

**GOWANUS CANAL
BROWNFIELD OPPORTUNITY AREA
NOMINATION STUDY**



**PREPARED FOR
FRIENDS OF BROOKLYN COMMUNITY BOARD 6
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Friends of
BROOKLYN
COMMUNITY
BOARD 6



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Executive Summary

The Gowanus neighborhood is a last reservoir of industrial activity surrounded by the predominantly residential neighborhoods of South Brooklyn. This cluster of manufacturing-zoned, aging, low-rise industrial buildings has evolved into a nexus of arts, crafts, traditional industry, and new manufacturing uses that productively co-exist on the shores of one of the nation's most polluted waterways. Interest in Gowanus's future abounds: the area is frequently featured in news stories; attracts evident real estate speculation; and is the subject of a significant community visioning process that has engaged hundreds of local residents. Artists, residential neighbors, filmmakers, musicians, environmental advocates, and blue collar workers all lay claim to Gowanus, but the oldest claim belongs to the industrial businesses that have lined the canal's banks since before it was completed.

The Gowanus Creek was channelized in the 1860s to drain South Brooklyn's tidal marshlands and to create water-accessible real estate

for industrial development. The original creek drained storm water from the upslope areas now known as the Brownstone Brooklyn neighborhoods of Boerum Hill, Carroll Gardens, Cobble Hill and Park Slope. Foot-long oysters thrived in the creek; bottom-feeders and indigenous plant life filtered sewage naturally.

As population growth in Brooklyn expanded south and west from the initial historic village of Breuckelen, Gowanus transitioned from a center of grain processing and agrarian distribution to a center of bulk materials. The newly-constructed canal played a central role in transportation of materials needed for the construction of Brownstone Brooklyn. It also became home to heavier industrial uses, supporting several coal gasification plants and the energy generating facilities of the Brooklyn Rapid Transit Company.

Intensive industrial use and the continued use of the canal as an open sewer took its toll on the water body. In 1911, New York City constructed a pump station and flushing tunnel to introduce a source of fresh, oxygenated water at the head of the canal and eliminate the canal's storied stench. It quickly became apparent that the system, which flushed fresh water from Buttermilk Channel into the canal in an effort to force stagnant water into Gowanus Bay, was unable to keep up with the volume of waste that was regularly dumped into the canal. Despite the evident need for regular dredging to maintain the canal's functionality, resources for such maintenance were non-existent.

Equipment damage in the early 1960s led to the break down of the flushing system. Deposited biomass from combined sewer overflows collected on the bottom of the stagnant canal, reducing water depth and giving rise to a pervasive, distinctive, noxious odor which stigmatized the area. The canal's odor and extensive siltation reduced navigability at a time when inexpensive fuels and the new interstate highway system allowed trucking to supplant maritime shipping; as FHA loans opened the door for real estate development further inland, and the demand for locally-generated energy products declined, Gowanus saw businesses and activity move away.

In 1999, the City repaired and reactivated the Gowanus Canal flushing system. Overnight, the malodorous environment was transformed.



The Gowanus BOA focuses on 131 acres of land in a historically industrial South Brooklyn neighborhood that abuts the Superfund-designated Gowanus Canal.



Gowanus's sheen of industrial pollutants led to its historic nickname "Lavender Lake."

Image Source: Brownstoner, 2009

Aquatic and avian life began repopulating the canal. Long-dormant properties suddenly saw substantial increases in value. Interest in Gowanus exploded.

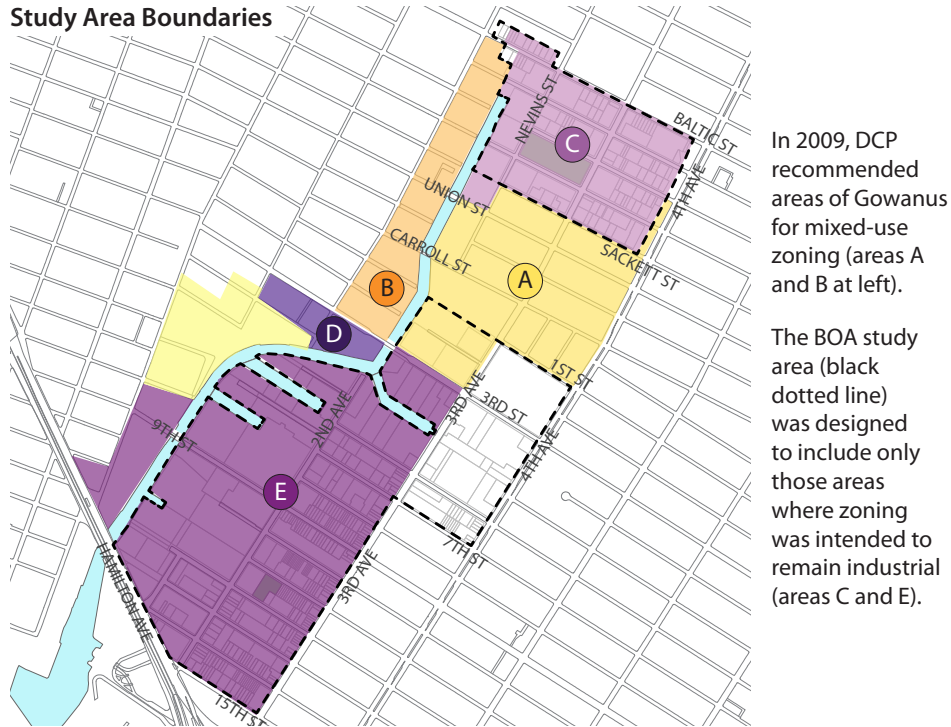
A surge of development interest in subsequent years led the Department of City Planning (DCP) to re-evaluate the area's exclusively manufacturing zoning, with an eye toward allowing mixed-use development. This exploration was cut short by the 2010 designation of the canal as a Federal Superfund site, which made it impossible for the City to consider future uses around the canal until the implications of the long-term clean-up plan were better understood. The Superfund designation and the prospect of a remediated canal ignited others' imaginations, however, and many visions of Gowanus have resulted, casting the neighborhood as a site for business activity, artistic expression, cultural uses, environmental restoration, outdoor recreation, high-end and affordable housing, and unique nightlife.



The Gowanus Canal Superfund designation has attracted real estate speculation, environmental tourism, and artistic interpretation. Here, a logo developed by artist Tonky.

These visions of the future sometimes conceive of the existing neighborhood as a blank slate, but Gowanus is quite active. The industrial activity that has always distinguished the area from its residential neighbors continues, albeit at a slower pace. In July 2012, Gowanus supported 420 businesses and 3500 jobs. Nearby highways and transit lines deliver rapid access to markets, and businesses appreciate the strongly supportive local community, but the maintenance and growth of a thriving Gowanus business district is challenging. The study area's built fabric is under-invested (70% of buildings were constructed prior to 1940; only 20% have seen significant renovations since 1984), and although it appears attractive to new businesses that wish to stay and grow, Gowanus's typical spaces are often too small to accommodate growth. Despite apparent demand, 5.2% of land in the BOA study area is being held vacant and unused, including several larger buildings that could provide necessary step-up spaces to support growing businesses.

Study Area Boundaries



The Gowanus Brownfield Opportunity Area Nomination Study

Confining the study area to zones where supporting industrial use is an articulated City priority, Friends of Brooklyn Community Board 6 (FBCB6) has sponsored this BOA to develop an economic development strategy that can encourage new investment in Gowanus's businesses and buildings while preserving and supporting the area's existing industrial and cultural uses. This community-driven BOA focuses on the strengths and weaknesses of Gowanus as a business location, and explores the needs of the area's businesses, industrial property owners, and workers.

Community & Outreach

Given this BOA's tight focus on economic development within existing industrial areas, the team identified the core community as those with an articulated interest in the study area: businesses, property owners, and community organizations whose missions and programs are tailored to Gowanus. Outreach to these groups consisted of:

- Two interactive stakeholder workshops;
- A door-to-door survey of 80 industrial businesses;
- In-depth interviews with both industrial and non-industrial businesses; and
- Individual outreach to owners of potential strategic sites.

The team also reached out to local elected officials, Community Board 6 (CB6) members, experts, and the general public via:

- Public presentations of findings at open meetings of CB6's Economic/Waterfront/Community Development and Housing Committee;
- A website (www.fbc6.org/gowanus-bo) that hosted an overview of the BOA, project FAQ, and a library of project documents, including copies of all public presentations;
- Meetings with local elected officials;
- Interviews with local real estate brokers; and
- Two discussions of project findings and recommendations with the CB6 Executive Committee.

Work on the BOA was overseen by a steering committee that comprised representatives of Federal, State, and City agencies, Community Board 6, and indigenous community groups. Friends of Brooklyn Community Board 6, the sponsor of this BOA, is the nonprofit arm of Brooklyn Community Board 6, one of the City's 59 local representative bodies charged with representing local interests in municipal-level planning and policy discussions.

Summary of Findings

Blue Collar Hub

Gowanus is an actively used business district and a local center for blue collar employment that provides almost double the number of manufacturing jobs and nearly as many construction jobs as the surrounding area. The few residents who call Gowanus home exhibit higher rates of poverty, lower incomes, and lower educational attainment than residents of adjacent neighborhoods, and are also

more likely to be employed in blue collar (e.g. construction and manufacturing) and low-skill (e.g. retail) jobs. Blue collar jobs offer higher average hourly wages than retail positions, making Gowanus a potentially important employment center for its residents.

Land Use: Promises & Uncertainty

These blue collar opportunities are protected by the study area's industrial zoning, and strengthened in the Southwest Brooklyn Industrial Business Zone (IBZ)—a designated area where the City declared that it would support industry and resist rezoning to allow residential use.

Industrial uses dominate the BOA study area, with 63.7 acres of land used for manufacturing, warehousing, transportation, studio production, and more. Commercial uses occur on 40 acres of land, while 29 acres of the study area are considered underused, comprising vacant buildings, construction sites, parking areas, and empty lots—but only 5.2 acres is considered truly vacant.

New, primarily commercial uses that have arrived in the past 15 years point to Gowanus's widening appeal, including hotels, nightclubs, gyms, boutiques, restaurants, and a new Whole Foods Market. While some stakeholders appreciate the growing diversity of Gowanus, others worry that these higher-rent-paying enterprises, in concert with two high-density residential complexes slated for construction on the canal's west bank, spell trouble for the future of local industry. Although zoning variances for the housing developments were discussed and granted a decade ago, site clearing and construction have only recently begun. The fact that construction is proceeding despite intervening events (establishment of the IBZ, the federal Superfund designation) has led some people to feel that the City's promise to champion local industrial activity has been undermined.

Start-Up Spaces

Gowanus's building stock presents opportunities and obstacles to businesses. The small spaces and affordable rents appeal to startups and artists, and may partially account for Gowanus's growing base of young businesses. The older and unimproved building stock, which is



Architectural Grille, a manufacturer of metal products employing 50 workers, has operated on the banks of the Gowanus Canal for nearly 70 years.



New uses, like this two-story Turkish restaurant with courtyard on 7th Street, make some locals wonder about the future of Gowanus as an industrial area.

Despite its vulnerabilities, Gowanus's building stock has aesthetic appeal for many. Low-profile buildings and open space along the canal create striking views and visual openness unavailable in denser areas. The study area blends buildings of historic and architectural significance with others of a purely utilitarian aesthetic. Even the latter were included in a recent nomination of a Gowanus Canal Historic District to the National Register for Historic Places; advocates see the nomination as celebrating the industrial history of Gowanus, but many property and business owners have decried it as a hindrance to future use of the district.

Gowanus's affordability, underinvestment, and visual openness have their roots in the pervasive contamination that led to the canal's Superfund designation. The BOA found 82 tax lots in the study area that have histories of contaminating use, including the two former Manufactured Gas Plants (now State Superfund sites) that were major contributors (along with a third plant on the canal's west bank) to contamination of the canal and upland areas. Water and soil quality in the canal has also historically been tainted by its use, since construction, as an open sewer. Today, 15 sewer outfalls dump 350 million gallons of mixed sanitary and storm sewage into the canal each year.

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-  Manufactured Gas Plant (MGP)
-  EPA "Dirty 7" Site (NAPL contamination)
-  Asphalt Plant
-  Chemical/Plastic Manufacturing
-  Coal Yard
-  Oil/Petroleum Business
-  Multiple Contamination Sources
-  Other Manufacturing Use
-  Spill Site
-  Superfund Area



In addition to the Superfund-designated canal, 82 upland tax lots have known histories of contaminating uses. The overwhelming stench and stigma of the canal suppressed investment and development in the entire upland neighborhood.



The Gowanus Dredgers have been operating canoe trips down the canal for over a decade.
Image Credit: Carolyn Cole for the Los Angeles Times

pilot project, and incentivization of private action through a targeted grant program. DEP recently completed extensive rehabilitation of the flushing tunnel and pump house, increasing capacity by 30%, adding system redundancies, and extending the hours of operation, all of which contribute to better water quality. Local community groups like the Gowanus Canal Conservancy (GCC) are also contributing to storm water management by constructing bioswales and rain gardens.

Recreation & Open Space

Despite pervasive contamination and relatively little park space, Gowanus functions as a destination for outdoor recreation. The Gowanus Dredgers offers free canoeing and kayaking along the canal, punctuated by annual races; as early as 1999, the group led canoe-based cleanup efforts on the canal. A thousand people volunteer annually through the Gowanus Canal Conservancy's community composting program and to help build rain gardens and bioswales in the area. Remediation activities represent an opportunity to take advantage of the canal environs as informal outdoor recreation space.

Recreational opportunities are expected to increase following EPA's canal cleanup. An improved bulkhead edge will make the canal more accessible for barges and kayaks alike. The Gowanus Canal Conservancy hopes to work with landowners to create a continuous waterfront park, anchored by the publicly-accessible Salt Lot. As waterfront developments like the Whole Foods Market at 3rd Street and the Lightstone residential development on the canal's west bank are required to provide public waterfront access, the canal will become more appealing and available as a recreational amenity.

Transportation & Access

Existing conflicts between recreational and commercial canal users are minimal; although the canal was once an essential transportation asset for the neighborhood, it is used today only by a handful of businesses below the 4th Street turning basin. North of the 4th Street basin, barge access is limited due to siltation; this reach has become the domain of recreational users. EPA's cleanup effort will deepen the canal along its length and result in improved bulkhead walls, benefiting both commercial and recreational users of the canal, but necessitating careful integration of the two groups in the future.

On land, Gowanus offers easy access to local highways and truck routes that provide swift connection to Manhattan, Long Island, and New Jersey. Many businesses interviewed for the BOA listed location as one of the area's primary advantages. Roughly 30 block faces in the study area have parking regulations that favor commercial and truck access, and nighttime street sweeping helps to cut down on residential parking by upland neighbors.

Limited transit access may contribute to parking challenges in the study area, where it is not uncommon to see cars parked on sidewalks. Local advocates are exploring the possibility of a bus circulator route that could connect nearby residents and customers with the area.

As Gowanus's economy diversifies and its appeal expands, particularly in the wake of EPA cleanup, there is potential for inter-modal conflict on streets that have long been dominated by commercial traffic. Strategic implementation of urban design elements could help to

direct pedestrian, cyclist, and through-traffic along certain routes, leaving others free for trucks.

