

What Makes the City Run

*Preserving space for critical
economic activities*

April 2016

Executive Summary

In 2005, Mayor Michael Bloomberg recognized that his initiatives to rezone some industrial areas to create more housing had the unintended consequence of sparking speculation about future rezonings of industrial areas throughout the City. Land prices in industrial areas rose completely out of proportion to how the land could legally be used, leading to widespread displacement and job loss in the industrial sector. Out of this recognition grew the IBZs, areas that the Bloomberg Administration committed - and the de Blasio administration has recommitted - not to rezone for housing. The IBZ policy is essentially a message to industrial property owners to correct their market expectations.

Ten years later, different market and economic conditions are leading to another wave of speculation and displacement. This one is driven by both a surge in rezonings to create more housing and a growing vision that the “creatives” who had moved to New York and into the newly developed housing seeded under Bloomberg also need places to work, eat, shop and play. The IBZ policy was designed for an outdated economic context in which speculation was driven by the prospect of housing development. This policy is no longer adequate to address contemporary conditions in which speculation is also propelled by commercial development to house services ranging from offices to rock-climbing studios to entertainment venues for music, theater, film, and dance. The City needs to adapt the IBZ policy if it is to preserve space for the activities essential to the City's operations, such as the storage, preparation, and delivery of food, fuel, and building materials, as well as the 350,000 blue-collar jobs vital to the vital the basic functioning of the city.

Simply sending a message to the market is not enough to address today's challenge. It is perfectly legal to convert space from industrial uses to other non-industrial uses, which triggers residential displacement and the loss of blue-collar jobs. The City needs to introduce protections that prioritize industrial businesses and jobs in industrial areas.

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The need to protect industrial areas is a call for more balanced growth. The extraordinary diversity of our residents requires that we cultivate an economy that offers diverse opportunities for work and entrepreneurship and ensures pathways of economic opportunity for the 40% of New Yorkers who have only a High School degree or less.¹ If New York is to have a thriving entertainment and tourism sector, it also needs space for making everything from movie sets to artisan bread. If we are to have a thriving fashion industry, businesses need space to cut and sew clothes, even on a small scale. Alongside spaces for production, we also need space for all the back office and maintenance operations that are essential for the city to function, from parking and repair for trucks, buses, cranes and cement mixers, to the actual fabrication of the architectural metal and woodwork that creates inspiring homes and offices.

The City needs new tools that can more precisely guide development in its industrial areas to achieve more balanced growth. This report focuses on how those new tools, particularly Industrial Employment Districts (IEDs), may work by taking an in-depth look at their potential application in two different Brooklyn neighborhoods—East New York and Gowanus. We selected these neighborhoods because they illustrate different ends of the real estate market, are both the target (or likely to be the target in the near future) of zoning changes, and enjoy strong community support for industrial retention. This analysis reveals some of the strengths and weaknesses of the IED strategy and discusses additional land use tools the City could employ to achieve more balanced economic growth.



Image: Pratt Center

The City is on the brink of completing zoning changes to stimulate more housing development in East New York and must now play catch up in order to advance equitable economic development in land use. Jerome Avenue in the Bronx, which is not an IBZ but is nevertheless a heavy commercial zone that is currently home to more than 1,200 businesses, presents very similar issues to those discussed here.² The proposed economic development and land use tools in this report should be implemented in tandem with the City's housing initiatives if the City is to achieve the type of equitable and sustainable growth that is at the heart of Mayor de Blasio's administration.

¹ American Community Survey (ACS), Public Use Microdata Sample (PUMS) 2013.

² National Establishment Time-Series (NETS) Database, 2014. This figure is likely a significant undercount due to the many subtenants which operate in the corridor.

Executive Summary: Key Findings

- New York's blue-collar sectors—particularly manufacturing, transportation and warehousing—are at risk. Though real growth opportunities remain for these sectors, **space for jobs is shrinking as the development of non-industrial uses such as hotels, mini-storage facilities, entertainment venues, offices and big-box retail spreads into traditional industrial areas.** This is the result of changes in the city's economy since the zoning resolution was created more than 50 years ago and the failure of successive administrations to keep zoning current with those changes. The Department of City Planning is currently conducting a study to rethink how to better zone industrial areas and needs to preserve space for the operations that keep the city functioning.
- **The critical strategy for stabilizing the industrial real estate market is limiting non-industrial uses, which are currently permitted as-of-right, through the creation of Industrial Employment Districts (IEDs),** a new zoning tool that would be mapped in core industrial areas and require that development of non-industrial uses be linked to an application for a special permit. This requirement would minimize displacement and reduce speculation. Mayor de Blasio and the City Council have endorsed this strategy, but the Mayor has not yet taken the steps necessary to apply it in coordination with housing rezoning efforts.
- Creating the right space is also essential to preserving jobs, and **the successful application of the IED strategy depends on recognizing the particular characteristics of the businesses and built environment in each IBZ:**
 - **East New York's IBZ profile** calls for a restriction on uses and strategies that preserve the low-density character of the area in order to accommodate the many businesses that require ground floor space. There are already more than 5 million square feet of unused floor area ratio (FAR) development rights spread over 525 non-vacant lots in the IBZ, suggesting that rezoning to increase density is not an appropriate strategy. **As currently proposed, more than twice as much ground-floor space is being rezoned, as there is vacant space in the IBZ to accommodate displaced companies.** Except for owner-occupancy of previously acquired property or where there is no new acquisition cost, building even modest one-story industrial buildings will require public subsidy.
 - **Gowanus' IBZ profile** also calls for a restriction on uses in the core industrial areas where there is some modest opportunity to increase density for owner-occupied space. Increasing density beyond that to create rental space for other businesses such as small artisanal manufacturers is not financially feasible without very significant public subsidy. **A mixed-use strategy that employs a commercial cross-subsidy to underwrite manufacturing space is possible in the area adjacent to the IBZ but only if enforcement mechanisms are dramatically stronger than has historically been the case in New York.** This might be achieved through more negotiated arrangements with non-profit developers who own, manage and steward the space consistent with an industrial development mission, a strategy now being implemented in San Francisco.
- **Where increasing manufacturing density meets the needs of the businesses, there is likely to be a financial gap.** The underlying economics of industrial development simply do not work in most situations. Without first limiting uses, non-industrial development becomes a more attractive option and could accelerate real estate speculation.

Introduction

The Need For Industrial Employment Districts and the Density Challenge

This report explores strategies for preserving affordable industrial space for manufacturers, transportation companies, warehouses and other industrial uses and the well-paying, blue-collar jobs those sectors provide. Those companies and jobs are at risk of displacement not only as industrial areas are converted to housing, but as the demand for space for hotels, entertainment venues, offices and other non-industrial uses pushes them further from traditional central business and other commercial districts into previously solid industrial neighborhoods. These forces have caused both direct and indirect displacement as the possibility of high rent tenants ignites real estate speculation.

"...in too many of the (Industrial Business Zones), instead of workshops and factories, we see storage facilities, gas stations, superstore retail, and hotels. **These uses should not be allowed in industrial zones, and the zoning laws should be changed** to restrict new developments of this type in these areas."

Bill de Blasio

A Progressive Vision for Industrial Development in New York City, 2013

"New York City needs to develop a zoning district, which ... provides the space for those industries critical to the economic well being of thousands of New Yorkers and the health of a variety of industries. In those places... **a re-writing of the use regulations to focus on protection and growth is essential as is allowing for additional density** in order to create more space for new firms and existing firms to expand."

New York City Council

Engines of Opportunity, Nov 2014

In some ways, the need for IEDs exists because of a loophole caused by the evolution of our economy. When the Zoning Resolution (1961) was adopted approximately 50 years ago, the manufacturing sector could pay top dollar for land. The Resolution separated uses based on the assumption that residents and white-collar workers needed to be protected from industrial encroachment. In addition, planners did not foresee the dramatic growth in travel and hospitality, the proliferation of self-storage facilities, the emergence of superstores, and very large-scale entertainment venues. The basic economics have changed, but the fundamental assumptions in the Resolution have not.

