy data rather than for introducing new incentive programs for developers. In February 2010, East Harlem Councilwoman Melissa Mark-Viverito developed Introduction 48, which called for an annual citywide census of vacant properties. However, it failed to provide anything but vague recommendations. For example, the amendment does not include budget details nor does it designate a City office responsible for conducting the survey. Here, Picture the Homeless has stepped in by providing these missing details in a cost-analysis of two potential approaches for conducting the census. Housing Works, another New York-

based NGO, published a report in July 2010, which first suggests the city follow Boston's model and estimates that the survey would cost "under $50,000 annually." Hunter College professor Tom Angotti suggests conducting the survey through community boards and unpaid interns and estimates such an effort would cost "under $60,000." Clearly, this analysis is still quite vague and did not convince the Council to overturn their rejection of Intro 48.

Again in August 2010, Picture the Homeless stepped in by launching what the City refused to fund: an interactive, real-time map of vacant properties in the city using Ushahidi crowd-sourcing software. So far, the tool has inventoried 11,523 vacant lots and buildings in the City. Though a large accomplishment, the crowd-sourced census is only one item to be checked off on the agenda of an issue promoted so intensely by Picture The Homeless. It remains to be seen how these properties can be released from the grip of speculative practices and transformed into productive parcels again.

Book Review

Top of the Rock

Millay Kogan *MSUP 2013*

Analysis of New York City's built environment is nothing new. Throughout its history, New York City has been a favorite among architects, urban planners, historians, academics and tourists who are fascinated not only by the sheer size of the city, but by its unique and adaptive physical nature as well: the fluctuations in its neighborhood demographics, its cultural and financial influence on the United States and the world at large, its parks, subway systems, bridges and more. Jamie Kruse and Elizabeth Ellsworth of Friends of the Pleistocene — an organization interested in the geological epoch that occurred between approximately 2.5 million to 10,000 years ago — have decided to explore an entirely different aspect of New York City, one that not only places the city within the framework of its present or immediate circumstances, but instead situates the city in a much larger context: geologic time.

Their recently published book, *Geologic City: A Field Guide to the Geoarchitecture of New York*, is a unique and thoughtful field guide that encourages its readers to explore the way that geologic forces have physically shaped New York City, as well as to consider how the city is, in turn, shaping even larger geological systems and processes around it. Its original subject matter coupled with its playful layout and thoughtful visual design makes this project appealing to anyone, whether or not they are interested in New York City or geology.

Geologic City's premise is that "New York City is a geologic hot spot" where "humans channel and reshuffle earth materials on a scale and with consequences that rival major geologic events." The reader is shown twenty carefully selected sites around New York City where geologic forces are at play, highlighting an array of monumental sites, as well as everyday features, that one can easily observe in the city. From the seemingly commonplace color of taxi cabs — the synthetic "Taxi Yellow" paint color is derived from crude oil that is the transformed product of animals and plants living in the Devonian, Cretaceous and Permian periods — to the gold reserves found in the New York Federal Reserve Bank — the remnants of a type II variety supernova now housed in a vault sitting on 450-million-year-old Manhattan schist bedrock.

Geologic City pushes its readers to consider New York City's place within a geologic timescale, as "the very fabric of our daily lives depends on bringing forward into the present and 'using up' more and more materials that took millennia for the Earth to form." Furthermore, it challenges its audience to consider the more radical notion that New York City and its residents are part of a larger time scale known as the "anthropocene," where humans are actually able to affect the Earth's geologic future.

Kruse and Ellsworth's ability to present such a complex and foreboding concept in a seemingly lighthearted, visually attractive and poetic way will surely attract readers from all intellectual backgrounds. In doing so, *Geologic City* promises to reach a wide audience, allowing readers the opportunity to reflect on a number of important and increasingly relevant ideas that may affect not only their lives, but perhaps how we measure time and history.

Density is not Destiny

Sprawled cities shouldn't write off good public transit

Jake Schabas *MSUP 2012*

When it comes to good rapid transit, high density is generally a given. Without a critical mass of people — the skyscrapers of Manhattan and Hong Kong or the dense mazes of London and Paris — higher order public transportation simply isn't possible. Just look at the suburbs all around America, where dispersed quarter-acre and half-acre single-family lots make supporting sporadic bus lines a challenge, even with significant subsidies.