Business Outlook

The study area is a thriving business district. The majority of businesses are industrial, with concentrations in construction, wholesale trade, manufacturing, automotive parts and service, transportation and warehousing, and waste management. A historic cluster of businesses dealing with building materials persists to this day with over a hundred related businesses and some local supply chains. Nascent clusters exist in food production, automotive, and film and media. Many businesses expressed a desire to strengthen local business-to-business activity. The strength of the building materials sector, combined with Gowanus's general focus on environmental remediation and restoration should make the area a natural fit for businesses specializing in green building techniques, design, and products.

The area attracts new and start-up businesses, and many of these firms wish to remain and grow in place; however, Gowanus lacks larger or step-up spaces into which businesses can grow. Real estate in the study area is tightly controlled; 20 owners control 60% of the land, and turnover is low. The vast majority of businesses in the study area rent their spaces. Among the businesses interviewed, 56% had leases for less than five years; 35% had leases for one year or less. Inability to secure long-term space curtails business investment, and lack of turnover in real estate contributes to the neighborhood's under-investment.

Asked to identify challenges to conducting business in Gowanus, survey respondents noted that parking, sewers and drainage, street conditions, and telecommunications needed improvement; but that the biggest challenge to business is real estate pressure. Despite the existing zoning, the Industrial Business Zone classification, and the Department of City Planning's deliberate choice to retain the study area's industrial zoning in its 2009 proposal, many property and business owners worry about the neighborhood transitioning to become a residential area. This specter of neighborhood change is perceived as the major obstacle to the success of industrial businesses.



Flooding on 9th Street after a rainstorm in August, 2012. Poor drainage is an issue for businesses that the City is addressing. *Image Source: Paul Martinka for The Brooklyn Paper*

Bridging the Gaps: BOA Recommendations

Stakeholders identified three goals for the neighborhood:

- 1. Support and grow industrial business presence in Gowanus**
- 2. Preserve a navigable canal for all users**
- 3. Integrate evolving interests in Gowanus (cultural, environmental, recreational) with existing industrial and business interests to foster a multi-faceted, productive, creative economy**

Together these goals envision a future Gowanus that is inclusive of many types of activity while remaining an active and vibrant economic center that supports a variety of businesses and jobs. This vision can be advanced through a number of smaller steps outlined below.



Gowanus's older buildings are visually distinctive but vulnerable to flooding and fires. The majority were built before 1940 and have not seen major structural upgrades.

GOAL 1: SUPPORT AND GROW INDUSTRIAL BUSINESS PRESENCE IN GOWANUS

Industrial businesses have historically been the core constituency of Gowanus, and stakeholders expressed a strong desire to maintain and strengthen that base. Key strategies for supporting this community and removing obstacles to business investment fall into three main tasks.

1. Improve essential infrastructure.

Businesses reported difficulty with infrastructure from drainage to telecommunications. Steps that should be taken to remedy these issues include:

- Exploring options for improving broadband and wireless access in Gowanus, currently an under-served area;
- Supporting ongoing upland investments in green infrastructure, sewer capacity expansions, and CSO reductions;

- Commissioning a parking study to discern the root causes of local parking congestion; and
- Advocating for expanded transit and alternative transportation infrastructure, including new bus service and added bicycle facilities.

2. Promote investment in industrial business, in both emerging and traditional sectors.

Businesses are drawn to Gowanus, but surveys found that relatively few businesses were able to grow in place. Implementation of several institutional supports could fill information gaps, increase the visibility of the district, facilitate business investment, and improve business longevity:

- Connecting potential investors with information about incentive programs that support industrial and remedial activity in NYC;
- Working with interested business owners and arts organizations to form an industrial BID (IBID) for Gowanus that can effectively advocate for and support the community;
- Establishing a Gowanus Business Advocate, possibly through the IBID, who would work to foster business-to-business relationships, explore Gowanus branding options, and act as an information clearinghouse for local businesses and arts organizations;
- Encouraging formation of new and small businesses by establishing incubator, co-working, or shared workspaces in Gowanus; and
- Engaging the neighborhood's largely untapped resident workforce with job training programs targeted to foster the skills needed by local businesses.

3. Promote investment in industrial building stock.

Lack of investment in building stock is one of the biggest impediments to continued use of Gowanus for industrial and manufacturing business. Buildings are old and unimproved; owners are reluctant to

invest in improvements to structures; several structures stand vacant. These conditions can be mitigated through a few actions:

- Working with City leadership to stabilize market conditions by clarifying zoning priorities and the future of manufacturing uses in Gowanus;
- Advocating at the municipal level for Gowanus to remain a home for permanent jobs, manufacturing uses, and productive economic activity;
- Collaborating with City leadership to explore options for strengthening protections afforded to manufacturing uses through M-zoning; and
- Leveraging incentives to promote investment and improvements in building stock.



A rain garden at the terminus of 2nd Avenue, implemented and maintained by the Gowanus Canal Conservancy, provides public access and a soft, absorbent edge.

GOAL 2: PRESERVE A NAVIGABLE CANAL FOR ALL USERS

The canal is the heart of Gowanus. From its heyday as a bustling center of resource transportation and energy generation, through the years when its miasma cast a pall over the neighborhood, to its role today as an organizing center for creative approaches to urban environmental remediation, the canal has defined Gowanus. Looking toward the future, stakeholders wished to preserve a navigable canal for all users, whether commercial or recreational. The BOA recommends four ways to do so:

1. Help waterfront property owners take advantage of the opportunity to upgrade bulkheads in concert with EPA's cleanup process.

EPA's selected remedy provides a unique and limited opportunity for waterfront property owners to participate in a coordinated effort to upgrade the canal's bulkheads. Upgraded bulkheads will increase the integrity of the shoreline for both recreational and commercial use. Upgrading as part of EPA's work will expedite permitting and ensure a high standard of work.

2. Develop a Waterfront Access Plan (WAP) that advances the community's goals for public use of the Gowanus Canal.

While many in the community desire public access along the canal's banks, the City's existing waterfront zoning regulations do not seem flexible enough to accommodate the neighborhood's complex relationship with the canal. A WAP could refine the uses that trigger the requirements and offer design flexibility appropriate to the community's vision.

3. Support environmental restoration and contextually-appropriate waterfront access.

Cleaner water, a usable canal, and improved drainage benefit everyone who lives and works in Gowanus. Currently, environmental restoration work is proceeding on multiple levels. Community-supported local organizations have for 15 years created recreational amenities and upland environmental remediation features; these should be supported alongside the work of DEP and EPA.



Gowanus Grove, a popular, informal weekend party location along the canal's west bank, in June 2012. Image Source: Curbed.com

4. Promote increased maritime movement of people and goods.

A remediated, deepened Gowanus Canal can attract new economic activity, in the form of new water-dependent businesses or recreational users looking to support upland businesses. Promotion of the remediated canal will encourage increased economic activity in the neighborhood.

GOAL 3: INTEGRATE EVOLVING INTERESTS IN GOWANUS (CULTURAL, ENVIRONMENTAL, RECREATIONAL) WITH EXISTING INDUSTRIAL AND BUSINESS INTERESTS TO FOSTER A MULTI-FACETED, PRODUCTIVE, CREATIVE ECONOMY

Gowanus's economy is evolving from one dominated by traditional industrial and manufacturing activities to a new, more diversified model that incorporates a robust array of sectors, including food and film and media. Artisanal manufacturers are bringing a sustainable, small-scale, craft focus into the neighborhood; boutiques, restaurants, and gyms draw pedestrians. Environmental activists are drawn to



Artists, performers, artisans, and local food manufacturers already gather under a Gowanus flag. Image source: Film Biz Recycling

the Superfund site to volunteer and make tangible improvements to upland landscapes. Stakeholders saw integration of all of Gowanus's constituencies as important to creating and maintaining the neighborhood's vitality. The BOA recommends three steps to help these varied uses coexist.

1. Encourage strategic implementation of on-street green infrastructure facilities that complement local business activity.

DEP and the GCC are committed to installing green infrastructure that can help reduce CSO overflows and relieve flooding in the area. These facilities should be thoughtfully sited so as not to negatively impact business operations.

2. Promote Gowanus's emerging, non-traditional industrial and arts clusters alongside traditional uses.

Gowanus has growing appeal among artists, film and media businesses, and food manufacturers. Promoting Gowanus to these

sectors increases local economic diversity and strengthens the business community.

3. Preserve built character through adaptive re-use of existing architecture where possible.

Gowanus's low-rise, industrial building stock sets it apart from its upland neighbors. This visual character was quite important to some stakeholders, and some local developments like the Old American Can Factory have shown that a historic structure can be an economic asset. Where adaptive re-use of buildings or designation of historic significance can assist interested business owners in putting structures to productive use, the BOA supports such action.

Strategic Sites for Reinvestment

The BOA identified 19 underused properties where strategic investment and redevelopment could have a catalytic effect on economic development in the study area. Two of these, the Brooklyn Rapid Transit Power House and the Salt Lot, are actively being developed as publicly-accessible cultural and open space amenities. Three others are particularly promising, and were selected as target sites: properties where strategic redevelopment could fill identified gaps in Gowanus's real estate portfolio, support significant job creation, and catalyze further neighborhood investment.

The three target sites are all large, well-located buildings with the potential to offer a range of tenant spaces that fulfill area need for:

- Medium to large "step-up" spaces;
- Small start-up spaces similar to those offered at the Old American Can Factory; and
- Incubator spaces or shared workspace that could support emerging industries like food manufacturing.

While not uniformly interested in the BOA, owners of the three properties have evinced interest in redevelopment possibilities. One, the Kentile building, is currently in use but is subject to floods that have resulted in significant inventory losses to some tenants. The largest industrial space in the study area, the Kentile building

255 Butler: Existing



255 Butler Street, a 96,000sf industrial building suitable for multiple tenants, could revitalize the northwest corner of the study area by engaging nearby residents for job training.

has the potential to fill real estate gaps or house new types of job-creating uses.

269 Douglass Street, a complex of several multi-story industrial buildings, was slated to be demolished for a charter school until plans fell through. This well-located property, just north of Thomas Greene Park, has potential for reuse or redevelopment.

255 Butler Street, a historic four-story building with a one-story northern extension, is ideal for creating multi-tenant or incubator spaces. After being identified as a target site for this BOA, the property was leased to a developer believed to be interested in creating a hotel at the site. Friends of Community Board 6 is attempting to contact the developer for more information and to explore any opportunities to guide the development direction.

Realizing these sites' potential to catalyze neighborhood reinvestment requires more extended dialogue with the owners about potential redevelopment options that could both generate revenue and benefit

255 Butler: Rendering



Although 255 Butler has recently been leased, Friends of Brooklyn Community Board 6 is working through SoBRO to discuss potential opportunities with the lessee.

the neighborhood. To that end, Friends of Brooklyn Community Board 6 has been receiving assistance from the South Bronx Overall Economic Development Corporation (SoBRO), who have contracted with the Mayor's Office of Environmental Remediation (OER) to provide real estate advisory services for BOA recipients. This work is funded through a separate BOA grant received by OER.

In addition to conducting supplemental outreach to the owners of identified target sites, SoBRO is assisting FBCB6 in laying the groundwork for new types of development in the study area through outreach to local nonprofits, developers, and significant investors.

Outcomes & Next Steps

While the BOA has developed a range of recommendations and corresponding action items, the highest-priority items for FBCB6 to pursue in order to strengthen the business environment in Gowanus and advance stakeholders' goals for the area are:

- Build on SoBRO's work by continuing to engage strategic site owners, local developers, and nonprofits to advance development solutions that address real estate gaps that currently hinder development.
- Pursue formation of an IBID by securing funding that can support the necessary outreach, assessment, and application processes needed to create this body, and by building a coalition among business and arts leaders.
- Use the momentum generated by this BOA and by Councilman Lander's *Bridging Gowanus* community visioning process to open a discussion with the Mayor's office or DCP leadership regarding the future of land use and zoning in Gowanus, and options for preserving and protecting manufacturing and maker uses.

Report Structure

This Step 2 Nomination Study report documents the findings of this study and is presented according to the NYS BOA Program Guidance for Applicants document. The Introduction provides the description of and justification of the study area boundary; description of the project's scope, goals, and sponsor; and a review of the planning context. *Gowanus Context: Past & Present* explores the study area's rich history and provides a demographic comparison of the study area to its surrounding community. Existing conditions and relevant findings follow, separated into four sections: Land Use & Built Form, Natural Systems & Open Space, Transportation & Access, and Economic & Business Analysis. The Strategic Sites section spotlights properties within the study area where reinvestment could have a catalytic effect on neighborhood development. The Recommendations section offers a broad range of actions that would advance stakeholders' goals in the study area; Outcomes & Next Steps identifies the highest priority items that should be undertaken swiftly to maintain project momentum and set the framework for future action.

Introduction

Gowanus is a low-lying, industrial neighborhood in the midst of what is today a predominantly residential area of Brooklyn, New York. The Gowanus canal, a channelized tidal marsh that historically served as a natural sewer for upland areas, was the key to the neighborhood's early prominence as a center of industry and transportation. The water body was pivotal in transporting the materials that built today's residential brownstone neighborhoods of Boerum Hill, Carroll Gardens, Cobble Hill and Park Slope.

Industrial uses, including power generation and transportation, flourished along the canal; historic industrial processes, coupled with ongoing use of the channel as an open sewer, led to the canal's gradual contamination and siltation. Despite the City's efforts to mitigate the problem, the mounting accumulation of bio-solids impeded the navigability of the canal, and resulted in a pervasive, distinctive, noxious odor that came to characterize and stigmatize the area. By the 1960s, when inexpensive fuel helped the interstate trucking industry to supplant national maritime shipping, construction activity in Brooklyn had moved further inland, and conditions on the canal had deteriorated significantly. Many businesses moved away from the canal, and Gowanus fell into decline.

In 1999, the City improved the canal's oxygenation system, alleviating its pervasive odor; suddenly, long-dormant properties saw substantial increases in value. Interest in Gowanus exploded. A surge of development interest in the following years led the Department of City Planning to re-evaluate the area's exclusively manufacturing zoning, although the resulting rezoning effort would be stalled, along with multiple planned conversion projects, by EPA's declaration of the canal as a Superfund site in 2010. Nonetheless, the prospect of a remediated canal has inspired tremendous interest in Gowanus, which is variously imagined as a future site for business activity, artistic expression, environmental restoration, outdoor recreation, affordable and high-end housing, and unique nightlife. In an effort to clarify local preferences for future land uses in Gowanus, City Council Member Brad Lander has begun a community visioning process



The Gowanus BOA focuses on 131 acres of land in a historically industrial South Brooklyn neighborhood that abuts the Superfund-designated Gowanus Canal.

that has engaged hundreds of interested parties from Gowanus and surrounding neighborhoods. This BOA is more narrowly focused, and seeks to represent and support the indigenous populations who make Gowanus what it is today.

Gowanus is an active business district. The 131 acres of the study area house 3,500 jobs at 420 businesses, some of which have called the canal edge home for over a century. The neighborhood is a significant supplier of manufacturing and construction jobs in its area of Brooklyn; while blue collar jobs have declined overall in the past decade, small-scale artisan manufacturers and businesses based in the building trades continue to locate here. Relatively low rents, a supportive business community, and convenient transportation access to suppliers and markets contribute to the area's lasting appeal. In the past five years, the study area's base of industrial businesses has been joined by new hotels, retail, and physical culture establishments (e.g. gyms) that benefit from proximity to upland residential populations.



Looking north along the canal from the 9th Street Bridge. Under-investment in Gowanus's built fabric has resulted in vulnerable buildings, opportunities for artists and young businesses, and striking views. The canal's iridescent sheen comes from deposits of coal tar in the soil below the water.