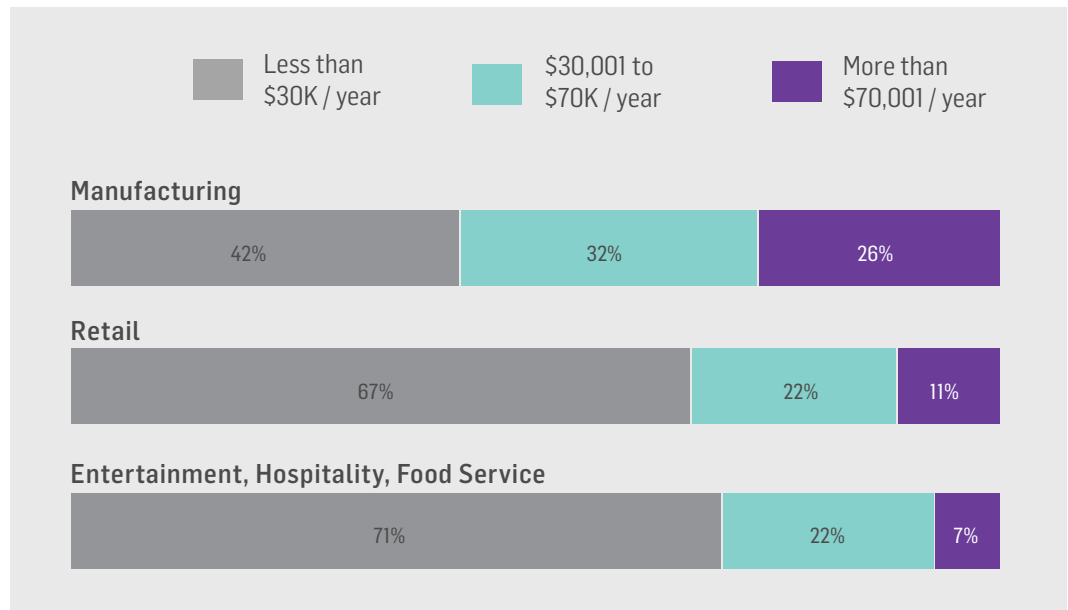
Both Mayor de Blasio's *A Progressive Vision For Industrial Development* (2013) and the City Council's *Engines of Opportunity* (2014) presented a clear rationale for policy interventions to close these anachronistic loopholes to stabilize the industrial real estate market and preserve well-paying blue-collar jobs, particularly for people who lack high levels of educational attainment. The industrial and manufacturing (I&M)

sector³ provides approximately 484,300 jobs in NYC, including 75,000 manufacturing jobs⁴ accounting for approximately 15% of the city's private sector employment. These are good quality, well-paying jobs that are accessible to a less educated workforce (see Figure 1). The average annual manufacturing wage is \$51,934 and has kept up with inflation over the last ten years, in contrast to other sectors such as retail and food services. Of City residents with no more than a high school diploma, 30 percent are employed in the industrial sector, accounting for more than 58 percent of sector's employment base.

Manufacturing provides better quality employment opportunities, particularly for people with modest educational attainment

Figure 1
Wages of HS Graduates/GED Holders by Sector
N=13028

Source: ACS PUMS 5 Year 2013



Both the Mayor and the Council adopted the strategy proposed by many in the research, policy and advocacy community, we included, of limiting the proliferation of non-industrial uses such as hotels, mini-storage, and big box retail in industrial areas to reduce demand and the real estate speculation that caters to it. Often referred to as Industrial Employment Districts (IEDs), these areas would either completely prohibited non-industrial uses or allow them only by special permit, to ensure minimal adverse impacts on the remaining industrial businesses.⁵

³ We define the industrial and manufacturing sector broadly to include manufacturing (NAICS Codes 31 – 33), construction (NAICS Code 23), wholesale trade (NAICS Code 42), transportation and warehousing (NAICS Codes 48 – 49), utilities (NAICS Code 22*), motion picture and sound production / recording (NAICS Code 512) and waste management (NAICS Code 562) We do not include, research and development laboratories in our definition of the I&M sector Source: NYS Department of Labor, Quarterly Census of Employment and Wages 2012, *Utilities data only available for 2010.

⁴ Manufacturing includes printing services and the production of apparel, food and beverages, jewelry, computers, electronics and other products; Source: NYS Department of Labor QCEW Data, 2012.

⁵ *Protecting and Growing New York City's Industrial Job Base*, New York City Industrial Policy, 2005.

The IED strategy rests on recognition of the tremendous disparity in the return on investment between most industrial and non-industrial uses. If the city were to rely exclusively on financial incentives to overcome this disparity and motivate property owners to develop industrial space, the cost would be exorbitant. By limiting non-industrial uses, the city reduces the opportunity costs of industrial development. There will still be a gap in financing for industrial development, but it will be due more to the economics of the sector and cost of construction over competition driven by speculative land values.

To illustrate the disparity in return between competing uses, BJH Advisors were retained to provide several development scenarios to determine their Residual Land Value (RLV), the comparative value of the project holding land costs constant. BJH created a scenario in East New York that contrasted manufacturing with storage uses and a scenario in Gowanus that contrasted manufacturing with retail uses (see figure 2).

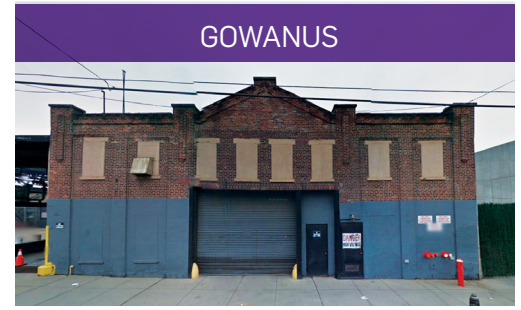
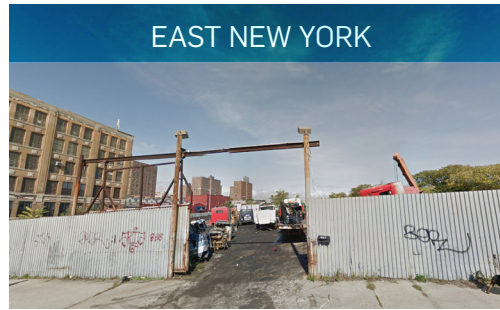
In East New York, the difference in RLV between manufacturing and a storage facility was \$233 per square foot (psf). In Gowanus, the difference in RLV between manufacturing and retail was \$225 psf. The prospect of non-industrial uses with such substantially higher RLVs drives the market for almost all properties in these areas. Hotels, mini-storage facilities, large-scale retail and entertainment venues, and offices are generally serving a citywide (not local) market and demand may seem almost insatiable, particularly to the property owner contemplating a sale or setting rent for a manufacturer.

Making a firm commitment through both zoning to restrict non-industrial uses and the clear articulation of policy that supports a vibrant blue-collar sector will lessen real estate speculation. An IED could move forward in either one of two ways: The City could create a Special Industrial District, which might be mapped to the current IBZ locations or create an IED overlay which could be mapped to coincide with the current IBZ boundaries.⁶ The special district or overlay would specify which use groups such as transient hotels, community facilities, “large-scale destination” stores, or restaurants could be developed only after an application for a special permit. The special permit process would include review by the affected community and a vote by the Community Board, Borough President, Planning Commission and City Council that is standard in the land use process. Criteria for the special permit should provide that:

- The proposed development would not displace an industrial firm based on a five-year lookback;
- The proposed development would not impede or conflict with the operations of surrounding industrial companies; and
- The proposed development would not change the character of the neighborhood.