Or is it?

The relationship between density and travel behavior has never been a clear one. For decades academics and practitioners have found that income, race, age, and urban design also influence why people choose to travel in certain ways. Sidewalk-less cul-de-sacs or the social stigmas associated with riding the bus, they argue, might be just as important as the low densities driving people to take their car.

Unsatisfied with this, new research is taking the density critique one step further. In his recently published book *Transport for Suburbia*, Australian professor Paul Mees makes the case that "density is not destiny." The number of dwelling units per acre found in North American and Australian cities, Mees argues, has very little bearing on how people travel.

This seems counter-intuitive when one looks to Manhattan's built-up gridiron and subway network or conversely, Los Angeles' sprawl and accompanying freeways. Both urban forms seem to go hand-in-hand with their accompanying transportation systems. Mees doesn't entirely disagree. Manhattan's upward development was a direct result of the subways, just as L.A.'s freeways — along with new water infrastructure — helped facilitate much of the city's outward growth.

But looking at the two cities as metropolitan regions that include their suburbs where the majority of their growth is occurring tells a vastly different story. In terms of urbanized land, the L.A. region is actually a much more dense metropolis than the New York City region, having on average almost 20 additional people per acre. However, L.A.'s high regional density appears to have had little affect on getting people to take public transit to work: in 2000, only 4.7% of work trips were made by public transport, compared to New York's 24.8%. In contrast, Toronto's 2006 metropolitan region matched L.A.'s regional density yet 22.2% of residents took public transport to work.

The picture remains equally complex when looking at other cities in North America and Australia. In these countries, metropolitan density bares little relation to the number of people taking public transport, biking or walking to work.

Instead, system design and historical policy decisions seem to play a far greater role in the success and failure of different public transit systems. These decisions include whether or not to expand transit service to new suburbs no matter how dense the development. Or providing cross-town lines and local suburban networks to link increasingly dispersed jobs to new housing rather than simply maintaining historical routes to downtown business districts.

Movies like *Who Framed Roger Rabbit?* and documentaries blaming the death of the streetcar on General Motors tell a deceptively appealing tale that America's car culture and public transit failures have come at the hands of conspiratorial car tycoons. On the other hand, narratives like the unwillingness of many local governments to take over public transit companies who refused to expand service to new jobs and developments until they went bankrupt and their systems had fallen into disrepair are rarely raised. With their fares capped at five cents for decades and their routes locked into historical patterns that were becoming increasingly irrelevant, American mass transport providers had legitimate reasons to scrap their streetcars for the cheaper, more flexible buses.

Today planners and transportation engineers are finally recognizing the need to abandon 19th century models of public transit service and match transit routes with today's travel needs. Last year, a New York City Department of City Planning study reported how more New Yorkers live in the same borough they work than don't. These findings are reflected in the new planned Select Bus Service lines, none of which leave the borough where they start. In Tallahassee, Florida, transit planners dramatically re-routed all 26 bus lines in the city one July morning last summer to better serve cross-town and peripheral routes rather than radial suburb to downtown trips.

When it comes to rail-based transit, the challenges of re-orienting public transit service to better meet today's travel demands are huge, since those fixed tracks mean routes lack the flexibility of bus systems.

But it should also come as a relief to know that entire suburbs don't need to be rebuilt at higher densities in order to have good public transit. If we have to wait to rebuild our cities before being able to provide good transit, we're doomed, since global warming, the rapidly developing Asian economies and our own health won't wait. More important still, today more than half of all low-income households and jobs in metropolitan regions are in suburbs. If cities hope to address poverty and increase job access, better transportation in the suburbs is a necessity.

Models like Zurich's integrated pulse-timetable, where bus and rail lines serving sparsely populated rural regions bring riders to transfer points just as their connecting bus or train arrives, or Toronto's frequent service feeder bus lines that deliver suburban riders to subway stations, demonstrate that serving the suburbs is indeed possible.

To be sure, higher densities can definitely help cities get better rapid transit since more residents and job sites make it easy to find high ridership routes. But sprawl shouldn't be written off as impossible to serve with public transit. Increased subsidies might be needed at the start as route changes and service frequencies are increased, but resulting growth in ridership can often quickly make the new systems more efficient to operate.

In other words, density isn't everything. And that's a good thing for the future of public transit in America.