The neighborhood, which is almost fully built out, is home to numerous brownfields. Roughly 60% of the non-street land in the Gowanus Brownfield Opportunity Area (BOA) study area has housed contaminating uses, including coal yards, chemical and plastics manufacturing facilities, tanneries, and more. The canal was used as an open sewer from its inception and received dumped effluent from unnumbered sources; contamination from three manufactured gas plants in particular have left behind deposits of coal tar and other petrochemical byproducts that bubble to the surface today.

While the majority of brownfields in the area have been built upon more than once and profitably used for decades, the overall impression of Gowanus as a seat of contamination has long dogged the heels of neighborhood investment. Where surrounding Brownstone Brooklyn neighborhoods have appreciated wildly in the past 30 years, Gowanus has lagged behind. Very few of the buildings in the study area have seen significant structural investment since their construction; as a

result, buildings are vulnerable to floods and fires, which discourage potential tenants who can ill afford to lose inventory and equipment.

At the same time, lack of improvement and redevelopment has created a unique environment in Gowanus, whose low-rise industrial buildings offer relatively low rents that create opportunity for young businesses. Artists have thrived in the neighborhood for decades; volunteers who want to positively affect their environment have spent fifteen years laboring to green and clean the canal edge; intrepid boaters use the canal for canoe races; even those for whom the area is little more than a bridge between two residential areas enjoy expansive views along the canal that are hard to come by elsewhere. Decades of neglect and disinvestment have created in Gowanus unique aesthetic, economic, and environmental opportunities, which have attracted notice.

Today, Gowanus is at a crossroads. New residential and retail development pressure seems to presage an inevitable transition to a domesticated future; meanwhile, the City's commitment to Industrial

Local Neighborhoods



The BOA study area (black dotted line) straddles three primarily residential neighborhoods: Carroll Gardens, Park Slope, and Boerum Hill.

Business Zones, which promised a secure future for industry, seems less than binding. The release of EPA's Record of Decision describing a remediation plan for the canal has inspired visions of public parks along the water's edge, as well as visions of a deepened canal that can support shipping and marine activity. Housing developers, industrial property owners, film/media companies, manufacturers, artists, artisans, retailers, residents from adjacent neighborhoods, and environmental activists all harbor their own visions for Gowanus.

Bridging Gowanus, a new community visioning process guided by City Council Member Brad Lander, seeks to build consensus among these disparate ideas and establish an honest, overall context to guide future development in the neighborhood. The Gowanus BOA Nomination Study is once piece of the complex picture considered in the *Bridging Gowanus* process. This BOA study seeks to shed light on the oftentimes overlooked indigenous population of business persons, property owners, artists, artisans and workers who are Gowanus's core constituency, and explore ways that neighborhood reinvestment can

accommodate the changing interests in Gowanus while continuing to support this existing community.

Scope

The BOA program, funded by the New York State Department of State (DOS), supports community-driven, neighborhood-scale economic development planning in areas profoundly affected by brownfields and contamination.

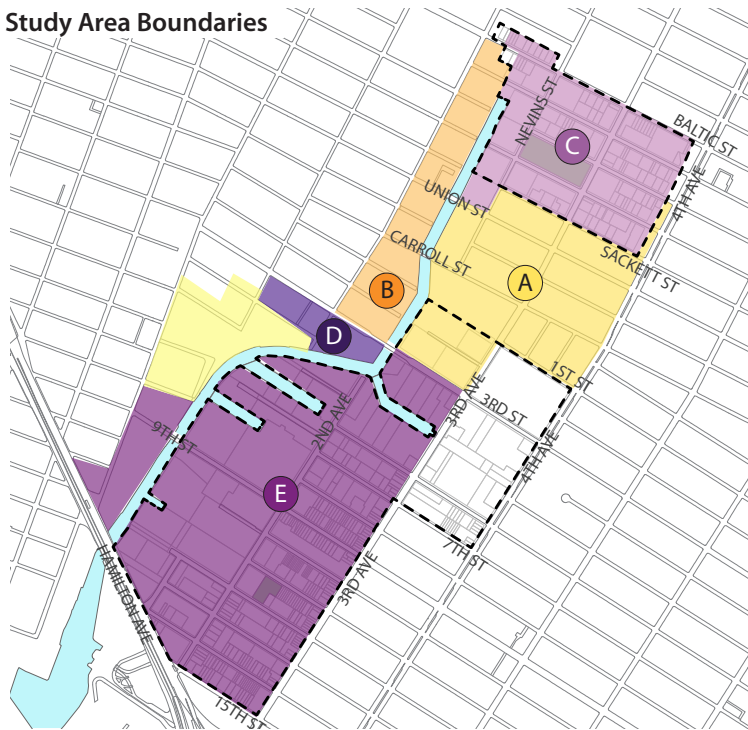
The Gowanus BOA seeks to create a community-driven plan for economic development that builds on the neighborhood's unique assets and enduring industrial base, in the context of evolving neighborhood concerns. An effective economic development plan for Gowanus must prioritize industrial growth and retention, welcome new, compatible economic sectors, embrace the remediation of brownfield sites (including the Gowanus Canal), and thoughtfully address the need to integrate diverse stakeholder groups into this changing area.

Boundary

The Gowanus BOA study area was specifically selected to conform to recent City policy explorations. Prior to EPA's Superfund declaration, the Department of City Planning explored the possibility of rezoning some areas of Gowanus from manufacturing to mixed-use (see full discussion, page 30). Although the rezoning initiative was tabled following the Superfund declaration, the boundaries of the BOA study area were chosen to include those areas where rezoning was never proposed to avoid any possible conflict with City policy. As a result, the study area is separated into a north section (approximating DCP's area C) and a south section (approximating DCP's area E). Because the west bank of the canal has several significant redevelopments planned or in progress, the BOA focuses on parcels east of the canal. In the south area, it expands east of DCP's area E to include several blocks of manufacturing and compatible commercial activity along 4th Avenue.

The project boundary was modified once, at the request of stakeholders, to include the block bordered by the canal, 3rd Avenue, 3rd and 1st Streets. This area contains two fully paved lots used by

Study Area Boundaries



In 2009, DCP recommended areas of Gowanus for mixed-use zoning (areas A and B at left).

The BOA study area (black dotted line) was designed to include only those areas where zoning was intended to remain industrial (areas C and E).

Verizon for parking, a self-storage facility, and the former BRT Power House, an iconic structure in the area that was recently purchased for redevelopment as a cultural and arts center. The BRT Power House site was at one time envisioned for residential development by the previous owner but those plans have long been abandoned.

The final BOA boundary encloses 173 acres of land, with 42 acres used for streets and 131 buildable acres. Land use is overwhelmingly industrial and commercial, with small clusters of legal, non-conforming residential use. Utilities are a major presence in the area; vacant land is rare. The BOA identified 82 lots (79 acres) as potential brownfields, in addition to the Superfund-designated Gowanus Canal, whose reputation has long been synonymous with the neighborhood.

Community

While the BOA study area is of interest to many, its indigenous community consists of the business owners, industrial property owners, artists, artisans and workers who embody and contribute

to the area's current use. This core constituency is often overlooked in conversations that treat Gowanus as a blank slate ready for redevelopment, when in truth it is home to a diverse and thriving business community. It is the BOA's intention to explore economic development strategies that capitalize on and support current activity; in conformity with that intent, this nomination study identified a stakeholder group that included business owners, property owners, and community organizations whose missions specifically focus on Gowanus itself.

The BOA team reached out to these stakeholders in multiple ways over the course of this nomination study. Daytime meetings in September 2012 and April 2013 brought stakeholders together to solicit insight about the study area; discuss the neighborhood's strengths, weaknesses, opportunities, and threats; establish and confirm goals for neighborhood development; review project findings; prioritize possible action steps; and more.

Through a survey of 80 industrial businesses operating in the study area, the BOA team gathered information on local trends, advantages, and challenges of doing business in Gowanus. The team augmented this information with longer interviews with several industrial and non-industrial businesses.

The BOA team also conducted individual outreach via letters, emails, phone calls and additional meetings with owners of properties identified as potential strategic sites, and interviewed local real estate brokers for insight into the area's real estate market.

For complete details of the BOA's outreach efforts, please refer to Appendix A.

Community Goals

A wide-ranging discussion at the initial stakeholder meeting in September 2012 elicited a host of ideas about how to improve the neighborhood in an economic development context. These included ideas about reusing and redeveloping structures, prioritizing land uses, preserving local architecture and built form, connecting commercial and industrial business owners with incentives that could

countermand the financial enticements of residential development, repairing and upgrading critical infrastructure, maintaining a navigable canal, and more. By the April 2013 stakeholder meeting, these diverse ideas had coalesced into three goals that express the indigenous community's vision for Gowanus:

1. Support and grow industrial business presence in Gowanus

Retaining, supporting, and developing the industrial business sector already present in Gowanus was of preeminent importance to stakeholders. This goal is supported by objectives focused on improving essential infrastructure, and encouraging investment in businesses and building stock. Specific recommendations for this goal range from modification of city policies to creation of a user-friendly online guide to available incentive programs. This goal is the main focus of the BOA; it received the most vocal and consistent community support, and is, accordingly, the most highly developed.

2. Preserve a navigable canal for all users

The neighborhood's namesake waterbody stands to be cleaned up by EPA in the next 15 years. Stakeholders expressed a desire to see the canal remain navigable in the future, for both commercial maritime-reliant uses and recreational boating. There is also considerable interest in creating business-compatible public access along the canal's banks.

3. Integrate evolving interests in Gowanus (cultural, environmental, recreational) with existing industrial and business interests to foster a multi-faceted, productive, creative economy.

Although the stakeholder group comprised mostly business interests in Gowanus, workshop participants welcomed the variety of uses that have started to appear in the neighborhood. Business owners were enthusiastic about partnering with environmental groups to install distributed green infrastructure, sidewalk plantings, and street-end open spaces, if the installations could be thoughtfully sited to accommodate continuing business use. The overwhelming desire of the stakeholder group was to enable new uses to coexist with (rather than displace) existing uses.

GOWANUS CANAL BOA NOMINATION



The Brownfield Opportunity Area program is a state-funded program that fosters community-based planning to catalyze redevelopment of underused and brownfield properties at the neighborhood scale. The Gowanus BOA Nomination is in its earliest stages, and we want to invite you, as a key stakeholder working in Gowanus, to help us identify and define a strategy for redeveloping significant properties in the area. This is the first of two working sessions planned with key stakeholders, and we hope you will join us.

Stakeholders will:

- set the vision and goals that will shape the study and resulting plan to redevelop the project's two study areas,
- deepen the consultant team's understanding of the neighborhood by sharing their unique knowledge of the area
- contribute essential information about strengths, weaknesses, opportunities, and threats to area development

RSVP: planner@brooklyncb6.org

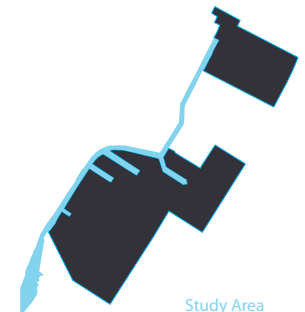
Please note: organizations are limited to 2 representatives each.

Questions? Contact:

Melissa Umberger, Project Manager
Friends of Brooklyn Community Board Six, Inc.
planner@brooklyncb6.org
718-643-3027 ext 203

JOIN US!
STAKEHOLDERS' MEETING

SEPTEMBER 27th
9:30 - 11:30 AM
250 Baltic Street
Brooklyn, NY 11201

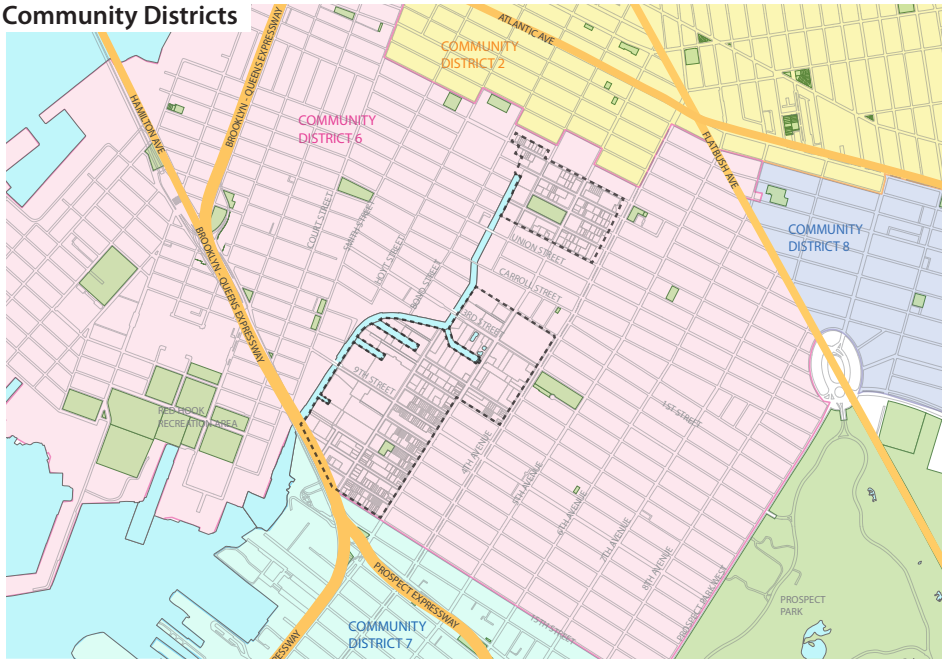


For more information on the BOA program and what's happening in Gowanus, please visit:
http://fbc6.org/gowanus_boa

HELP US SHAPE THE FUTURE OF THE GOWANUS!

Interactive stakeholder workshops encouraged dialogue between property owners, business leaders, community organizers, and government representatives.

Community Districts



New York City has 59 Community Districts, which are overseen by Community Boards who provide local representation on citywide policy and land use approval issues.

The BOA's three goals envision a future Gowanus that is a thriving business district, accommodates a wide variety of activities and uses, and embraces the canal as both a means of commerce and a place for recreation.

Project Sponsor

The Gowanus BOA is sponsored by Friends of Brooklyn Community Board 6 (FBCB6), the nonprofit arm of Brooklyn Community Board 6. New York City's 59 community boards are local municipal bodies that represent local community interests in the city's land use process, advise the city on the needs of their districts and monitor the day-to-day delivery of municipal services. Community board members are appointed by the Borough President, half of them at the recommendation of a local City Council Member, from the area's residents, business owners, workers, and others demonstrating significant interest in the district. Community boards have an important role to play in the City's land use decision-making processes and as advocates for public policy at the municipal level. Community

boards are managed by District Managers, who are responsible for running district offices and managing special projects.

Brooklyn Community Board 6 encompasses the neighborhoods of Carroll Gardens, Cobble Hill, Columbia Waterfront, Gowanus, Park Slope, and Red Hook. BOA findings were publicly presented at open meetings of the Community Board's Executive and Economic/Waterfront/Community Development & Housing committees. Notices for the meetings, along with general updates about the BOA, were disseminated through FBCB6's monthly e-newsletter, which reaches an audience of over 5,000 subscribers in the district.

Work on the Gowanus BOA was overseen by the District Manager, who is also FBCB6's Executive Director, as well as by the Board's Executive Committee, whose members reviewed the BOA recommendations for consistency with other ongoing district plans, projects, and policy positions.