⁶ The NYC Department of City Planning is pursuing a special district strategy in a very similar situation in North Brooklyn to encourage development of a mix of industrial and office uses.

Figure 2
Development Program



EAST NEW YORK

Address **457 Blake Ave** Block **3764** Lot **2**

Zoning **M1-1** Land Area **24,750**

FAR **1** Built SF **--**

Gross SF **24,750** Parking Requirement **Yes**

GOWANUS

Address **527 Smith St** Block **480** Lot **1**

Zoning **M3-1** Land Area **54,440**

FAR **2** Built SF **13,167**

Gross SF **108,880** Parking Requirement **Yes**

	Scenario A1	Scenario A2	Scenario B1	Scenario B2
	Industrial	Storage	Industrial	Retail
VALUE				
Gross Rental Income	\$297,000	\$693,000	\$2,177,600	\$3,810,800
Vacancy	\$8,910	\$34,650	\$65,328	\$190,540
Expenses	\$43,214	\$65,835	\$316,841	\$543,039
Net Operating Income	\$244,877	\$592,515	\$1,795,431	\$3,077,221
Capped NOI	\$3,498,236	\$8,464,500	\$29,923,853	\$61,544,420
DEVELOPMENT COSTS				
Demolition/Abatement	-	-	\$52,668	\$52,668
Construction	\$4,950,000	\$4,331,250	\$21,776,000	\$27,220,000
TOTAL HARD COSTS	\$4,950,000	\$4,331,250	\$21,828,668	\$27,272,668
Developer Profit	\$742,500	\$649,688	\$3,274,300	\$4,090,900.20
TOTAL SOFT COSTS	\$742,500	\$649,688	\$3,274,300	\$4,090,900.20
Total Development Costs	\$6,435,000	\$5,630,625	\$28,377,268	\$35,454,468
RESIDUAL LAND VALUE				
Capped NOI	\$3,498,236	\$8,464,500	\$29,923,853	\$61,544,420
Development Costs	\$6,435,000	\$5,630,625	\$28,377,268	\$35,454,468
RLV	\$(2,936,764)	\$2,833,875	\$1,546,585	\$26,089,952
RLV per SF	\$(119)	\$115	\$14	\$240
<i>Per SF Difference</i>		\$233.16		\$225.42

The Case For, and Against, Density

The IED strategy to limit uses in industrial areas is often linked to increasing industrial density - the city's industrial sector could add anywhere from 15,000 to 50,000 jobs over the next ten years,⁷ but most existing industrial areas have relatively low vacancy rates. In addition, as some industrial areas are converted, businesses are seeking to relocate to areas that are already fully occupied. The obvious answer to this dilemma would seem to be to "build up," to increase density within the city's industrial areas similar to how the City is increasing density within some of its residential areas.

It would be counter-productive from an industrial development perspective to increase density without first limiting the uses. If density is increased without limitations on uses, non-industrial development becomes a more attractive option because the disparity in RLV grows with density. The opportunity cost to manufacturers of not selling is raised and on its own could lead to further real estate speculation.

If, however, uses are limited through the creation of an IED, to what extent is greater industrial density possible?

Industrial spaces are not like residential apartment units which can be stacked provided there are adequate parks, schools, and the other infrastructure and services for residents to enjoy a safe, healthy and satisfactory quality of life. Some industrial businesses need to be on the street level. While it is imaginable that engineers and architects could come up with comprehensive designs that allow school buses, waste transfer stations, construction companies, building materials suppliers and other industrial uses to be stacked, the cost of doing so is almost inconceivable. To what extent can the city's remaining industrial uses be located on upper floors, and will increasing density create the right types of spaces for these uses? If industrial stacking were physically or operationally possible, would it be financially feasible?

A Word About Density, Under-Utilization and Employment Opportunities

Labeling an area as "under-utilized" simply because it has available FAR can be misleading. A large lot with a tiny building that is used for parking and repairing school buses can seem under-utilized from the perspective of built density, but its operations can actually support a significant number of jobs. Such a lot could be "built up" without increasing the number of jobs it could support.

To illustrate, a 30,000 sq. ft. lot could easily accommodate 50 buses that each support the employment of a driver and attendant plus 5-8 office and maintenance staff -- totaling 105 employees. The same site built to 2 FAR might accommodate 60-80 woodworkers or metalworkers. The same site built to a 3 FAR with a mini-storage facility might be home to 3-4 fulltime and 6-10 part-time jobs.

⁷ These estimates are based on Bureau Of Labor Statistics data using their 4% "low rate" and 9% "medium rate" of job growth. See A 50,000 Job Challenge, Pratt Center and the Association for Neighborhood Housing and Development (June 2014) http://prattcenter.net/sites/default/files/industrial_policy_exec_summary_june_19_final.pdf



Photo: Pratt Center

Neighborhood Analysis

To explore the question of how strategies to increase density may work, Pratt Center looked at how creating IEDs and increasing density may be applied in the Brooklyn neighborhoods of East New York and Gowanus. The City has already begun to rezone some of the manufacturing areas in East New York as part of the Mayor's affordable housing plan. In Gowanus, industrial businesses are under pressure from hotels, entertainment, mini-storage and other commercial but non-industrial uses. Residents in both neighborhoods are strongly supportive of preserving industrial businesses and jobs, and community-based plans in both neighborhoods call for strengthening the remaining industrial areas, which include Industrial Business Zones (IBZs).

When we initiated this study, we assumed that increasing density in the IBZs was an obvious, necessary, and viable option for providing space for industrial jobs. By the time we completed this analysis of each of these neighborhoods' industrial profiles, the configuration of their lots, and their market conditions, we realized there would be significant obstacles and limitations to the density strategy. First, many types of industrial uses need space on the ground floor. Second, the development of upper floor space – adding elevators, venting, egress, etc. – drives costs up as the value or marketability of the space goes down, which increases the need for subsidies.

A. Neighborhood Snapshot: East New York

The Cypress Hills/East New York community has a long history of support for its industrial sector and efforts to link residents with local industrial jobs. East New York's Coalition for Community Advancement, which was organized in response to the Mayor's affordable housing zoning proposal for the neighborhood, called for carving out the M-Zones along Atlantic and Liberty Avenues (See Figure 4) to reduce the number of new market-rate units and strengthening the adjacent East New York IBZ by excluding non-industrial uses to prevent real estate speculation and displacement.

The area's industrial jobs are an important employment option for residents and a significant contributor to the local economy. A recent Phase 2 Brownfield Opportunity Area (BOA) study (2013) found that almost 24% of the neighborhood's residents work in the industrial sector, significantly higher than the citywide average. In addition, Census data indicates that more than 500 people who work in an industrial business in East New York live in one of the immediately adjoining census tracts, a likely undercount (see Figure 3). The BOA also found important concentrations of businesses and jobs in food production, metalworking, and woodworking, and identified a number of sectoral strategies to capitalize on these clusters. Like detaching strands from a spider's web, zoning changes that displace some participants in an industrial cluster can weaken the remaining participants by undermining the area's attractiveness for specialized services, the labor pool, and the market.