Why do certain **modes of transportation** dominate in one city more than another?
Density is often used to explain travel behavior, but in American metropolitan regions the relationship between density and mode share isn't so clear.

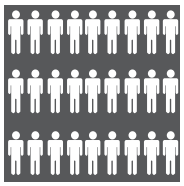
Infographic by Jake Schabas
Source: U.S. Census 2000 and *Transport for Suburbia* by Paul Mees

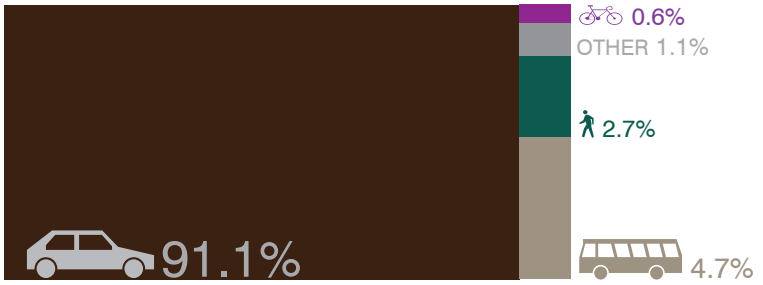
Urbanized Area
(1000+ residents per square mile)

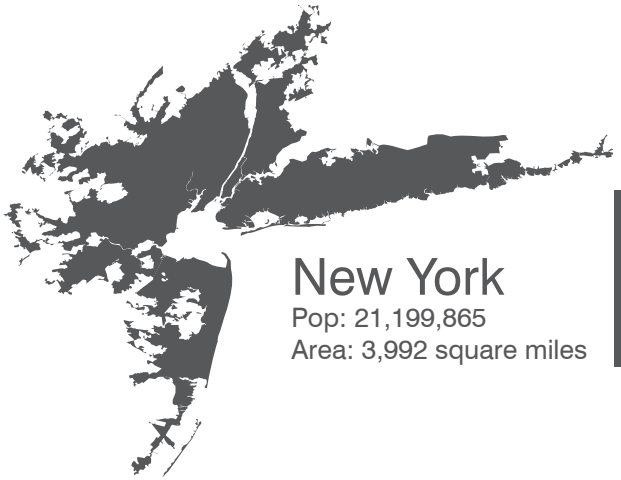
Density
(people per hectare)

Mode Share
(work trip)

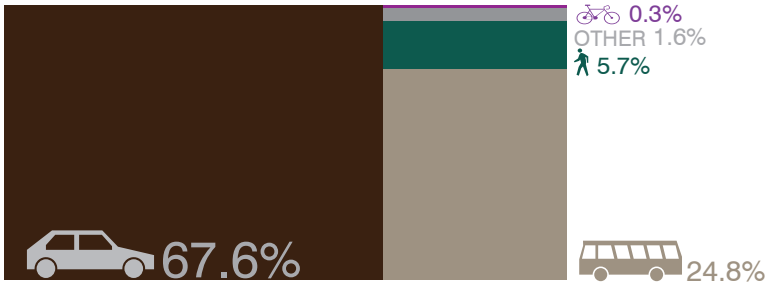
Los Angeles
Pop: 16,373,645
Area: 2,315 square miles