The BOA was guided by a steering committee comprising representatives of Federal, State, and local government, as well as representatives of key indigenous community organizations. This committee worked diligently with the project team to direct and augment project research and ensure that recommendations conformed with agency capabilities.

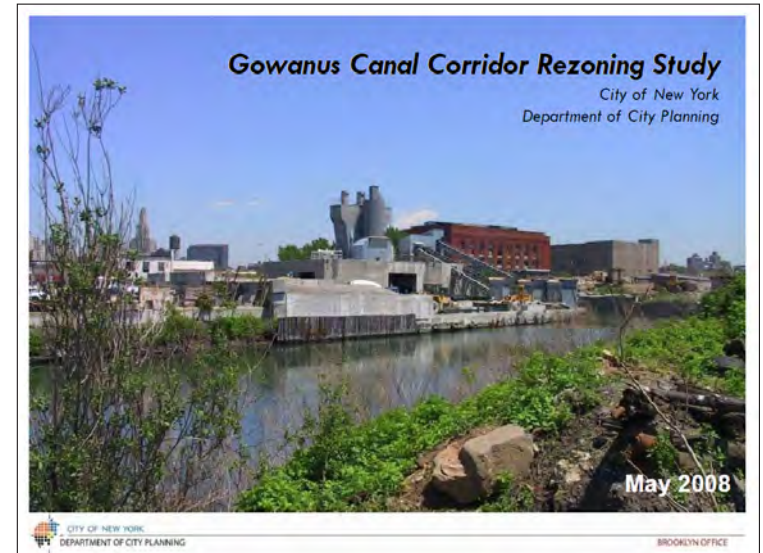
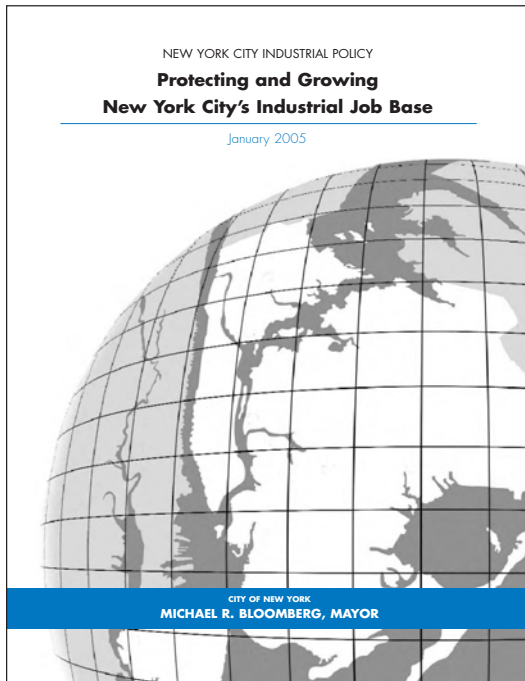
Finally, the BOA project team included staff from the South Brooklyn Industrial Development Corporation and the Pratt Center for Community Development, two nonprofits with extensive knowledge of the local area and its economic development potential.

Planning Context

The Gowanus BOA is one in a series of plans to recommend action in Gowanus. Where pre-existing plans are still in consideration, the BOA has worked to conform to their articulated visions. Plans that have expressed visions for Gowanus include:

New York City Industrial Policy (2005)

In 2005, Mayor Bloomberg released the New York City Industrial Policy, which established the city's 14 Industrial Business Zones (IBZs),



including the Southwest Brooklyn IBZ, which overlaps with part of the study area. Within the IBZs, the mayor promised: not to rezone to allow residential uses, to provide support for and incentives to attract industrial businesses, to protect and stimulate the supply of industrial space, and to foster a supportive, industry-friendly environment.

PlaNYC 2030 (2007, Updated 2011)

In 2007, Mayor Bloomberg issued his first comprehensive plan for the city, subtitled “A Greener, Greater New York.” The plan advocated for a land use study of the Gowanus Canal Corridor, citing diminished industrial presence and an ongoing, organic transition to a mixed-use neighborhood. It also advocated for improvements to the Gowanus Canal pump station.

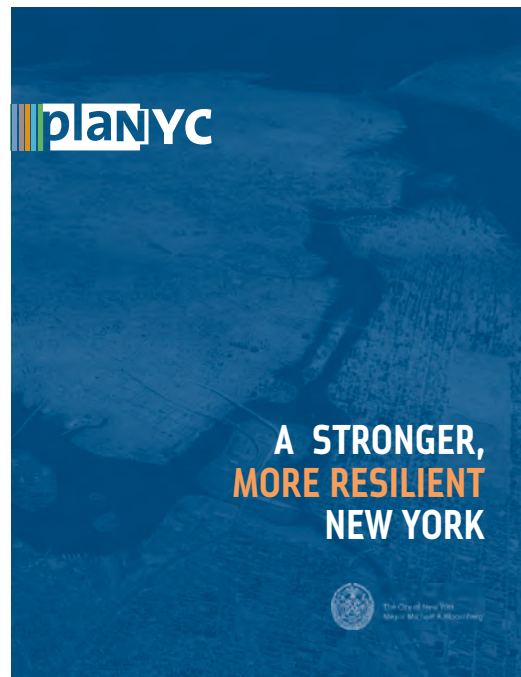
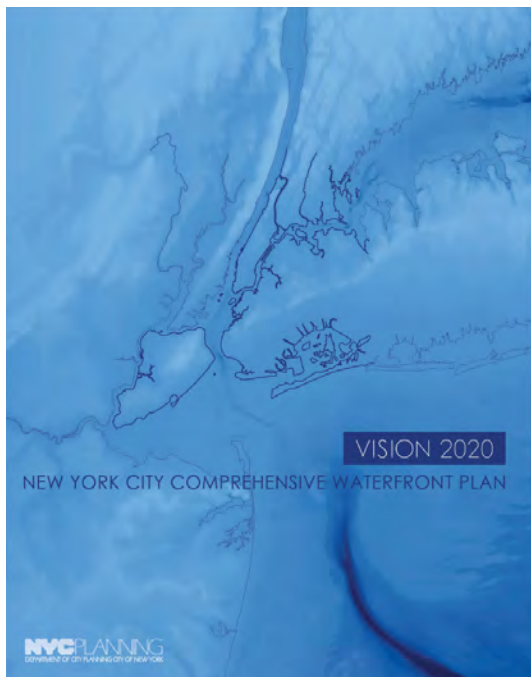
The 2011 plan update promised to expand the capacity of the canal’s pump house, reactivate the flushing tunnel, implement high level storm sewers, use green infrastructure to curtail CSO events, and partner with EPA in planning for the Superfund remediation.

Gowanus Canal Corridor Framework and Rezoning Study (2007, 2009)

The Department of City Planning conducted a land use study into Gowanus and recommended rezoning parts of the neighborhood to allow a mix of uses. The rezoning proposal was tabled in light of the canal’s Superfund designation in 2010, when housing developers became reluctant to invest in the neighborhood.

Vision2020: New York City Comprehensive Waterfront Plan (2011)

Vision2020 advocated a range of strategies for Gowanus, including: improving canal infrastructure, cooperating with EPA’s planning process, improving upland drainage infrastructure and implementing green solutions to reduce CSO outflows, supporting DCP’s proposed rezoning and related waterfront access recommendations, exploring the potential for safe indirect-contact in-water recreation, preserving historic properties, and supporting local industrial activity.



PlaNYC: A Stronger, More Resilient New York (2013)

Following the impact of Hurricane Sandy on the city in October 2012, Mayor Bloomberg commissioned his Special Initiative for Rebuilding and Resiliency effort, which examined ways in which the City could better prepare for the effects of climate change. Recommendations for Gowanus included: implementing a barrier to protect the area from storm surge, adapting infrastructure at the canal pump house to withstand flooding, using green infrastructure to reduce CSO events, installing watertight barriers to protect the machinery of the canal's movable bridges, and implementing high level separated storm sewers.

Record of Decision: Gowanus Canal Superfund Site (2013)

EPA's Gowanus Superfund Record of Decision (ROD) describes planned remediation activities along the canal, which include extensive dredging and reconstruction of the canal bottom. The work is expected to take six years, following a three year design process.

Bridging Gowanus (ongoing)

The latest in planning efforts touching on Gowanus is Council Member Lander's community visioning process focused on the future of land use and zoning in Gowanus. Findings from the BOA are being actively incorporated into this effort, which is expected to conclude in June 2014.

While there has been no shortage of planning occurring around Gowanus, the majority of work outside of the BOA has been focused on water quality and environmental remediation. The Gowanus BOA brings a new and complementary perspective to the planning picture by focusing on economic development that can serve the neighborhood's indigenous community. The BOA team hopes that this perspective will contribute to and inform public policy regarding the Gowanus area and its future.

Gowanus Context: Past & Present

Gowanus today is much as it has always been: a small, low-lying, flood-prone, industrial area sandwiched between residential districts. From its earliest days as a Dutch outpost, Gowanus developed industrial capacity to support its upland neighbors: as a center for agricultural processing, transportation, energy generation, and supply of building materials. The land has always been contested by industrial and residential interests, and remains so today.

Growing Up Gowanus: Land Use History ¹

Industrial use in Gowanus dates back to the 1660s, when Adam Brouwer built the first gristmill (now known as Freeke's Mill) in the marshland adjacent to the tidal creek, near contemporary Union Street. Two other mills followed, Denton's Mill near Carroll Street and Coles' Mill across the canal. The first roads in Gowanus connected these mills to an early predecessor of today's 5th Avenue, which connected the Village of Breuckelen to New Utrecht (today's Bensonhurst). During these early days, the Gowanus creek was a prime location for oystering, as draining fresh water mingled with tidal inflow to create ideal conditions for foot-long oysters.



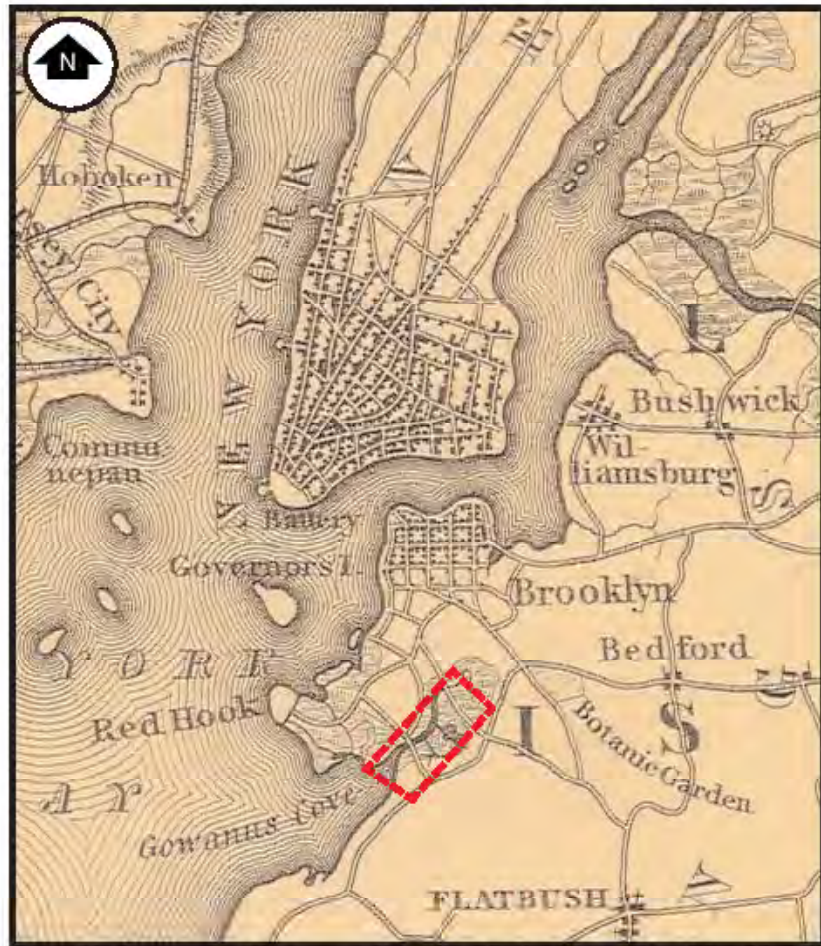
Alonzo Chappel's 1858 painting, *Battle of Long Island*, portrays the burning of Freeke's mill by retreating American soldiers crossing the Gowanus to safety.



An 1836 map of the Gowanus Creek, overlaid with the canal's modern alignment (blue) and approximate location of the study area (red). Source: *Proteus Gowanus*

The dam at Freeke's Mill was the only passable crossing along the creek. During the Battle of Brooklyn in 1776, the retreating American forces burned down both the mill and the bridge to stop the English advances (the mill was later rebuilt). The gristmills survived and operated for nearly 170 years, processing Brooklyn's grain exports until the 1840s, when midwestern grain shipped via the Erie Canal became affordable, and Brooklyn's grain export business was cut short.

Urban development of Brooklyn largely followed the waterfront, accelerating rapidly in the 1820s and 1830s, although it was some time before urbanization reached Gowanus. The area remained agrarian



This detail from an 1833 map of New York shows development only in the Brooklyn Heights area. Development followed the waterfront southwest and into Red Hook. Gowanus, highlighted in red, trailed behind. Source: Hunter Research

into the 1800s, providing food and supplies for its urban neighbors. In the 1840s, as industrial and residential activity increased in nearby Red Hook, and the grain markets dried up, construction laborers took up residence in the largely unimproved and empty marshlands of Gowanus. Their settlements, referred to as Tinkersville, were squalid, flood-prone, and lacking built roads.

Despite the lack of roads or other improvements, by 1846, real estate pressure in the marshes of Gowanus was mounting. Rising land values

in the urbanized areas of Brooklyn to the north and west forced speculators further inland, where Gowanus's unimproved waterway was seen as a potential shipping route to connect inland areas with the newly industrialized Buttermilk Channel. Channelizing the tidal creek into a canal was seen as a triple solution: it would clear the "pestiferous miasmata" of the marshes, which were generally regarded as unwholesome; open new land for development along its banks; and create a naturally flushing sewer that would relieve the burgeoning borough's sanitary issues. Planners and engineers agreed that "accumulations of filth" in the canal would "be exceedingly slow, as at every flood tide five feet of good clean water would be carried up from the bay, which would return with sufficient velocity to carry off most of the deposits."² These assertions would unfortunately prove to be false.

Speculators began acquiring land along the banks of the creek for development as early as 1850, in hopes of profiting once the canal was built. One major investor was Edwin C. Litchfield, who also acquired large upland tracts in what would soon be Park Slope. Litchfield's firm, the Brooklyn Improvement Company, would be integral in development of the desirable residential neighborhood; it would also construct four of the canal's turning basins, and the Coignet Stone building, the first concrete structure in New York City.

Progress toward canal construction was slow. Landowners were hesitant to finance construction until a return on investment was likely. Private landowners and later the City worked to improve street, land-fill, sewer, and bridge conditions; some private landowners even began canal work on their own. When construction of Prospect Park led to increased interest in the area, and some speculators threatened the waterside landowners' interests by suggesting that the entire canal should be filled to create more developable area, the time to build had arrived. A commission authorized to use city bond funds to construct the canal received the go-ahead in April 1866. The canal was completed roughly four years later.