Industrial jobs are an important employment option for residents of East New York

Figure 3

Where workers live (by zip code) who are employed in the East New York Industrial Business Zone in 2013

Source: Home Destination Report created by U.S. Census Bureau's On the Map OnTheMap

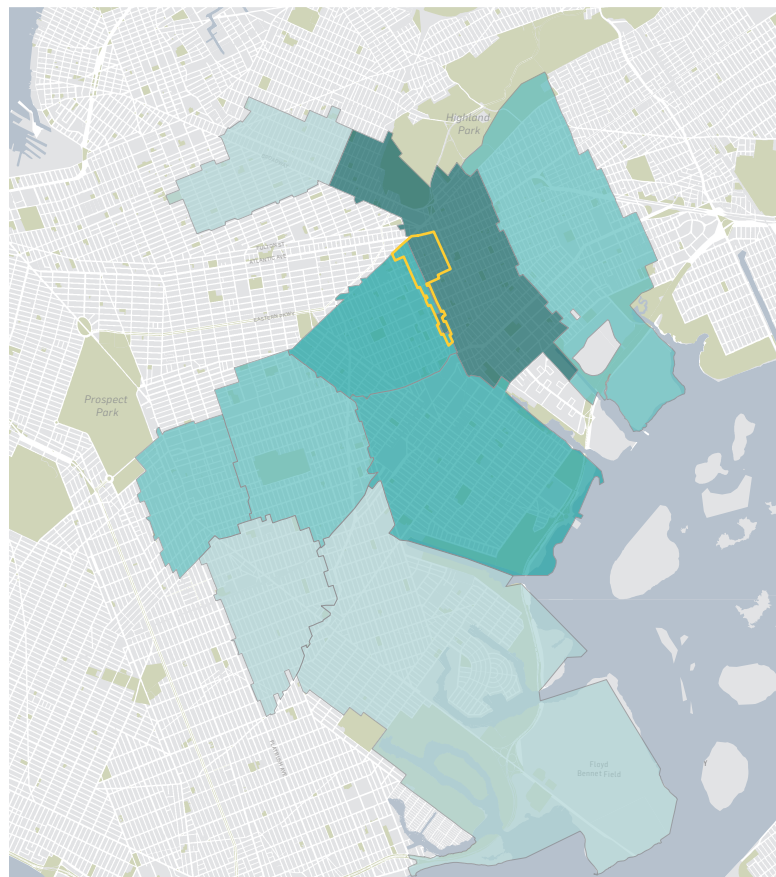
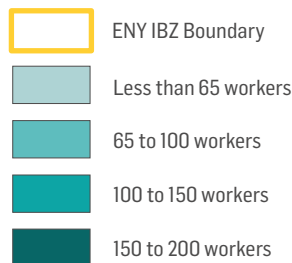
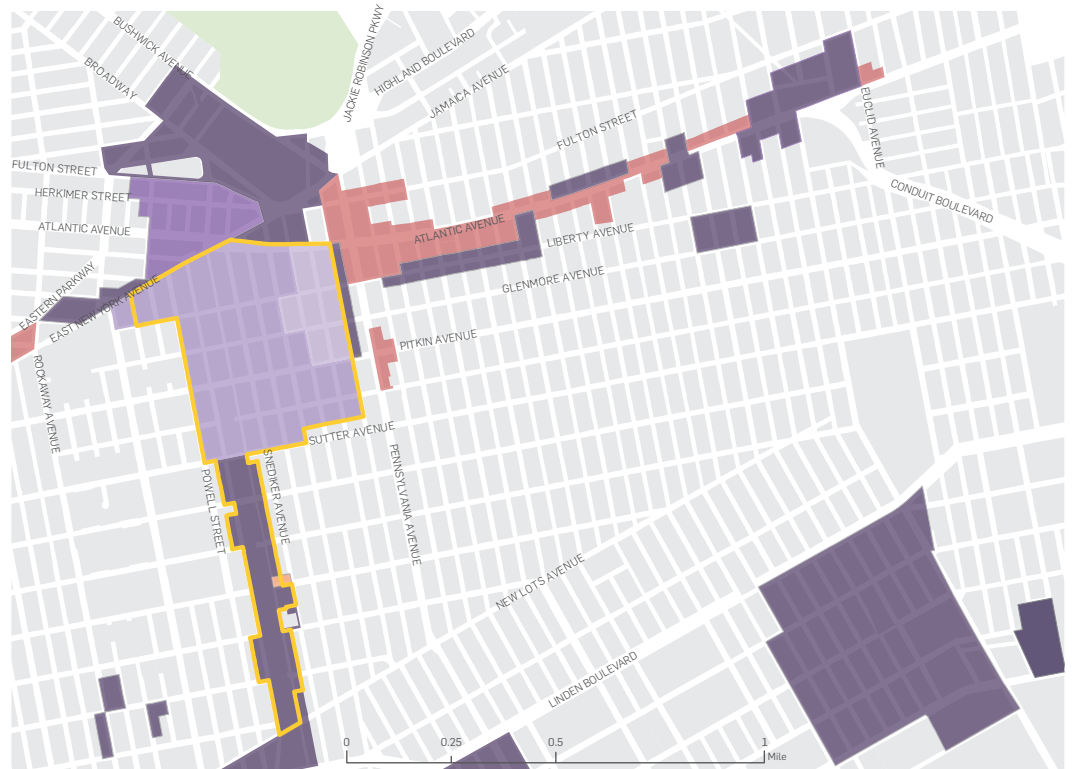
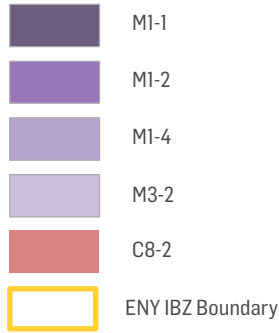


Figure 4
Manufacturing and Heavy Commercial Zones in East New York

Source: PLUTO, NYC Dept. of City Planning

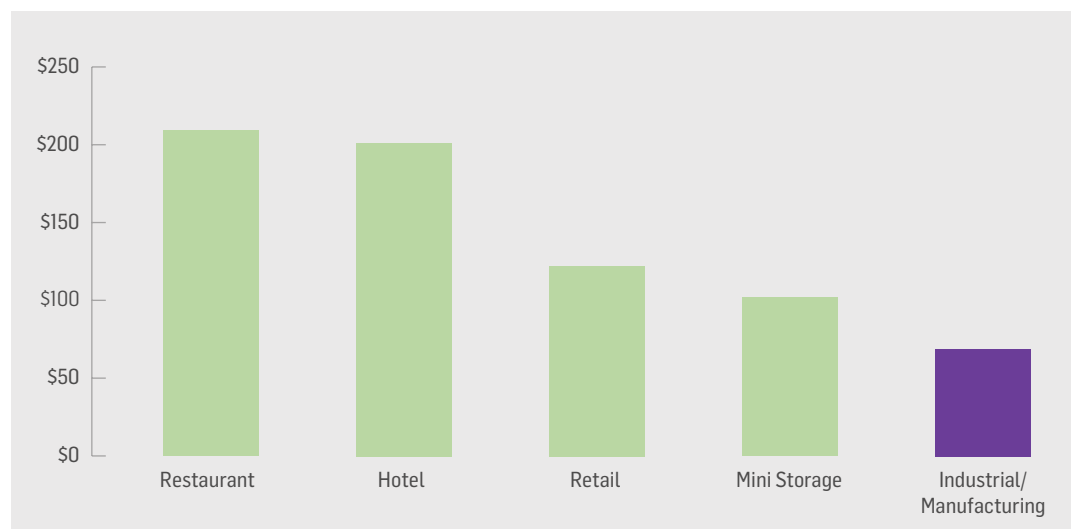


Though East New York does not have a particularly strong real estate market, non-industrial businesses have been opening and are able to price out industrial firms. Data from the NYC Department of Finance (DoF) projecting market value of land based on actual income and expense filings for the users of that land reveals the extent to which the non-industrial uses are likely to be able to outbid industrial users for space. The DoF data indicates that hotels, mini-storage, retail, and entertainment venues such as restaurants yield a higher market value than land used for manufacturing (shown in Figure 5).