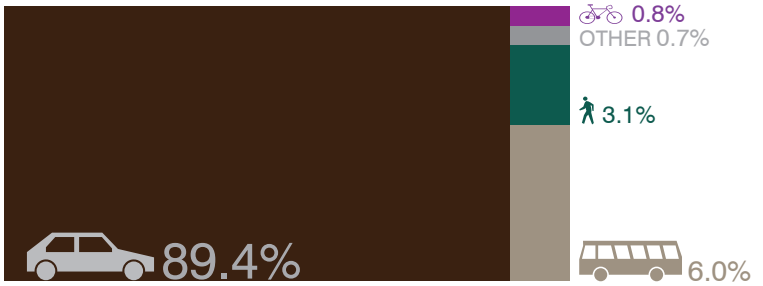


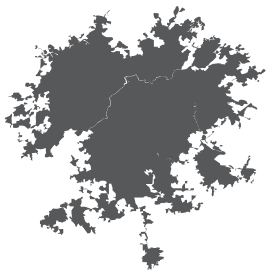


New York
Pop: 21,199,865
Area: 3,992 square miles

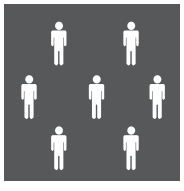


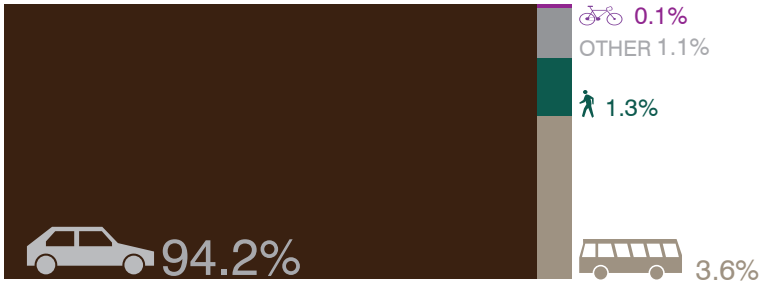
Portland, OR
Pop: 2,265,223
Area: 677 square miles





Atlanta
Pop: 4,112,198
Area: 2,301 square miles





20 miles

100 meters = 328 feet

0 20 40 60 80 100%

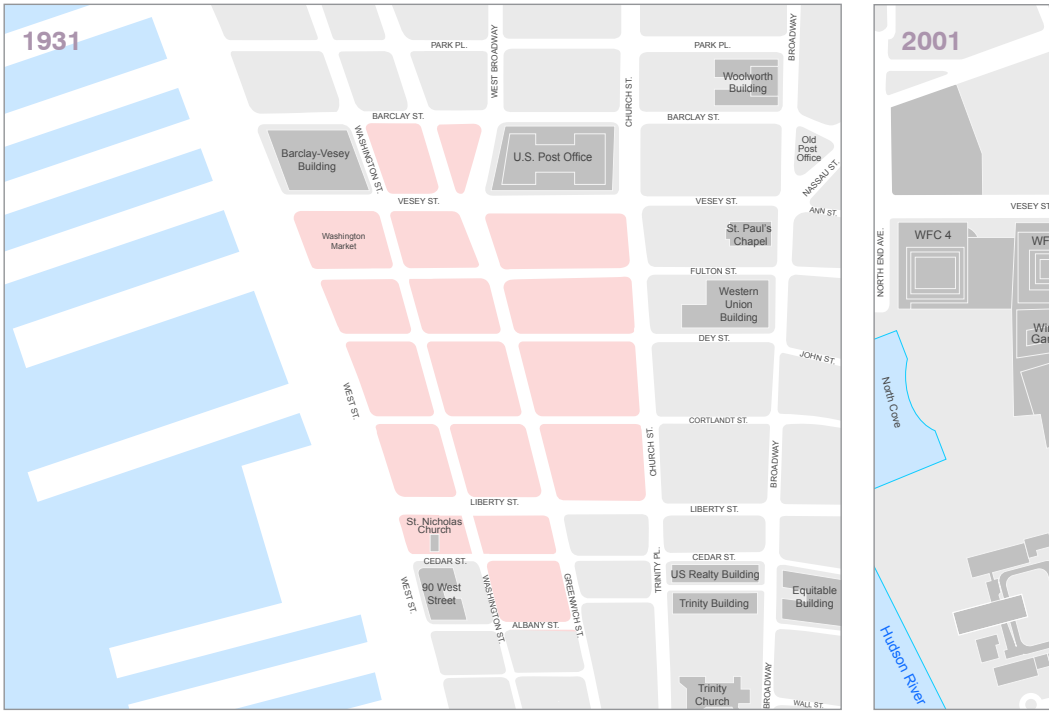
Getting to Work in the American Metropolis

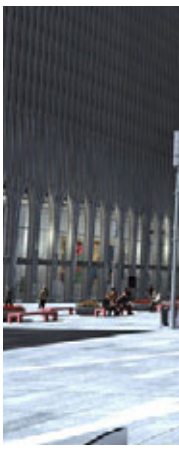
Old is New Again

The street grid returns to the World Trade Center

Alex Wallach *MSUP 2012*

In the decade since the attacks on September 11th, Ground Zero has become a national symbol of recovery and rebuilding. During this process, the 16-acre World Trade Center site in Lower Manhattan has also become a space for discussion on what shape cities should take. In erasing the scars of that terrible day, planners have also taken steps to erase the marks that modernist planning left on New York.