Industrial Growth and Decline

Prior to the 1860s, the only enterprise on the Creek was the Citizen's Gas Light Company (later Brooklyn Union Gas), which opened in

1859 on the west bank of the canal between modern-day 4th and 7th Streets. By 1868, half a dozen businesses perched on the future canal's edge, despite limited navigability. Marine access to the area was limited to high tides, during which the four bridges across the Gowanus (all but the Union Street Bridge) were kept open continuously to accommodate boat traffic. By 1880, when the canal was complete, 31 businesses lined its banks, handling lumber, coal and firewood, hay and grain, oil, building materials, and chemical fertilizers. By 1890, electric and gas companies that required coal and coke moved in, followed by several area coal yards and, in 1896, the Brooklyn Rapid Transit Company.

Industrial use of the canal was at its peak from 1900-1932, with 50-60 businesses in the area, 75% of which dealt in bulk products. At its peak, the canal saw 25,000 vessels per year. The upland blocks of Gowanus housed factories and warehouses, but also rooming houses and bars to accommodate a rowdy population. But Gowanus's heyday didn't last. After World War II, housing policy led residential development out to the suburbs, reducing the local demand for building materials. Coal and manufactured gas fell out of fashion; truck transportation increasingly replaced marine shipping. By the mid-1960s, following the construction of the Verrazano-Narrows bridge and the fatally convenient Gowanus Expressway, only 15-20 businesses still used the canal for shipping; by 2000 only five did.

Canal History

Conditions in the canal itself contributed to its decline. Siltation and pollution problems arose immediately after the canal's construction, when daily tides proved insufficient to clear the household, industrial, and other waste washed into the canal by rains. Intermittent dredging was insufficient to counteract the problems. In 1877, nearly 20 years after the Citizen's Gas Light Company started operation on the Canal's

"The dredge cannot be used successfully as the filth slides from the shovel back into the water as soon as it is displaced." (1877)



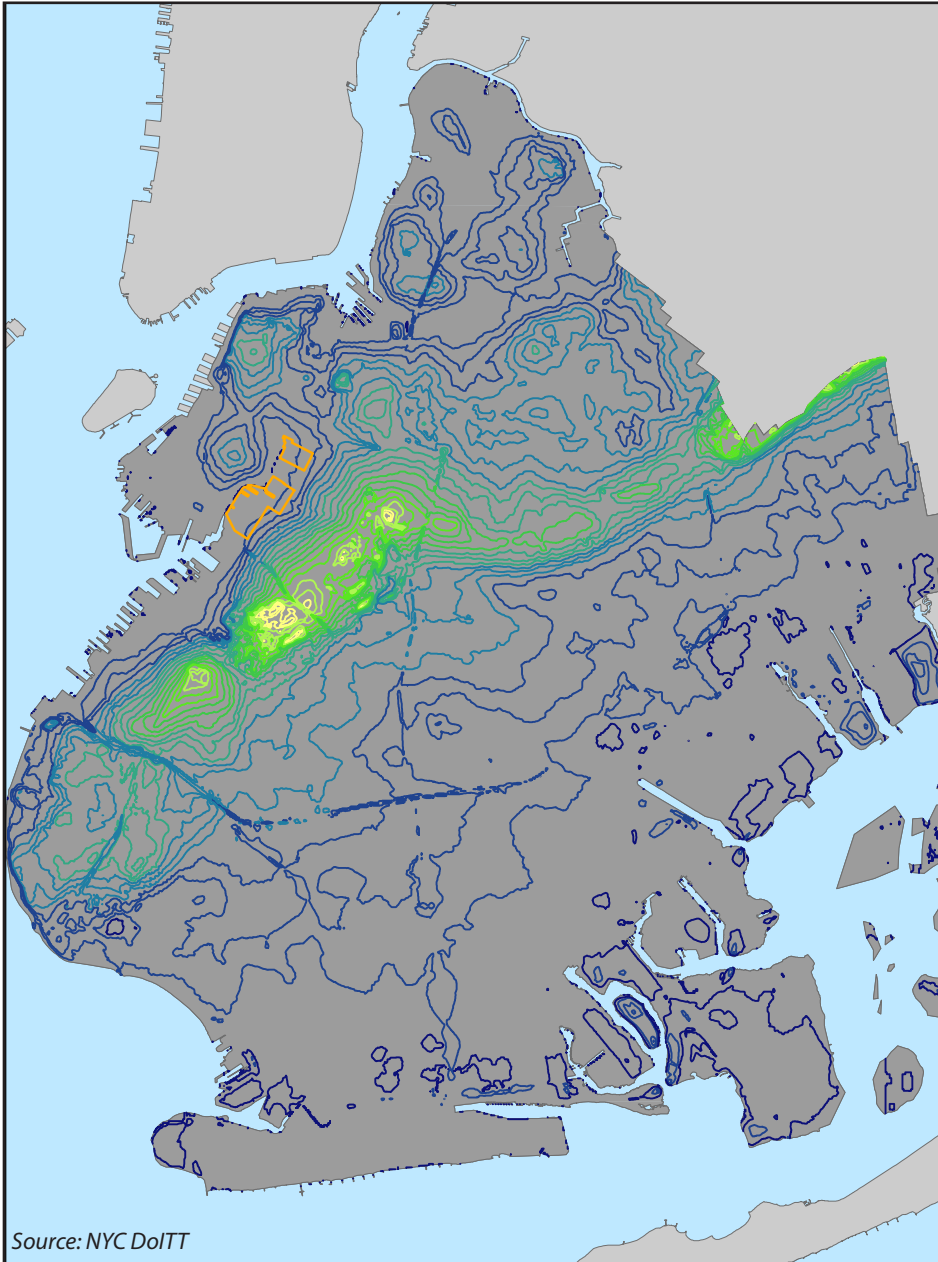
A tugboat pulled a barge down the busy canal in 1928. Photo Credit: Brooklyn Daily Eagle, 1928.
Source: Brooklyn Public Library

west bank, the Brooklyn Eagle quoted an official as saying about the canal, "The dredge cannot be used successfully as the filth slides from the shovel back into the water as soon as it is displaced."⁴ In the absence of an effective dredging regimen, debris in the canal made it increasingly difficult to traverse.

Ideas to mitigate deteriorating canal conditions ranged from filling it entirely to a sophisticated palette of actions not dissimilar to EPA's contemporary solution. This included eliminating all flows into the canal, dredging to the hard bottom, repairing bulkheads to prevent erosion, and creating an improved flushing system. Instead of implementing any of these steps, the City constructed additional upland storm sewers, hoping that increased rain flow would flush the pollutants from the canal. Unfortunately, the storm water carried more debris into the canal, worsening the problem.

In 1911 the City constructed a flushing tunnel that connected the canal to Upper New York Bay under Degraw Street. The propeller-driven tunnel operated continuously from 1911 until 1960. Although

Brooklyn Topography (3' Contours)



Source: NYC DoITT

A glacial moraine ridge creates the high ground in Brooklyn. Gowanus (study area highlighted in orange) lies in the low ground between the glacial ridge and some smaller hills to the north. Storm water from the high ground travels downhill to this area, where it traditionally mingled with incoming sea water to create a brackish tidal creek.

the tunnel improved oxygenation and flow, reducing local odors, it was insufficient to entirely overcome sewer drainage and the lack of comprehensive dredging. Siltation and pollution remained significant problems for the canal. In 1960, the tunnel's propeller was damaged, rendering the tunnel inoperable; it was not repaired until 1999. Today the tunnel pumps 200 million gallons of water per day from the Buttermilk Channel into the canal, greatly reducing but not eliminating the smell.⁵ In 2010, EPA added the Gowanus Canal to its Superfund National Priorities List of the most hazardous sites in the country; EPA's Record of Decision for the site was released in September 2013.

Upland Trends

The upland blocks east of the canal retained their industrial heritage, no doubt partially thanks to the canal, whose pollution and odor made the area unappealing for other uses. In 1961, the city's zoning code classified the northern study area as M1-2, appropriate for light industrial and manufacturing uses, and the southern area M2-1, for medium manufacturing and industrial uses. These designations remain in effect today.



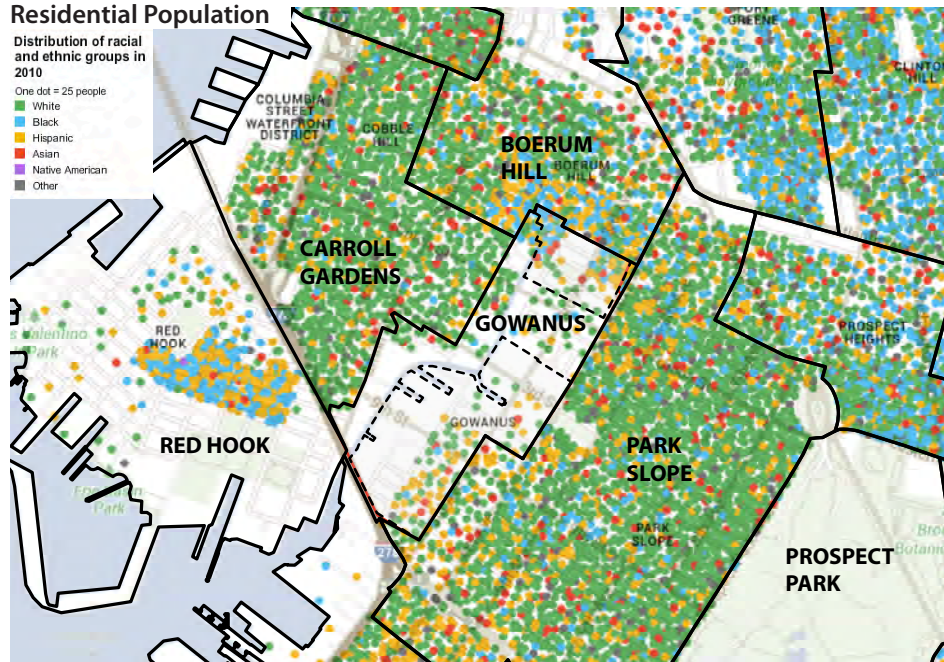
An industrial property abutting the Union Street Bridge that appears to have residential use.

Residential Population

Distribution of racial and ethnic groups in 2010

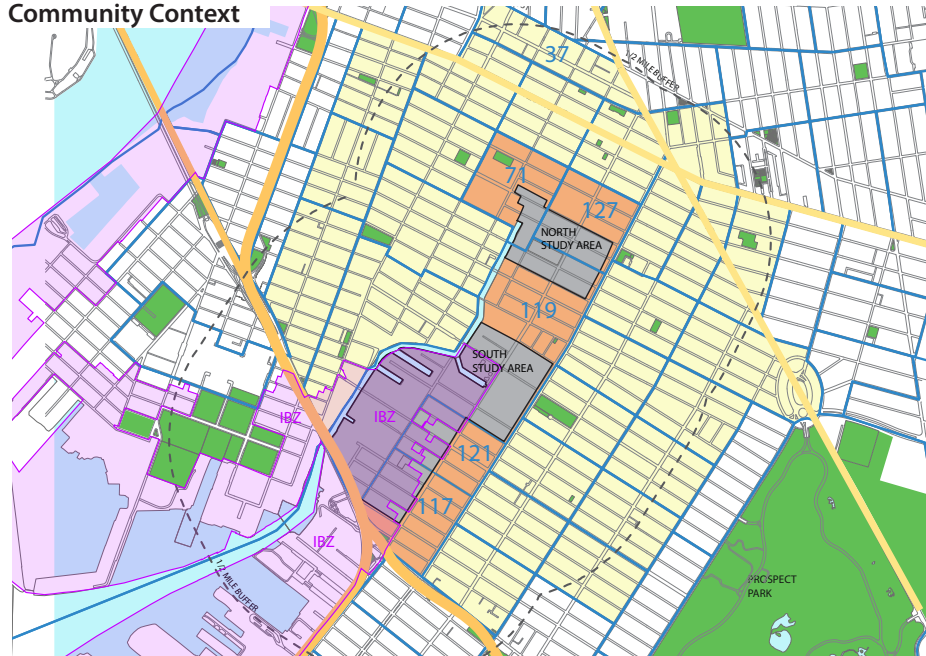
One dot = 25 people

- White
- Black
- Hispanic
- Asian
- Native American
- Other



Gowanus has scarcely any residential population. Image source: NY Times Mapping Census 2010

Community Context



Census tracts of Study Area (orange) and Community Context (yellow). Purple overlay shows the Southwest Brooklyn IBZ boundary

By 1960 the upland area of Gowanus had largely fallen out of use. Newspaper articles paint pictures of neighborhood abandonment, a fetid stink rising from murky water, and rumors of bodies dumped in the canal. By 1998, however, things had already begun to change. Removal of exposed sediment piles at the canal's north end alleviated much of the stench and prompted visions of the canal as an amenity; increasing residential densities and property values in adjacent upland neighborhoods led locals to once again speculate that Gowanus might one day be residential.⁶

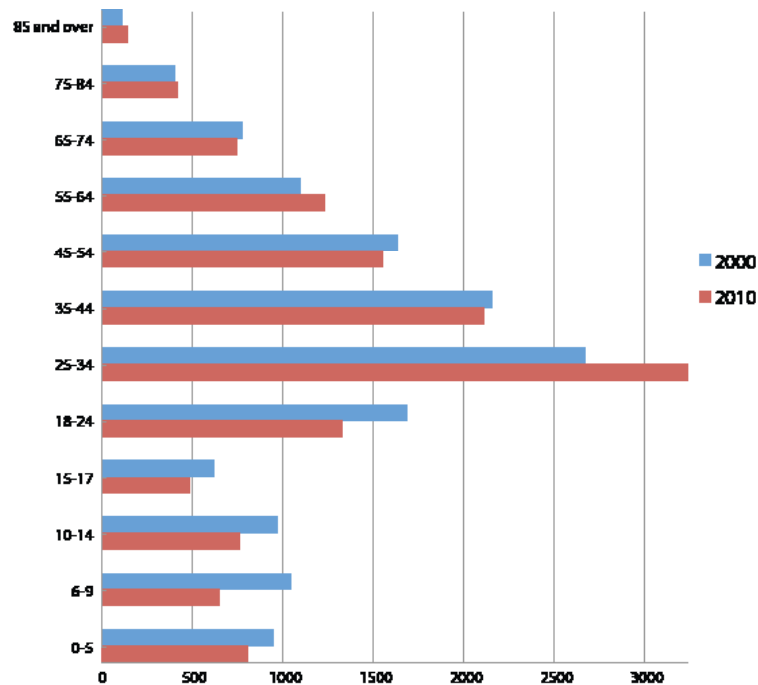
This long tradition of speculation continues today, intensified by the possibility of a clean canal. A 2007 preliminary land use study by DCP suggested that some areas of Gowanus could potentially be re-zoned for mixed uses including residential.⁷ Although the resulting rezoning proposal was tabled in response to the Superfund declaration, the suggestion lingers in the minds of many. Variances granted for high-density residential development at waterfront sites on the canal's west bank seemed to confirm the possibility of rezoning, despite the inclusion of much of the study area in the Southwest Brooklyn Industrial Business Zone (IBZ; purple overlay in map, lower left) and the City's continued support for industrial use in Gowanus.

Gowanus Today: Community & Regional Setting⁸

Today, Gowanus is an inlet of industrial activity sandwiched between the residential neighborhoods of Brownstone Brooklyn. Although demographically the neighborhood has more in common with Red Hook, surrounding expressways, high-traffic arterials, and transit access routes mean that Gowanus is largely experienced as part of a continuum between Carroll Gardens and Park Slope. Accordingly, the BOA defines demographic area of Gowanus as the census tracts east of the canal that contain the study area, and the Community Context as all census tracts within half a mile of the project area that are not separated from Gowanus by a major highway. This generally includes the adjacent neighborhoods of Park Slope, Carroll Gardens, and Boerum Hill, all predominantly residential.