Non-industrial uses yield a higher market value than manufacturing

Figure 5
East New York Average Market Value Per Square Foot, 2016

Source: NYC Dept. of Finance



Profile of Existing Activity

East New York's industrial sector is composed of the type of traditional or legacy manufacturers that have been eclipsed in much of the public policy debate by more "advanced" manufacturers. There are also many other industrial businesses, particularly auto-repair and bus garages, small wholesalers, custom fabricators, and construction (see Figure 6). Many of these users require ground floor space. For example, there are 72 auto repair and transportation-related businesses occupying 361,000 square feet in areas being rezoned (this is approximately twice the amount of vacant land that is in the IBZ). Some existing users in the IBZ may be able to situate their office operations on a second floor, which would free up ground floor space for their own expansion but probably not for rental use.

East New York's industrial sector is largely composed of traditional manufacturers and transportation-related businesses

Figure 6
Industrial
businesses
by sector,
2014
N=69

Source:
ReferenceUSA

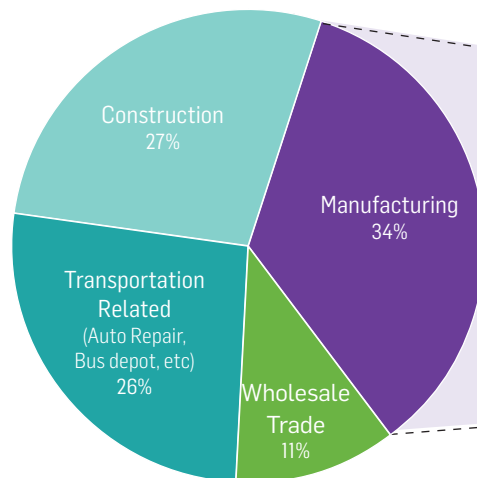
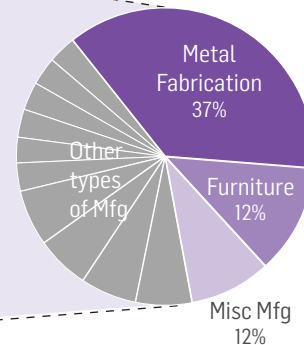


Figure 7
Manufacturing
sector
businesses
by sub sector,
2014
N=33

Source:
ReferenceUSA



There is significant unused density in East New York's industrial areas, suggesting that the obstacle to greater density is not zoning but operational and financial constraints. There are already more than 5 million square feet of unused FAR spread over 525 non-vacant lots in the IBZ. In addition, there are 60 vacant sites within the industrial area, suggesting opportunities for new development. These lots tend to be small (averaging approximately 3,000 square feet), making their development costly and their use inefficient for multi-story, multi-tenant users, although there is some opportunity to consolidate vacant lots for more profitable development possibilities—22 property owners have a portfolio of 4 or more holdings within the IBZ. The City owns 47 of the sites that are already zoned M1-4 (2 FAR), and there are more than 340,000 square feet of unused FAR on vacant lots, which has not yet induced development.

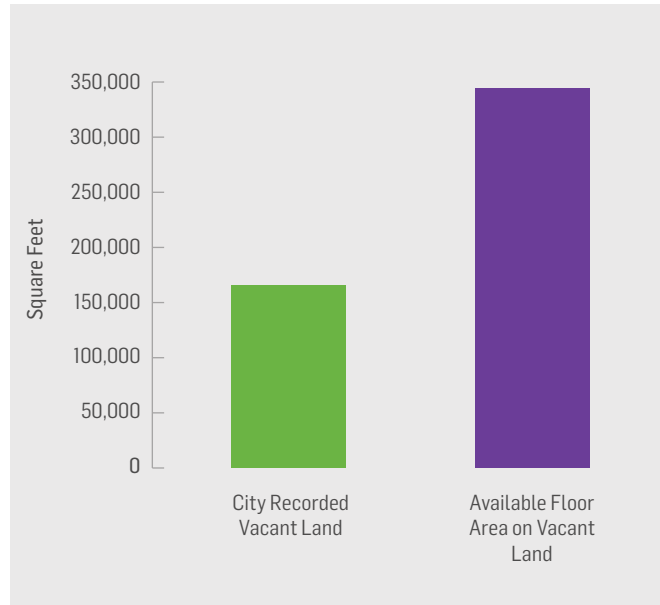
Our financial analysis (see Appendix A) projects that the financial gap in the development of these sites would be between \$150 and \$200 per square foot for a displaced company having to purchase and develop one of the vacant lots. This scenario assumes a purchase price of approximately \$150 per square foot (an increasingly rare find) and an owner-occupant's willingness to derive his return on investment from the profits of his business, as opposed to sale of land, and to pay down his mortgage. Development of rental property would require a subsidy in excess of \$250 per square foot.

East New York's industrial areas contain significant unused density

Figure 8
Available vacant land and FAR, East New York
N=52

Note: Vacant land is categorized as having no structure or current use.

Source: PLUTO



Given the prohibitively high cost of new development, the best strategy to protect industrial jobs in East New York is clearly one that rests on preserving existing industrial space. For example, if a typical small manufacturer employing 15 people located in one of the ENY rezoning's proposed MX zones had to relocate and wanted to buy a vacant lot and build an 8,000 sq. ft. building, it would cost approximately \$3.6m.⁸ To make this a reasonable decision for the owner, the city would have to subsidize this project with approximately \$1.2m in grant money, which would translate into a subsidy of approximately \$80,000 per job.

⁸ See scenario C in Appendix A.

B. Neighborhood Snapshot: Gowanus

Community Demand for Manufacturing

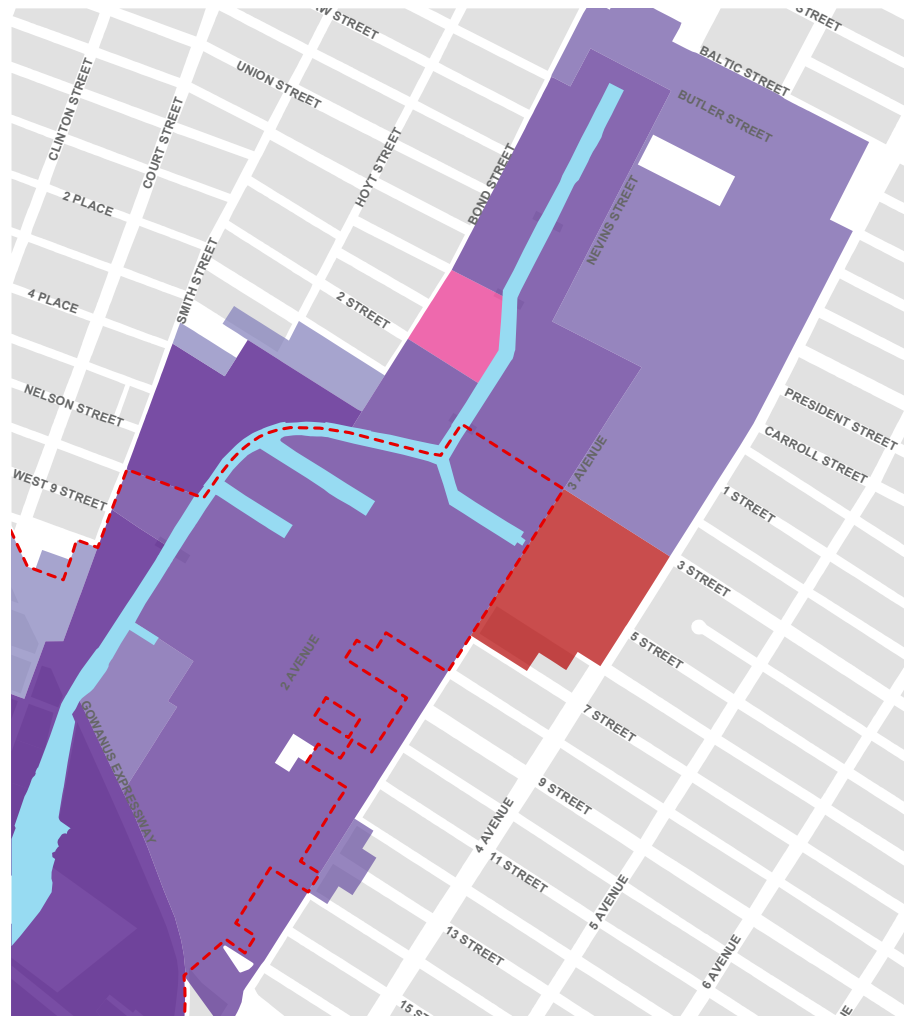
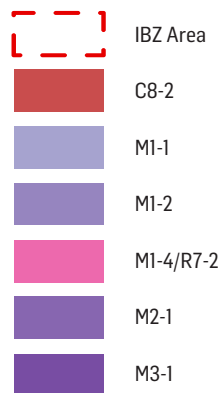
The Gowanus community also has a long history of deep support for the preservation of its manufacturing sector. Friends of Brooklyn Community Board 6 recently sponsored a Brownfield Opportunity Area (BOA) Nomination Study to develop an economic development strategy to encourage new investment in Gowanus's businesses and buildings while preserving the area's existing industrial and cultural uses.