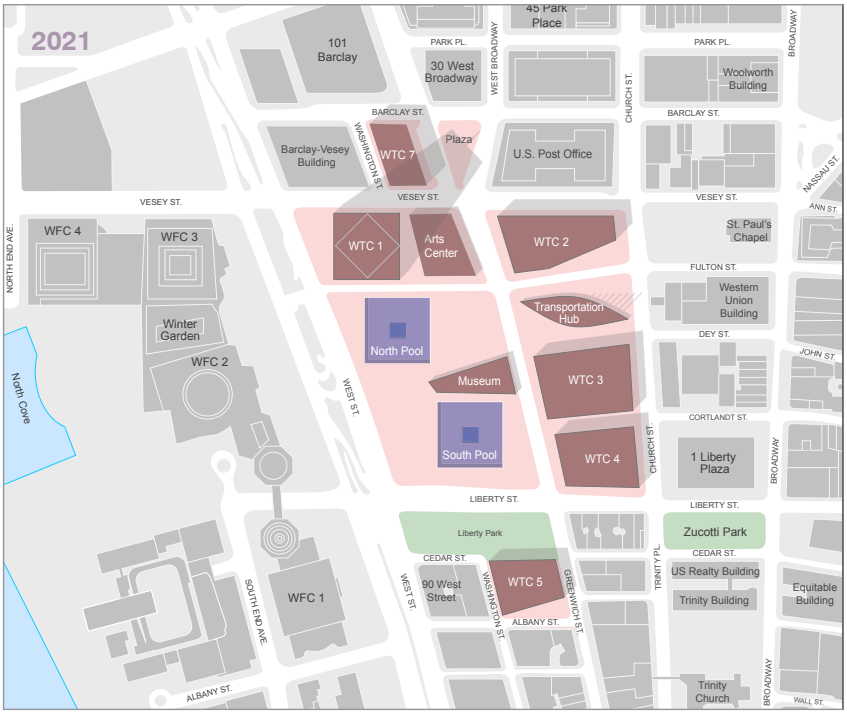
Following World War II, the Radio Row area by Manhattan's declining piers was considered "a down-and-out dark, dangerous part of town," as one contemporary architecture professor at MIT called it. In 1961, the neighborhood was chosen as the site for a massive urban renewal project aimed at spurring investment in struggling Lower Manhattan. The entire neighborhood was to be acquired through eminent domain, bulldozed, and replaced with a megaproject constructed by the Port Authority of New York and New Jersey. All of the streets were closed to create an enormous superblock on which would stand an office complex featuring two super-tall skyscrapers. With its superblock construction, open plaza, and monolithic architecture, the World Trade Center was typical of the modernist planning and design that defined the era.

The project was immediately controversial. Radio Row property owners unsuccessfully sued the city, architects criticized the monolithic aesthetic, and many thought the colossal towers out of place, inappropriate, and disconnected from old New York. Echoing Jane Jacobs' critique of the modernist philosophy, exemplified in her 1961 book, *The Death and Life of Great American Cities*, opponents continued to attack the superblock well into the 1980s. This paralleled the rise of "new urbanism," a design movement that promoted places with small-scale, diverse, walkable communities modeled after traditional urban neighborhoods. To many contemporary commentators, the World Trade Center is remembered as a "deadly dull superblock disengaged from the surrounding streets of lower Manhattan," as a reporter for *The New York Observer* remarked in 2005.

By the time construction on Battery Park City — a residential neighborhood built on landfill from the World Trade Center — had begun in the mid 1980s, these new critiques had taken hold. The superblock plans for Battery Park City from the 1960s and '70s, now seen as barren and dehumanizing, were thrown out. Traditional urban streets extended from Manhattan's grid became the radical new design. Modernist superblocks were out, and traditional streets were in. Out with the new, in with the old.

The destruction of the towers offered a rare opportunity rethink the design of the World Trade Center site. "It was widely known to be a failure of public space that the terrorist attacks oddly permitted to be rectified," explained the reporter from *The New York Observer*. With modernist ideas now unpopular, this was seen as a chance to deconstruct the superblock. Even

Left Image: Cortlandt Street
Center Image: Austin J. Tobin Plaza
Right Image: Future WTC 4



Donald Trump's controversial plan to build replicas of the twin towers adjacent to their original footprints suggested that Fulton Street could be reconnected. Jane Jacobs herself, the great lover of street life, suggested a unique approach to reintroducing connections through the former World Trade Center superblock; in a visit to New York shortly before her passing in 2006, she offered that the grid should not be perfectly restored, but broken decisively with paths that reflect the way people might naturally traverse the site.