Gowanus, as defined through census tracts, is significantly different than its surrounding Community Context area. While the census area

Gowanus Population by Age, 2000 vs 2010



represents the study area imperfectly (the 13,500 residents embodied in the data reside almost entirely outside the study area boundaries), it does represent the closest residential population to the study area: a key potential workforce and consumer base. At the start of the decade, the residential base of Gowanus was more diverse, less well-educated, less economically secure, and more pervasively unemployed than the context area. However, it was also undergoing change, with shifts in employment sectors, a sizable gain in 25-34 year olds, and a corresponding increase in advanced degrees.

Between 2000 and 2010, Gowanus experienced a 5% loss in population, dwindling from 14,150 to 13,500 residents. This was in contrast to the Community Context area, Kings County, and New

Gowanus Census Area

	Census Tract 71	Census Tract 117	Census Tract 119	Census Tract 121	Census Tract 127
Tract SF	32,558	786,564	4,373,943	779,499	85,488
% of Tract in Study Area	1.8%	35.2%	56.4%	48.9%	3.7%
% of Study Area Total SF	0.4%	10.2%	58.0%	10.3%	0.9%
% of Gowanus Population	33.3%	17.5%	11.3%	12.0%	25.9%

York City, all of which grew at 2%. Gowanus's population loss was concentrated among young people. Every single age cohort below 25 years old lost population; the loss was partially offset by a significant gain among 25-34 year olds.

Demographically, Gowanus resembles greater Brooklyn and New York City more than its surrounding area. It is more racially integrated than the Community Context area, although it is getting whiter. Unemployment in 2010 was 8.4%, similar to Kings County and New York City, compared with only 4.5% in the surrounding area. More than one-third of the population aged 16 or older is not in the labor force; this is typical for Brooklyn and New York City, but significantly higher than in the surrounding community. Poverty rates in Gowanus, while higher than the surrounding community's, are lower than Brooklyn's.

Median incomes in Gowanus (\$54,000) are low compared to the surrounding community (\$89,000), but higher than those found in Brooklyn (\$43,500) or New York City (\$50,000). Inflation-adjusted median incomes in Gowanus are almost 50% higher than they were a

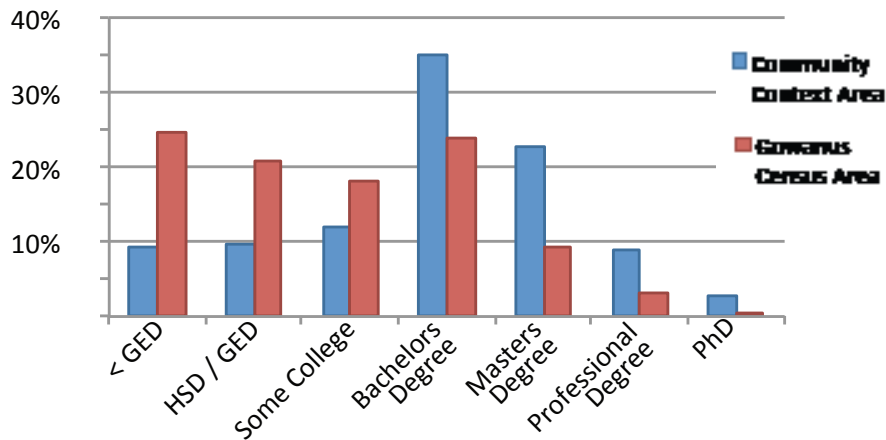
Race Distribution (2010)

	Gowanus Census Area	Community Context Area	Kings County	NYC
White Alone	47.7%	77.0%	43%	44%
Black or African American Alone	27.5%	8.1%	34%	26%
American Indian and Alaska Native Alone	0.8%	0.3%	3%	3%
Asian Alone	5.0%	6.3%	10%	13%
Native Hawaiian and Other Pacific Islander Alone	0.1%	0.0%	0%	0%
Some other race Alone	14.1%	4.0%	9%	13%
Two or more races	4.9%	4.3%	3%	4%
Hispanic of any race	34.0%	13.2%	20%	29%

% Living in Poverty (2010)

	Gowanus Census Area	Community Context Area	Kings County	New York City
Under age 18	29.0%	5.0%	32%	28%
18-64	17.0%	7.0%	18%	16%
Over age 64	26.0%	19.0%	23%	18%
Overall	20.7%	8.1%	22%	19%

Educational Attainment (2010), Community & Study Area



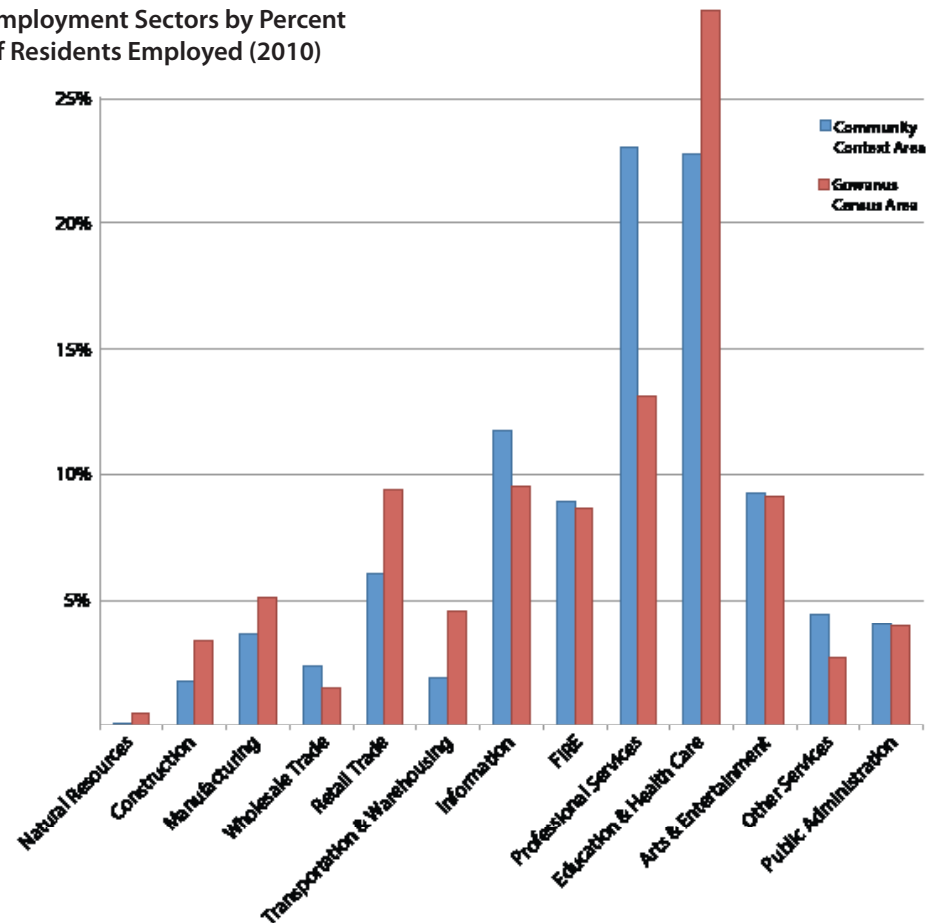
decade ago, compared to a 20% gain in the surrounding community and modest 3.5% and .33% increases in Brooklyn and NYC.

The neighborhood has seen a surge in educational attainment in the last decade, with BAs and MAs doubling, and a 250% increase in professional degrees. Meanwhile, there has been a 28% decline in individuals over age 25 with less than a high school diploma, and a 2% decline in those for whom a high school degree or GED was their highest educational achievement. While the neighborhood still lags significantly behind the surrounding area in terms of educational attainment, change is underway. Whether this change is attributable to increased educational attainment among longtime residents or a different demographic locating to the area is unclear.

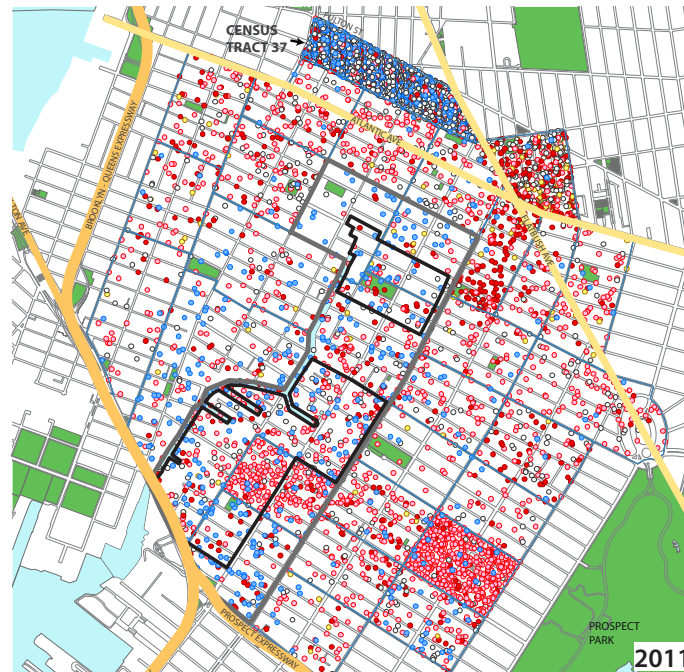
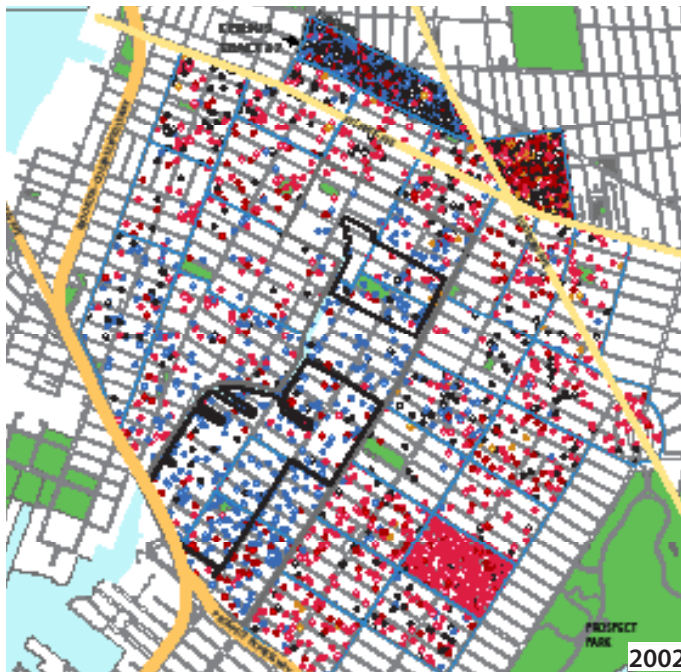
Residents are also pursuing different kinds of employment than they were a decade ago. In 2000, 23% of Gowanus's population was involved in blue collar industries: construction, manufacturing, natural resources, wholesale trade, transportation, warehousing, and utilities. In 2010 that number had fallen to 15%. Meanwhile, the percent of residents working in information (e.g. information technology, publishing, telecommunications, etc.) increased from 4.3% to 9.5%, and in education and health care from 18.5% to 28.5%.

Both Gowanus and the surrounding area have seen dramatic growth in local employment in the past decade. From 2002 to 2011, the number of jobs available in the Community Context area increased from 37,000 to 61,000. Over half the total jobs in the area are located in Census Tract 37, which borders the southern edge of Downtown Brooklyn and hosts the headquarters of several large organizations including Con Edison and the Kings County court system. Tract 37 accounts for more than 95% of the utility, transportation and warehousing, and public administration jobs in the context area. The remaining tracts contain 27,000 jobs, 4% of which are in blue collar industries such as utilities, construction, manufacturing, transportation, and warehousing. These blue collar jobs cluster around Gowanus, with a strong presence along the west bank of the canal. Elsewhere in the area, intensification of

Employment Sectors by Percent of Residents Employed (2010)



Local Employment Dynamics, 2002 and 2011



- White collar/office
- Retail
- Blue collar
- Service
- Artistic
- One dot = 10 jobs

Dot-density map of local employment based on census tract boundaries.

Source: Census Local Employment Dynamics

service and retail sector jobs along newly popular residential corridors such as Atlantic Avenue and north Park Slope illustrate real estate pressures at work in the neighborhood.

The Gowanus census area saw an increase of 3,900 jobs between 2002 and 2010, approximately 3,200 of which can be attributed to a single employer, Family Home Care Services of Brooklyn and Queens (FHCS), which employs live-in and visiting home health aides throughout the two boroughs. Although the employees do not work in Gowanus, the jobs are attributed to the organization's headquarters location. Retail employment in Gowanus grew by roughly 500 jobs, as boutiques and big-box stores moved into the neighborhood. Blue collar jobs declined overall in the decade, but still comprise 25% of non-FHCS employment. More importantly, the Gowanus census area contains nearly double the number of manufacturing jobs available in the entire Community Context area, and nearly as many construction jobs. Despite the surge in service and retail jobs, Gowanus (west and east of the canal) remains

a key location within the Community Context area for blue collar employment and goods production.

Very few Gowanus residents are finding jobs where they live. In 2000, according to the Census, 400 of the 5,800 people employed in Gowanus also lived there. In 2010, only 100 of the 8,200 area employees lived in Gowanus. In 2000, the census tracts with the largest number of resident employees also had some of the lowest rates of educational attainment; this may imply that locally available blue collar jobs provided a good match for the resident population.

Local housing trends are not encouraging for lower-wage earners. While the number of housing units in both Gowanus and the surrounding community have increased since 2000, the new units are equally divided between single-family housing (in Gowanus, these appear to be largely converted from three and four unit buildings) and high-rise apartment and condo towers with more than 20 units. (The 2003 rezoning of 4th Avenue allowed higher densities along

the Gowanus/Park Slope border, and led to local condo and high-rise development.) Median housing values (for owner-occupied units) have nearly doubled since 2000 in both Gowanus and the surrounding community, and rents have also increased: by 20% in Gowanus and by 40% in the surrounding community. Median housing values in both Gowanus and the Community Context area are higher than median values in Brooklyn and New York City, although the increase in property values over time was constant across all geographies.

Gowanus is a changing neighborhood. It is more diverse than the surrounding community, less financially secure, and less educated, but residential demographics are shifting as the neighborhood becomes appealing to 20 and 30 year olds with advanced degrees. Trends in local employment are mirroring borough and citywide shifts toward a knowledge and service base, but the area provides a core concentration of blue collar employment that is disappearing in the surrounding area. Meanwhile, housing is becoming less affordable, and real estate pressures are mounting. These factors combine to create a sense of uncertainty about the area's future. In 10 years, will Gowanus still provide a home for industrial activity, or will it shift to more closely resemble adjacent neighborhoods' mix of residential and retail use?