In 2013, elected officials representing the Gowanus community convened a community-based planning initiative that developed a comprehensive framework for the infrastructure and land use regulations that they deemed necessary to create a safe, vibrant, and sustainable neighborhood.⁹ The result of a community engagement process that spanned more than a year, this framework articulated four core priority areas, one of which was to strengthen the area's manufacturing sector.

Bridging Gowanus, as the initiative was named, proposed two primary land use strategies for strengthening the manufacturing sector in the neighborhood— with different applicability in different parts of the neighborhood. First, it called for implementing a use-limitation strategy similar to what is proposed in IEDs inside of

Figure 9
Gowanus Zoning and
Area of Interest

Source:
ReferenceUSA



⁹ Known as Bridging Gowanus, this framework was developed with technical assistance provided by Pratt Center. The framework can be viewed in its entirety at www.bridginggowanus.org

the Gowanus IBZ and a version of that strategy applied in manufacturing areas outside of the IBZ. A second mechanism sought to foster a mixed-use area that included light manufacturing, artisanal production, and space for the arts and non-profit organizations through the creation of a mixed-use district with a mandatory balance for manufacturing (and other threatened uses), to be located in another part of the Gowanus study area outside of the IBZ.

The value of the manufacturing sector to the neighborhood's vision of its future was further articulated through the job creation and job linkage recommendations in the Bridging Gowanus framework. Gowanus first developed as a neighborhood because of the area's plentiful industrial jobs and the framework cited as major concerns both the decline of local residents who work in the neighborhood and the great unmet local need for employment, especially among residents of the area's public housing developments.

Profile of Existing Activity

The manufacturing community in Gowanus is active and dynamic, with new types of firms moving in alongside more traditional industrial businesses that have been part of the community for decades.

Manufacturers in Gowanus produce a wide variety of products

Figure 10
Industrial businesses
by sector, 2014
N=160
Source:
ReferenceUSA

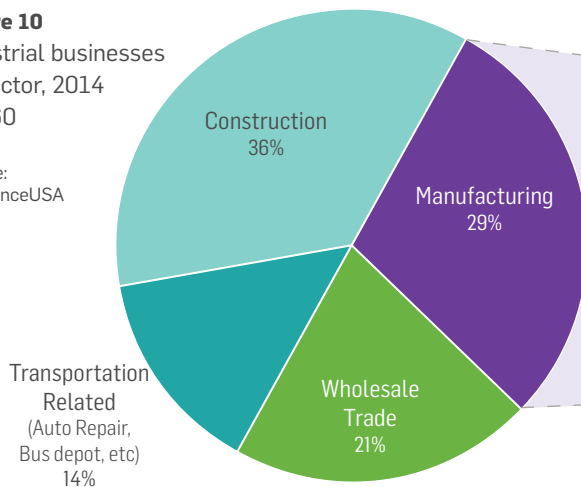
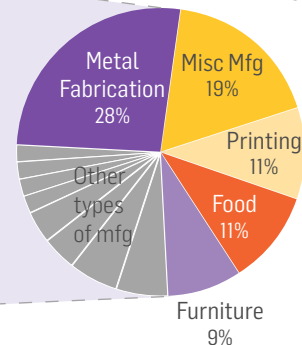


Figure 11
Manufacturing
sector businesses
by sub sector
2014
N=47
Source:
ReferenceUSA



Thousands of jobs are found within hundreds of industrial, manufacturing, and commercial businesses throughout the area. The number of industrial businesses alone tops 150, and these firms employ more than 1,600 people. Of these industrial jobs, more than two-thirds are in the construction, transportation, and wholesale trade sectors. There is a notable cluster of businesses in building materials and the skilled trades, with related businesses ranging from lumber yards and contractors to retailers such as Build it Green, which resells materials salvaged from deconstructed buildings. (see Figures 10 and 11) Generally speaking, in order to operate and thrive, these sectors must be located in areas that have unimpeded heavy industrial character.

The higher profile (but with comparatively lower job intensity) manufacturing sector in the area employs around 530 people and creates a broad range of products including metal grilles, chemicals, coffee, cell phones, knitwear, and neon light tubes, to offer a sampling. Businesses employ as few as one person to as many as 50 people.

The vast majority of businesses in Gowanus rent their space, and these tenants are therefore vulnerable to the pressures of an increasingly hot local real estate market. The area has received an incredible amount of attention in the real estate press for the recent products of this hot market—high profile hotels, entertainment, and recreational venues, as well as astronomical purchase prices for lots that are zoned for manufacturing.¹⁰ As was noted in *Bridging Gowanus*, these threaten to alter permanently the industrial and creative character of the neighborhood's economic base.

Since the framework was released, non-industrial uses have continued to proliferate, even on some of the most heavily industrial blocks. There are still some large industrial users, particularly construction contractors, metal fabricators, bus and sanitation garages, and woodworking and lumberyards. A modest increase in density could allow existing companies, particularly owner-occupied companies, to expand if they can put their current offices on upper floors to free up ground level space for production.

There is also strong demand for small spaces for artisan scale production. However, the cost of significant expansion, i.e. the creation of "spec space" to be rented by makers, artisans, and smaller manufacturers, is prohibitive and would require significant public investment. The financial analysis in the appendix (see Appendix B) assumes a purchase price of \$200 psf (a generous assumption for Gowanus) and \$18 psf rental cost for space for artisanal manufacturers. It concludes that new construction of a single floor industrial building would have a financing gap in excess of \$250 psf.

While there remains a persistent financing gap for industrial-only space, Gowanus has a very strong office market, a condition which opens up the possibility of internal cross-subsidy within a building. To be clear, the cross-subsidy model is intended for a mixed-use area, not the core industrial area. If this cross-subsidy were allowed inside an IBZ, it would clearly change the character of the area, raise operational conflicts, and escalate real estate speculation and displacement pressures which the IED and newly subsidized industrial spaces were intended to address. Increasing density through a cross-subsidy mechanism inside an IED would be counter-productive.