The official World Trade Center master plan calls for the reintroduction of Greenwich and Fulton Streets, breaking up the superblock into four quadrants, the largest of which features the original footprints of the towers as two memorial pools designed by Israeli-American architect Michael Arad. The new 7 World Trade Center tower was built on a smaller footprint, allowing Greenwich Street and West Broadway to meet once again. Dey St and Cortlandt St, both disconnected in the 1960s, will return as pedestrian walkways. The plan promises that "these streets will connect adjacent neighborhoods and support the active street life that is characteristic of New York City." Different architects designed each of the new towers, creating the diversity in design that New Urbanists advocate for. A new arts center will bring cultural amenities to the neighborhood. Arad explained the new design of diverse architecture, mixed uses and restored streets would "tie the site back into the city."

Yet the ideas of modernism are not completely behind us. In a critique of Jane Jacobs' ideas following her death, *New York Times* architecture critic Nicolai Ouroussoff claimed that "on an urban island packed with visual noise, the plaza at Lincoln Center — or even at the old World Trade Center — can be a welcome contrast in scale, a moment of haunting silence amid the chaos."

Anyone who has had the opportunity to visit the 9/11 memorial can certainly appreciate the silent beauty and the enormous scale of the fountain pools, made even more haunting by what they represent. Just as ideas on what cities should look like constantly evolve, it will be up to future generations to judge the success of the new design for the World Trade Center. As Jacobs once put it, "the significance of that site now is that we don't know what its significance is. We'll know in fifteen or twenty years."

An elderly man walks through a construction site in Wuhan.


Michael Snidal

Walking in Wuhan

No space for pedestrians in Chinese city's transportation plan

Michael Snidal *MSUP 2012*

In the last five years, Wuhan, China has seen so much infrastructure development that the City has employed a fleet of water trucks for the sole purpose of "clearing up the dust." These capital-intensive projects have made Wuhan the poster city for international economists concerned over local Chinese debt. But when I visited as a planning student, I was less interested in whether the municipal government has borrowed too much money via corrupt local development corporations (it has) or whether a real estate bubble will eventually burst (it will) and more interested in seeing how all this new infrastructure was working out for Chinese citizens on the ground.

Wuhan is a provincial capital located roughly 430 miles inland from Shanghai. With nearly ten million people in the metropolitan area, it is the most populous city in central China. The City is currently building two new airport terminals, 140 miles of subway track, new financial and cultural districts, and a river promenade, among other large municipal projects costing tens of billions of dollars.

As they did in Shanghai and Guangzhou before, Chinese authorities are building for the car as well as for the subway. They are even building for the bicycle, albeit not enough. But governments are still not building for the pedestrian. Walkways are narrow, hip-high gates deter even the most enthusiastic jaywalkers, and traffic lights are unbearably long. The problem is epitomized at large intersections where automobiles have been given such priority that people are forced to walk over or under roadways via steep pedestrian bridges and tunnels. The situation is further exacerbated by construction sites that spill brick and mortar onto the streets and the continual reclamation of open space for new megaprojects. For those who dare travel by foot, the best possible option is invariably an out-of-the-way route or a constant zigzag between cement and exhaust.

I sat down with Professor Baofeng Li, the Dean of the School of Architecture and Urban Planning at Huanzhong University to ask about my observations. He agreed, saying, "this is a very serious problem! Beijing builds for the car to encourage GDP. Then they build the subway to alleviate the resulting congestion. And this all happens so fast and is decided by so few people. Pedestrians don't really fit into the 'Peking planning' equation."

At this pace, the infrastructural foundations of Wuhan will be complete before a potential 'Chinese Winter' ends a top-down technocratic planning process. Let's hope the authorities take a look at the type of planning initiatives being celebrated back in New York City: a walking trail known as the High Line and the pedestrianization of Times Square.

Columbia University in the City of New York
Graduate School of Architecture, Planning and Preservation
http:/blogs.cuit.columbia.edu/urbanmagazine