References

- 1) Hunter Research et al, "National Register of Historic Places Eligibility Assessment, Gowanus Canal, Borough of Brooklyn, NY" Prepared for the Army Corps of Engineers, 2004.
- 2) Brooklyn Daily Eagle, "Gowanus Meadows," February 16, 1849, pg. 2. As quoted in Hunter Research (2004).
- 3) Hunter Research, tables 2.1-2.5, pages 2-41 and 2-42.
- 4) Brooklyn Daily Eagle, "Very Vile," September 3, 1877, pg. 4. As quoted in Hunter Research (2004).
- 5) NYC Department of Environmental Protection, "Environmental Assessment Statement, Gowanus Facilities Upgrade," December 2008 (Appendix A). Actual anticipated capacity of the flushing tunnel after upgrade = 215 million gallons per day at low tide and 252 million gallons per day at high tide.
- 6) New York Times, "The Gowanus Canal: An Appreciation," 8/30/1998, Edward Levine.
- 7) NYC Department of City Planning, "Gowanus Canal Corridor Framework," July 2007. Documentation related to the Gowanus Canal land use study and proposed rezoning can be found at: <http://www.nyc.gov/html/dcp/html/gowanus/index.shtml>
- 8) US Census 2000 Social Explorer: Tables 1, 8, 93; US Census American Community Survey 2006-2010: Tables 113, 25, 57, 49, 97; US Census 2010 Social Explorer: Tables 1, 54; US Census Local Employment Dynamics, 2002 and 2011.

Gowanus Today: Land Use & Built Form

While the population and demographics of residential Gowanus are changing, built form in the study area remains largely the same as it was in the 1930s. The low-rise industrial architecture, typified by the one and two story brick warehouse, that distinguishes Gowanus from its upland neighbors inspires affection while simultaneously increasing vulnerability to floods and limiting business activity. New investments in the built environment are coming partially at the heels of changing land uses, and some business and building owners point to existing zoning as constraining their ability to make improvements. (For more on business owners' perspectives, see the Economic and Business Analysis, page 68.) Stakeholders seek a way to accommodate changing land uses in Gowanus while protecting industrial use, respecting the area's distinctive built form, and increasing local resilience to storms.

This section explores existing built form and land use in the study area, as well as the underlying regulations that shape it.

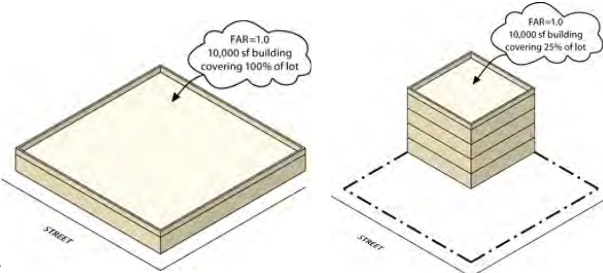
Zoning Context

Zoning defines the sphere of development possibilities within a district, specifying allowed uses, building bulk, and required open space. The study area is predominantly zoned for low-profile development, with a floor-area ratio (FAR) of 2.0. Industrial uses dominate, with 88% of the north and 86% of the south areas zoned for manufacturing. Industrial zones do permit other uses as of right; the light manufacturing district in the north allows several community

Floor-Area Ratio (FAR) Explained

Floor Area Ratio (FAR)*

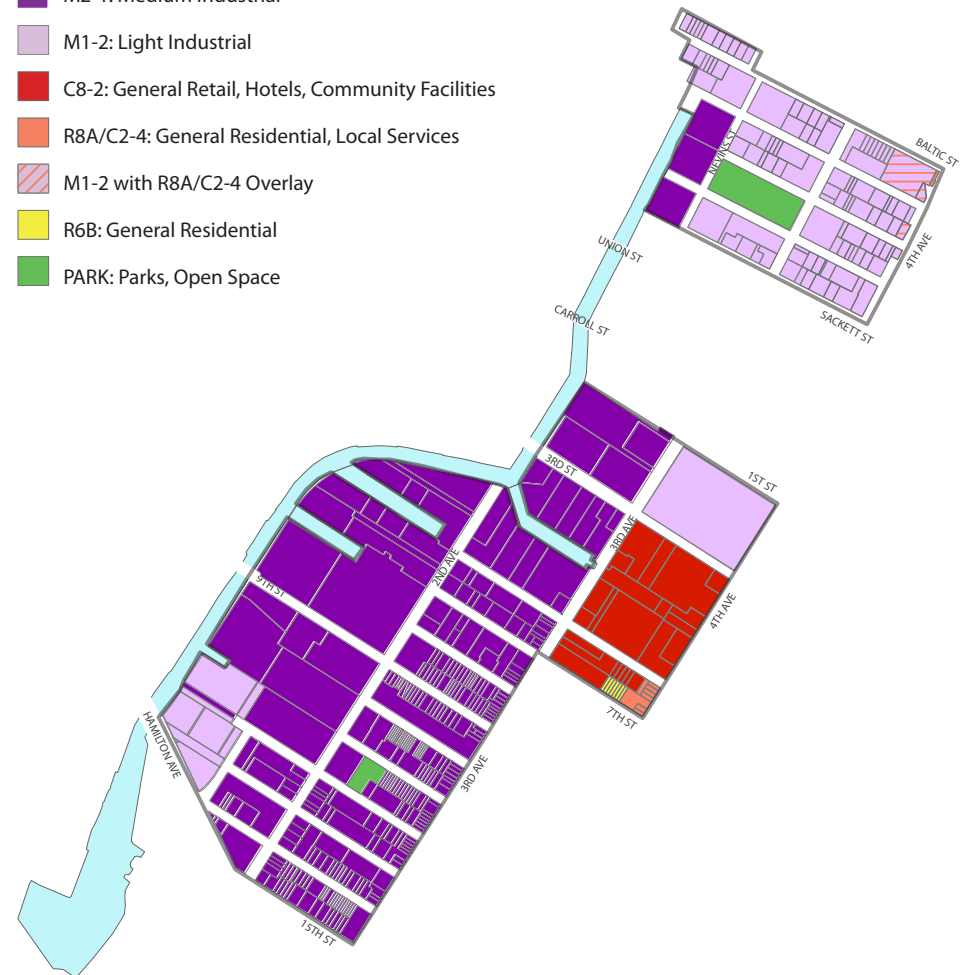
The floor area ratio is the principal bulk regulation controlling the size of buildings. FAR is the ratio of total building floor area to the area of its zoning lot. Each zoning district has an FAR which, when multiplied by the lot area of the zoning lot, produces the maximum amount of floor area allowable on that zoning lot. For example, on a 10,000 square foot zoning lot in a district with a maximum FAR of 1.0, the floor area on the zoning lot cannot exceed 10,000 square feet.



Source: NYC DCP Zoning Glossary

Study Area Zoning

- M2-1: Medium Industrial
- M1-2: Light Industrial
- C8-2: General Retail, Hotels, Community Facilities
- R8A/C2-4: General Residential, Local Services
- M1-2 with R8A/C2-4 Overlay
- R6B: General Residential
- PARK: Parks, Open Space



Zone	Acres	General Purpose	FAR	Notes
M1-2	34	Light Industrial	2	Allows hotels, ambulatory health care, houses of worship, event spaces, gyms, and other clubs. Construction yards must be enclosed.
M2-1	86	Medium Industrial	2	Allows more noxious uses than M1-2. Does not allow hotels or other uses noted above. Yards do not need to be enclosed.
C8-2	13	General Service	2	Provides necessary services for a wider area than just local. May generate heavy truck traffic; cannot have new residential development.
R8A/C2-4	0.68	General Residential / Local Service	max height = 12 stories	Accommodates general residential use and essential local services in buildings up to 12 stories tall.
R6B	0.31	General Residential	max height = 5 stories	Accommodates general residential uses in buildings up to five stories tall.

Source: NYC DCP

services (see table, page 30) as well as residential hotels. The medium industrial district in the south allows fewer community services, and disallows hotels, but still allows commercial and some entertainment uses. Commercial use is the focus of an area along 4th Avenue between 3rd and 7th Streets, where larger retailers like Staples and U-Haul have found homes. At the corner of 7th Street and 4th Avenue, two small residential zones allow construction of buildings up to five and 12 stories.¹

Because zoning elicits a surprisingly strong response from stakeholders in the study area, we explore the history and cumulative effect of recent changes to the zoning below.

Zoning History: 1916-2003

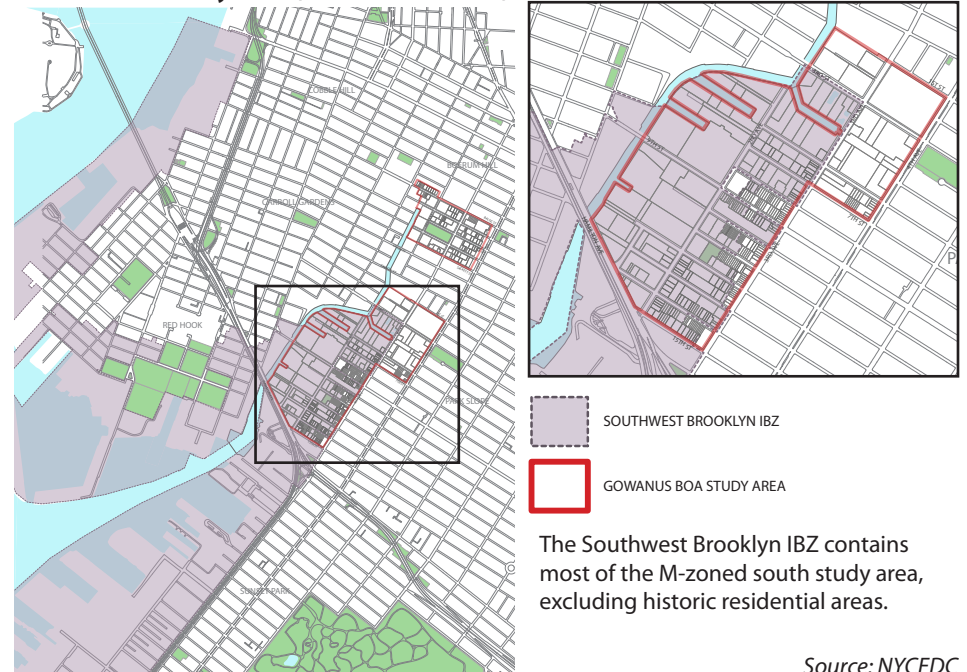
The first New York City zoning code, enacted in 1916, drew Gowanus with dotted lines designating an “unrestricted district.” In 1961, the City’s overhauled and use-specific zoning applied M1-2 and M2-1 zones to Gowanus that were nearly identical to those in place today. In 1974, the corner of 7th Street and 4th Avenue was rezoned for residential; otherwise, the study area zoning was unchanged until 2003.

Starting in 2003, the longtime stability of industrial zoning in Gowanus gave way to a series of well-intentioned changes. These changes reduced stakeholders’ confidence in the future of an industrial Gowanus, and the resulting uncertainty may be one factor contributing to stagnation in local real estate markets and lack of investment in building stock.²

Zoning Changes: 2003-2013

In 2003, the Department of City Planning refined its zoning for the upland neighborhood of Park Slope, and included comprehensive rezoning of 4th Avenue, with the intention of revitalizing the corridor, then largely underutilized and vacant. The result was creation of the current C8 commercial district along 4th Avenue between 3rd and 7th Streets (reflecting contemporary uses), and increase of allowable building heights along 4th Avenue. The eventual impact of the zoning change was growth along 4th Avenue of tall condominium towers

Southwest Brooklyn IBZ (Gowanus Section)



Source: NYCEDC

with little to no street-level engagement. In 2011, DCP revisited the 4th Avenue corridor with the Special 4th Avenue Enhanced Commercial District, which created requirements for ground-floor transparency and commercial/community uses in order to enliven the street.³

Southwest Brooklyn Industrial Business Zone (2005)

In 2005, Mayor Bloomberg’s office released the City’s Industrial Policy, which, among other things, created Industrial Business Zones (IBZs) intended to increase investment in industry. Although these Zones are not legally binding (they are not part of the City’s zoning ordinance), they incentivize industrial investment and come with a promise of protection for industrial land. The Southwest Brooklyn Industrial Business Zone covers most (but not all) of the southern portion of the study area. (Omitted are sections of historic housing between 8th and 15th Streets.)⁴

2009 Rezoning Proposal (tabled, 2010)

In 2007, the Department of City Planning undertook an examination of land uses in Gowanus, a neighborhood known to be changing.⁵

GOWANUS CANAL CORRIDOR STUDY AREA



The 2009 proposed rezoning of the Gowanus Canal Corridor designated areas A and B (left) as areas for new waterfront mixed-use zones that would have allowed residential uses. Although the BOA study areas (based loosely on areas C and E at left) were never intended for rezoning, stakeholders are uncertain about the area's future.



Source: NYC DCP

BROOKLYN OFFICE

The study found increasing residential and retail use along Union and Carroll Streets, which cross the canal to join Park Slope to Carroll Gardens. Based on the study's findings, the department proposed rezoning parts of Gowanus north of the IBZ to a mixed-use district with residential uses allowed as-of-right.⁶ The rezoning would create new space for housing in an increasingly crowded area, and would advance the City's stated goals for increasing waterfront open and recreational space. (The city's waterfront zoning regulations were specifically applied to Gowanus in 2009; see page 33.) This proposal was put on hold after the EPA designated the Gowanus Canal a Superfund site in 2010; nonetheless the specter of rezoning looms large in the neighborhood, in part because of two notable zoning variances granted before 2010 to national residential and commercial developers. Those projects are only now coming to fruition.

Variances and Rezoning: Toll Brothers and Whole Foods Markets

In 2008, one year after the land use study was completed and concurrent with development of the rezoning plan, Brooklyn Community Board 6, the Brooklyn Borough President, and the



The new mixed-use development slated for 363 Bond Street (the former Toll Brothers site) envisions residential towers with bucolic canal frontage. Image: Rendering shown by Lighstone Group at a presentation to Community Board 6 on 8/23/13.

Department of City Planning reviewed a development proposal and rezoning request from Toll Brothers, a nationwide housing developer. Toll Brothers proposed building a large-scale housing development on the west bank of the canal that would provide much-desired affordable housing, remediate and revitalize a highly toxic vacant site, and create open space amenities on a parcel of waterfront land. The request was approved by all parties in 2009, but the development never materialized—Toll Brothers pulled out of the project, citing the 2010 Superfund designation.⁷ In 2012, a new developer, the Lighstone Group, took over the project. Because the necessary zoning was already in place and the new housing development differed only superficially from Toll Brothers' approved proposal, it was able to proceed as-of-right, with only minimal review. Many stakeholders feel strongly that the development is no longer appropriate, in light the lack of a comprehensive rezoning, the Superfund designation, and the area's vulnerability to flooding (as demonstrated by Superstorm Sandy). The low standard of review required for the as-of-right project was confusing and disappointing to many in the community.

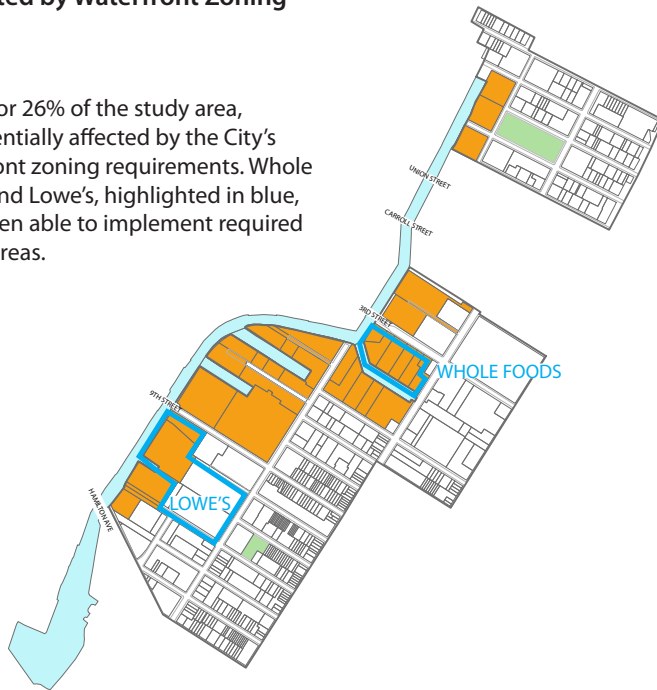
Another long-awaited and much-discussed project was the Gowanus Whole Foods, recently completed, which was built on the largest agglomeration of vacant industrial land in the study area. Whole Foods Markets purchased the land in 2004, prior to establishment of the IBZs (the land falls within the Southwest Brooklyn IBZ), with the intention of opening a store in 2005. Nine year later, after many objections, approvals, and extensive site cleanup, the store opened on December 17, 2013.⁸ As with the Lightstone housing project, the Whole Foods development was a product of its time; however, many regard the store as a harbinger of increasing residential and commercial development. Additionally, since the store was constructed on viable industrial land, some saw its construction as indicative of the City's failure to uphold its promises regarding IBZs.