However, the larger neighborhood of Gowanus includes several mixed-use areas, and there is strong community support for a balanced mix of "creative design," the arts, artisanal production, light manufacturing and other types of compatible uses. In these areas, a cross-subsidy model can greatly improve the financing of industrial development. This possibility raises the issue of how the city can achieve effective enforcement of use restrictions, which are critical to the cross-subsidy model. Historically and to date, enforcement of uses has been a major failing of the City. Beginning with the Special Garment Center District, arguably the City's first "innovation district" because it sought to combine both high-end space for design and sales with space for production, the City has been unwilling to commit the financial and political resources needed to enforce a regulatory structure that balances industrial and commercial uses.¹¹

¹⁰ Adam Pincus, "LIVWRK snaps up second Gowanus site in a month," (2013) <http://bit.ly/1PKVXhu>; "On The Scene: TerraCRG in Gowanus, C&W announces sales," (2015) *Real Estate Weekly* <<http://rew-online.com/2015/12/31/on-the-scene-terra-crg-in-gowanus-cw-announces-sales/>>, Clark, Katherine, "Prices for industrial Brooklyn properties soar as developers go crazy for sleek office conversions," (2015). *NY Daily News* <<http://nydn.us/1d1LD8Q>>

¹¹ See *Making Room for Housing and Jobs (May 2015)*, Pratt Center, which includes analysis of the City's failure to create a sustainable mixed use district.

If the City were to pursue a cross-subsidy model in Gowanus, a developer who acquired space at approximately \$300 psf and leased space at \$18 psf for manufacturing and \$40 psf for office space would achieve a very good return with a building that was one-third manufacturing and two-thirds office (see appendix B).

This 2:1 office to manufacturing ratio is very similar to the strategy currently being pursued by San Francisco to meet the challenge of creating affordable production space through mixed-use development and the establishment of a non-profit industrial development sector to own and manage new industrial space created through a cross-subsidy mechanism. San Francisco has Production, Distribution, and Repair (PDR) districts, which are similar to the Industrial Employment Districts being advocated here. PDR districts do not permit hotels, large-scale retail, entertainment venues or office development.

However, in 2014, the San Francisco Planning Commission and Board of Supervisors approved an innovative zoning pilot which permitted office development on relatively large PDR parcels that were vacant, not likely to be developed for exclusively PDR uses, and situated in such a way that their development would not threaten the industrial character of an area. The new zoning created a special permit that allowed office development provided that at least 33% of the space in each project be for PDR uses. This provision thereby gave the Commission leverage to negotiate on several key related issues.

Figure 12
Components of San Francisco's "PDR Business Plan"

THE "PDR BUSINESS PLAN" REQUIRES DEVELOPERS TO:

- Create a viable financial model based on reasonable rental rates for production, distribution and repair (PDR) uses
- Identify target sectors for the space
- Design the space to attract the most appropriate PDR businesses
- Specify a mechanism to inform tenants about local hiring opportunities



Figure 13
Rendering of Hundred Hooper
Image: SFMade

The first special permit negotiated through this process is for the Hundred Hooper project, which includes a community benefits agreement that requires the developer to create new PDR space and transfer that space at cost to PlaceMade, a subsidiary of a non-profit dedicated to strengthening the manufacturing sector in San Francisco, or to a similar mission-driven nonprofit organization.¹² Hundred Hooper will create approximately 285,000 square feet of office space and 201,000 square feet of PDR space, of which PlaceMade will own 56,500 sq. ft.

While this cross-subsidy strategy would not be appropriate in an IED or meet the community objectives of the Gowanus Manufacturing Zone, it may prove to be a useful mechanism for advancing the community's other objectives of a mixed-use area.

¹² Both Pratt Center and the Greenpoint Manufacturing and Design Center provided technical assistance to SFMade during this process.

Recommendations & Mechanism

The following recommendations apply citywide, but there is always a need for fine-tuning to account for the particular challenges and opportunities presented in each neighborhood and the concerns and visions of each community's residents and businesses. This fine-tuning may be achieved through the special permit processes provided in several of these recommendations, or through neighborhood-specific variations in some of the use-limitations. For example, some neighborhoods suffering a shortage of neighborhood retail may want to allow small retailers (under 5,000 square feet) as-of-right, while other neighborhoods desiring less auto-dependent shopping may want to limit new retail development in industrial areas to encourage retail development closer to homes.

1 MOVING FORWARD ON INDUSTRIAL EMPLOYMENT DISTRICTS

New York is beginning to pursue on a limited basis the type of use-limitation strategy already implemented in San Francisco's PDR districts. In November 2015, Mayor de Blasio announced that the City would limit the development of hotels in the IBZs through the creation of a special permit process and will also examine how to limit mini-storage. The Administration should expand this strategy to include other types of non-industrial uses such as entertainment venues, large-scale retail and office development unaffiliated with an industrial operation that destabilize an area and trigger real estate speculation. Uses which should be included within the special permit process include:

- Retail or service establishments, offices and clubs in Use Groups 6A, 6B, 6C and 6E (as specified in the NYC Zoning Resolution, Section 32-15);
- Transient hotels in Use Group 5 (Section 32-14);
- Parking facilities not exceeding 100 spaces in Use Group 8C (Section 32-17);
- Large retail department stores in Use Group 10A (Section 32-19);
- Large entertainment facilities and parking facilities in Use Groups 12 and in Use Group 13 (Sections 32-21 and 32-22); and
- Moving or storage offices with no limitation as to storage or floor area per establishment, packing or crating establishments, and warehouses (Section 32-25).

The clearest ways the City could move this forward would be to either create a Special Industrial Employment District, which could be mapped to current IBZ locations or an IED overlay that coincides with the current IBZ boundaries.¹³ In these areas, non-industrial projects could only be developed pursuant to a special permit process, which would provide an opportunity for review by the affected community and a vote by the Community Board, Borough President, Planning Commission, and City Council. This is more flexible than the San Francisco PDR model, which absolutely prohibits non-industrial uses.

¹³ It might be the case that the provision contained in an IED district would be useful in other situations. Much attention is being given to the creation of Innovation Districts, areas where a variety of production and "creative" office uses are encouraged to locate in close proximity. Most of the discussion about Innovation Districts has assumed that each building should have a range of uses to achieve the desired mix. However, rather than locate different uses in the same building, it may be more financially and operationally feasible to have solid production areas adjacent to office areas and to encourage mixing by building a sense of community and awareness in other ways such as through place making strategies, events and programming.

Criteria for the special permit should provide that:

- The proposed development did not displace an industrial firm based on a five-year lookback;
- The proposed development would not impede or conflict with the operations of surrounding industrial companies; and
- The proposed development would not change the character of the neighborhood.

2 REFORMING THE BOARD OF STANDARDS & APPEALS

A developer dissatisfied with the special permit process outlined above has recourse to the Board of Standards and Appeals (BSA), where he can seek a variance from the limitations on use. To grant a variance, the BSA has to confirm certain findings, including that the proposed development not change the essential character of the area and that economic hardship not be self-inflicted. With the mapping of an industrial employment district and creation of a special district, the city is making a clear statement that the area's character is industrial, and that city policy intends for that area to remain industrial. This should give rise to a strong presumption that a non-industrial use would alter the character of the IED. In addition, in making a determination that a hardship exists because the developer cannot make a reasonable return on his investment, the BSA should very carefully scrutinize the purchase price to ensure that it is not inflated by anticipating conversion to a prohibited non-industrial use. The BSA should look at comparable purchases based on other similar uses. This may be difficult to find because so many recent purchases may be based on conversion pricing. The BSA should address this problem by imputing a reasonable purchase price based on the rent levels for industrial and manufacturing businesses in an area.

3 REDUCING PARKING REQUIREMENTS

The vast majority of the City's manufacturing zones have very burdensome parking requirements. M1-1, M1-2, M2-1, M2-2, and M3-1 require one parking spot for each 1,000 sq. ft. of floor area or 1 space per 3 employees, whichever is higher. These requirements apply to new construction and enlargements of existing spaces and obviously, add cost to those developments. While these requirements have been greatly reduced in Manhattan and parts of Long Island City, they continue to apply in M zones through the rest of the City. The recent application by City Planning to create Business Enhancement Districts starting with a section of the Greenpoint-Williamsburg IBZ includes a significant reduction in the parking requirements – one space for 348 square feet. Similar reductions should be incorporated into the IED strategy.

4

IMPROVING ENFORCEMENT: LINKING CROSS-SUBSIDY WITH NON-PROFIT DEVELOPMENT

Both the Mayor's Progressive Vision For Industrial Development and the City Council's Engines of Opportunity call for the creation of a type of Innovation District that mixes production space with other uses. It appears that the Department of City Planning is pursuing something similar through its proposed Enhanced Business Areas (EBAs), which would create a special permit that offers an office bonus to developers who dedicate 17% of their buildings for manufacturing. However, the proposed EBAs have no new enforcement mechanisms beyond the Department of Buildings' complaint-driven inspection system, which has been proven ineffective in the past. Given the disparity in rent levels and returns from the diversity of uses that the City is trying to co-locate, the hoped-for diversity is likely to be very short-lived. The City must create new tools to improve enforcement and the preservation of production space in mixed-use areas.

The San Francisco real estate market is very similar in many ways to New York's, and the PlaceMade/Hundred Hooper project presents the best model so far that is likely to achieve long-term affordable production space. The City should adopt the Hundred Hooper strategy for those areas which are located outside of core industrial areas and are already transitioning to a mix of uses. The cross-subsidy strategy includes:

- Creating use-limitations similar to an IED (which is similar to San Francisco's PDR district);
- Creating a special permit that allows the development of offices and other uses that may be desired in New York's Innovation Districts, such as space for educational institutions or restaurants. The special permit process would give the City the leverage it needs to negotiate appropriate use and enforcement provisions. Some of the criteria for the award of the special permit should include:
 - The property has been vacant or under-utilized (defined as built to less than 0.3 FAR);
 - That the property is at least 20,000 square feet;
 - That at least 33% of the proposed development be used for production uses, enforced through a mechanism that vests ownership or management of the space in a non-profit organization whose mission includes the preservation of industrial space.

5

INDUSTRIAL DEVELOPMENT FUND

The Mayor has already announced the creation of an industrial development fund to help close the gap in the development of industrial properties. The use of public funds increases the leverage the City has for effective enforcement. The fund should be structured to prioritize non-profit owner-managers in any industrial area and for owner-occupied buildings tied to firm land use measures preventing conversion to non-industrial uses and resale restrictions that ensure continued industrial use. While at first blush owner-occupancy may seem a reasonable strategy for industrial retention to avoid displacement, in today's market the owner may have an incentive to shut down the business and sell the building off if the building becomes more valuable than the business. Ways of providing both stability and protecting the public's investment should be explored including requiring any resale to be consistent with industrial retention and approved by the Industrial Development Agency (IDA), or through a land trust mechanism that facilitates acquisition by having the IDA permanently own the land and lease the building to the user.

Appendix A

Development Scenario: East New York

Scenario	M1-1 Zoning		
	A. Purchased for owner occupancy	B. Purchased for Rental	C. Manufacturer with 15 employees
Land Area (Sq. Ft.)	24,750	24,750	8,000
Floor Area Ratio	1	1	1
INCOME			
Production Rental @ \$15 psf	\$371,250	\$371,250	\$120,000
Office Rental @ \$40	\$0	\$0	\$0
Vacancy @ 3%	\$0	\$11,138	\$0
Expense @\$2 psf (\$3 psf office)	\$49,500	\$49,500	\$16,000
NET OPERATING INCOME	\$321,750	\$310,613	\$104,000
Av. Debt Service (80%)	\$257,400	\$248,490	\$83,200
Supportable Debt (4.5% 25 Yr)	\$3,700,000	\$3,700,000	\$1,200,000
DEVELOPMENT COSTS			
Acquisition	\$3,712,500	\$3,712,500	\$1,200,000
Demo/Abatement	\$0	\$0	\$0
Construction \$225/sf (\$240/sf office)	\$5,568,750	\$5,568,750	\$1,800,000
TOTAL HARD COSTS	\$9,281,250	\$9,281,250	\$3,000,000
SOFT COSTS @ 20%	\$1,856,250	\$1,856,250	\$600,000
TOTAL PROJECT COSTS	\$7,425,000	\$4,950,000	\$3,600,000
Subsidy @ \$150 psf	\$0	\$0	\$1,200,000
Project Cost w/\$150 subsidy	\$0	\$0	\$2,400,000
Cost of Debt Service 4.5% 25yr	\$246,780	\$246,780	\$80,040
Profit	\$74,970	\$63,833	\$23,960
Capital/Equity Gap	\$3,725,000	\$1,250,000	\$1,200,000
RETURN ON INVESTMENT	2.0%	5.1%	2.0%

Assumptions:

1) Real estate taxes abated; 2) No environmental remediation; and 3) Construction costs for office add \$15 psf and \$1 psf expense

Appendix B Development Scenarios: Gowanus

Zoning	M1-1			M1-2		
	Development of Already Owned Property	Development of Rental Property		Development of Rental Property		
Scenario		w/o Subsidy	with Subsidy	100% mfg	50% Mfg / 50% Office	33% Mfg / 67% Office
Land Area (Sq. Ft.)	24,750	24,750	24,750	24,750	24,750	24,750
FAR	1	1	1	2	2	2 + 1 FAR Bonus
INCOME						
Production Rental @ \$18 psf	\$445,500	\$445,500	\$445,500	\$891,000	\$445,500	\$445,500
Office Rental @ \$40	\$0	\$0	\$0	\$0	\$990,000	\$1,980,000
Vacancy @ 3%	\$13,365	\$13,365	\$13,365	\$26,730	\$43,065	\$72,765
Expense @\$2 psf (\$3 psf office)	\$49,500	\$49,500	\$49,500	\$99,000	\$123,750	\$198,000
NET OPERATING INCOME	\$382,635	\$382,635	\$382,635	\$765,270	\$1,268,685	\$2,154,735
Av. Debt Service (80%)	\$306,108	\$306,108	\$306,108	\$612,216	\$1,014,948	\$1,723,788
Supportable Debt (4.5% 25 Yr)	\$4,550,000	\$4,550,000	\$4,550,000	\$9,100,000	\$15,000,000	\$25,500,000
DEVELOPMENT COSTS						
Acquisition	\$0	\$4,950,000	\$4,950,000	\$4,950,000	\$6,187,500	\$7,425,000
Demo/Abatement	\$0	\$0	\$0	\$0	\$0	\$0
Construction \$225/sf (\$240/sf office)	\$5,568,750	\$5,568,750	\$5,568,750	\$11,137,500	\$11,508,750	\$17,448,750
TOTAL HARD COSTS	\$5,568,750	\$10,518,750	\$10,518,750	\$16,087,500	\$17,696,250	\$24,873,750
SOFT COSTS @ 20%	\$1,113,750	\$2,103,750	\$2,103,750	\$3,217,500	\$3,539,250	\$4,455,000
TOTAL PROJECT COSTS	\$6,682,500	\$12,622,500	\$12,622,500	\$19,305,000	\$21,235,500	\$29,328,750
Subsidy @\$275 psf	\$0	\$0	\$6,806,250	\$0	\$0	\$0
Project Cost After Subsidy	\$0	\$0	\$5,816,250	\$0	\$0	\$0
Cost of Deb Service 4.5% 25yr	\$303,492	\$303,492	\$303,492	\$606,972	\$1,000,044	\$1,700,880
Income-Expense	\$79,143	\$79,143	\$79,143	\$158,298	\$268,641	\$453,855
Equity	\$2,132,500	\$8,072,500	\$1,266,250	\$10,205,000	\$6,235,500	\$3,828,750
RETURN ON INVESTMENT	3.7%	1.0%	6.3%	1.6%	4.3%	11.9%

Assumptions: No real estate taxes, construction costs for office add \$15 psf and \$1 psf expense

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Report design: **Ben Dodd, Nepal Asatthawasi**

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