Waterfront Zoning (2009)

Applied specifically to Gowanus in 2009, the City's waterfront zoning is the final piece to the Gowanus zoning puzzle. The zoning, enacted citywide in 1993, requires the construction of waterfront

Lots Affected by Waterfront Zoning

35 lots, or 26% of the study area, are potentially affected by the City's waterfront zoning requirements. Whole Foods and Lowe's, highlighted in blue, have been able to implement required access areas.



amenities along parcels with uses that are neither industrial nor water-dependent. The required amenities include continuous, 40' wide, publicly-accessible waterfront esplanades, upland connections, and view corridors. The intent of the zoning is to create an active, engaging, publicly accessible waterfront that accommodates both economic use and recreation, while protecting industrial and water-dependent uses. When applied to Gowanus in 2009, the regulations complemented the proposed rezoning, ensuring that any residential or commercial development along the waterfront would provide community access to the canal.⁹

Although the waterfront zoning protects industrial and water dependent uses, there is some feeling that it is too blunt a tool to address desirable economic growth in the area. Construction of the required amenities was no deterrent to Whole Foods, a big-box national retail chain whose new store is perceived by some as out of context. The necessary construction was not affordable, however, for a resident film business that wished to purchase and improve the waterfront structure it had been renting; as a consequence the



Whole Foods' esplanade, facing the Salt Lot

business relocated. Although the film business was neither industrial nor water-dependent, it represented a contextual use, an instance of an industry with a growing presence in the area, and a resident business that would have improved a waterfront structure.

While the community desires public access space along the water, and does not wish to retreat from requirements that non-contextual uses provide amenity space, there is a feeling that the current regulations' applicability and design specifications could be refined to better serve the community.

Perceived Impact of Zoning on the Study Area

Stakeholders expressed deep concern about zoning (and the future of zoning) in the study area. Projects like the Lightstone housing development and the Whole Foods have weakened local trust in the City's stated intention to support industrial use in the area. The chronology of events with Whole Foods in particular has eroded faith in the IBZs, and stakeholders want to see a new clarification from DCP about the future of Gowanus.

Uncertainty about the future of zoning in Gowanus, partly reinforced by these new developments, is believed to contribute to real estate instability in the area. There is widespread anecdotal belief that some property owners are retaining underperforming properties in the hopes of turning a profit from converting the structures for residential occupancy.

Among property owners who are committed to supporting industry, some see the study area's allowed FAR of 2.0 as limiting their ability to finance building improvements. Without income from lucrative upper-floor office space, these owners say that significant structural upgrades are financially untenable.

Land Use Patterns¹⁰

Zoning provides a necessarily simplified blueprint of uses allowed in a district. The reality of land use is always more complicated. In order to accurately characterize land use in the study area, the BOA team supplemented available administrative data with a block-by-block

Whole Foods Market



The new Whole Foods includes a rooftop greenhouse, a landscaped esplanade, and an extensive parking lot. Some stakeholders interpret the store's construction as evidence of the City's failure to protect Industrial Business Zones.

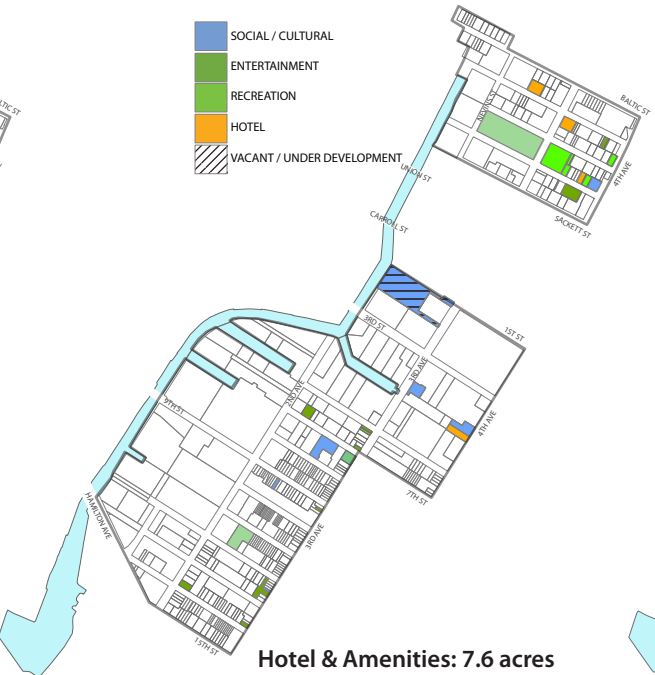
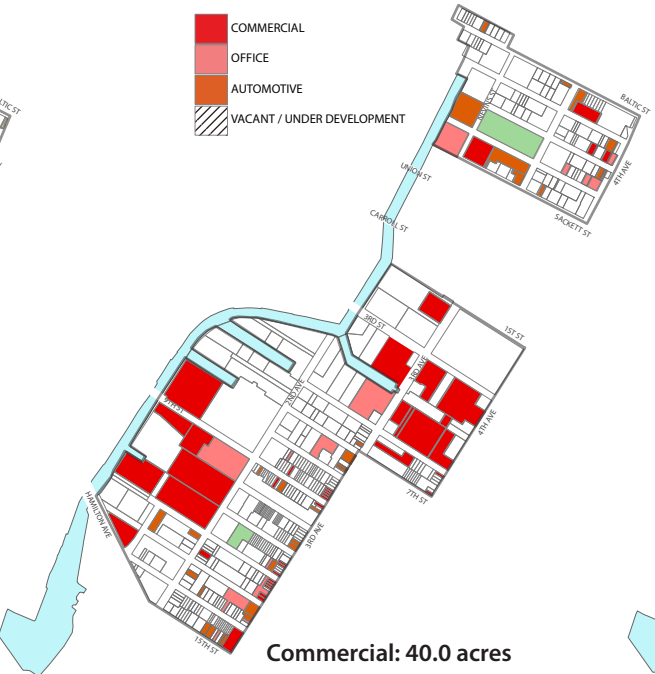
visual and photographic survey. At the first workshop in September 2012, stakeholders augmented and corrected the team's work, identifying uses that lacked signs or other outward indicators.

The resulting land use picture is multi-layered. Rather than attempt to construct a single land use map for the study area, the BOA team developed a series of thematic maps (page 35) highlighting use groups. Many of the lots in the BOA are used for multiple purposes or enterprises; consequently they may be highlighted in more than one map.

Overview

The study area is primarily a business district. The largest land uses are industrial (48% of the study area's buildable acreage is used for industry) and commercial (31% of the study area). There are small pockets of residential use, both in the residential-zoned area at 4th Avenue and in a cluster of historic houses between 8th and 15th Streets that predate zoning. Utility companies use 12% of the land, and

Gowanus Land Use (Observed)



another 22% is unbuilt. Despite this seeming surplus of unbuilt space, very little land is available in the study area for new development—only seven parcels stand vacant with neither existing use nor planned development.

Investment in the study area since 2000 demonstrates interest in both commercial and industrial use, with 22 lots developed or renovated for industrial uses (primarily manufacturing, contracting, and art/artisan goods production), and 16 developed for commercial uses (including entertainment, hotels, offices, and retail)¹¹.

Residential Use

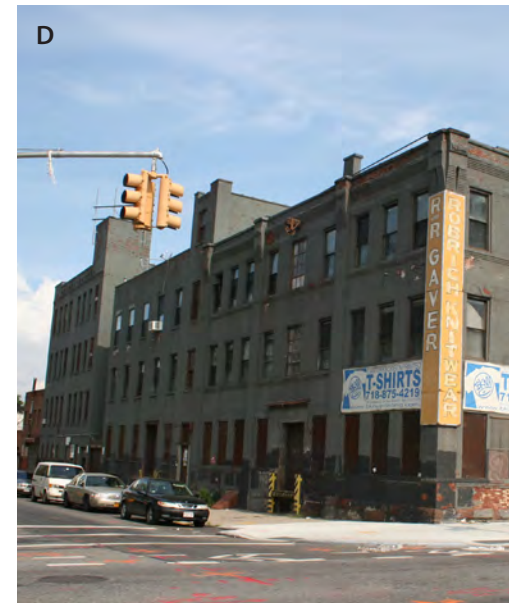
Residential use takes place across the study area. In general it can be separated into three types: non-conforming residential structures that pre-date the area's zoning, live-work spaces in the M districts, and residential uses allowed as-of-right in the R districts.

1. Non-conforming use: grandfathered residential structures

The most common type of housing in Gowanus is the low-rise, multi-family house whose construction predates the city's first zoning code. 112 lots in the study area fall into this category. The majority of these lots are in the south study area between 8th and 15th Streets, although six properties are in the north study area. These residential buildings are typically small, averaging 2.5 stories with 3.5 dwelling units per house, and all were built prior to 1902. These structures contain more than 300 dwelling units, but take up a very small footprint: only five acres of land.

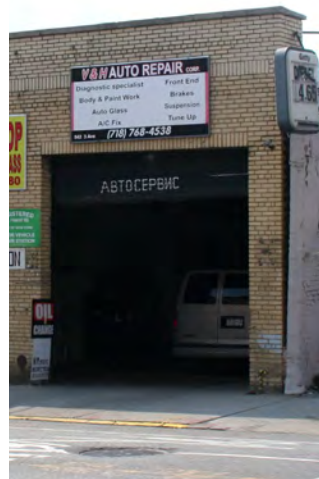
2. Live-work spaces (North Area)

The existence of live-work spaces in the north part of the study area is assumed but largely unconfirmed. Many industrial buildings used as studio space attract tenants who eventually take up residence on the premises; the phenomenon is common enough that the City established a protocol for declaring these structures Interim Multiple Dwellings (IMDs).¹² IMDs are prohibited in Industrial Business Zones.



Residential types in the study area: A) Pre-existing nonconforming residential on 10th Street; B) The Argyle, a new 12-story condo tower on 4th Avenue; C) Older residential buildings on 7th Street at 4th Avenue; D) 269 Douglass Street, one of a complex of four industrial buildings with confirmed residential use.

Study Area Commercial Uses



Because designated IMDs receive certificates of residential occupancy, they represent a path to land use change that sidesteps changes to the zoning. There are no designated IMDs within the study area; however, one property, 269 Douglass Street (image D, previous page), had an IMD application rejected in December 2012 on a technicality, and two designated IMDs exist in the eight blocks between the north and south parts of the study area. While live/work spaces are not necessarily in conflict with manufacturing uses in Gowanus, they historically have acted as harbingers of neighborhood transformation.

3. Zoning-compliant housing

The R-zoned corner of 7th Street and 4th Avenue contains a pocket of residential buildings. On 4th Avenue, the 2003 rezoning has so far led to construction of one 12-story residential tower, the Argyle, which has 59 dwelling units. The surrounding buildings in this area date to before 1932, and range from 3 to 4 stories, with three to eight dwelling units each.

Commercial Use

The study area contains a wide range of commercial activity, including big-box retail, self-storage facilities, lumberyards, corner stores, mom-and-pop restaurants, and more than 30 motor vehicle parts, sales, and service establishments. Detailed information about the number and types of businesses in the study area can be found in the Economic and Business Analysis (page 68).

Commercial activity is well-distributed throughout the study area, with a few notable clusters:

- Small restaurants, retail stores, and auto sales/service businesses cluster along the main thoroughfare of 3rd Avenue;
- Large retailers like U-Haul and Staples can be found in the C2-zoned area between 3rd and 7th Streets; and
- The Lowe's on 2nd Avenue at 9th Street anchors two local clusterings: a consumer-oriented furniture, accessories, and building materials retail concentration along 9th Street near the canal, and a group of industrial building materials suppliers,

Hotel & Entertainment Uses



including a spray-foam insulation company and a marble provider, along 2nd Avenue.

Much of the study area's commercial activity is hidden from view, with extensive wholesaling activity occurring behind roll-down doors, and some amount of non-store retailing among businesses that primarily reach their customer base via the internet.

In recent years, a new kind of commercial activity has begun in the study area, which we mapped separately. These "amenity" uses include hotels (allowed as-of-right in M1 districts), physical culture establishments (gyms), and entertainment venues (bars, nightclubs, and performance venues). Of the 20 observed uses that fall into this category, 18 have arrived in the area since 2006, including four bars, three nightclubs/performance venues, four hotels, six physical culture establishments, and one cultural club. (The two establishments with longer tenure are an indoor batting cage on 3rd Avenue and a long-lived motorcycle club near the canal in the north study area.) Degraw Street in the north area has become a particular hot spot for

Health & Social Service Uses



this activity, with four physical culture uses, a hotel, and a nightclub occupying the block between 3rd and 4th Avenues.

Cultural institutions and social and health services make up a smaller part of these amenity uses. The study area includes a nonprofit workforce training facility, a private school, a walk-in dialysis center, and the offices of the Fifth Avenue Committee, a nonprofit economic and social justice organization. While these uses predate the entertainment and hotel uses discussed above, they are still relatively new to the study area, arriving since 2000.

The Brooklyn Rapid Transit Powerhouse, currently vacant, is being prepared for reinvention as a cultural and arts center with gallery and studio space. Transformation of this facility may increase the already-growing arts and artisan manufacturing sectors in Gowanus (discussed in the Economic and Business Analysis with other industrial and production uses).

Industrial Use

Industrial uses occur on 63.7 acres (48%) of the study area. The largest land use type by acreage, industrial use has also been attracting significant new development, with 19 sites newly constructed or renovated since 2000.

The industrial uses in the study area include a wide range of activities such as: warehousing, construction, general contracting, specialty contracting, manufacturing (both large and small scale), art production, recycling and scrap handling, freight trucking, and transportation. The concentration of industrial uses in the area creates increased need for truck access, sometimes leading to conflicts with legacy residential uses, especially in the south study area.

Industrial uses are discussed in greater detail in the Economic and Business Analysis (page 68).

Utilities

Utility companies, including Consolidated Edison (Con Ed; electricity), the New York City Department of Sanitation (DSNY; sanitation), Verizon (telecommunications), and National Grid (natural gas) own or lease 15.7 acres (12%) of land in the study area. A number of these sites appear underutilized, primarily functioning as parking or equipment storage space.

1. Con Edison

Con Edison has the largest presence of the utility providers in the study area. It owns three parcels: a 45,000sf vacant lot in the north part of the study area, being held for possible future use; a double-block lot in the south study area that includes several office buildings and a fenced-off, vacant section roughly 36,000sf that is being held for possible future use; and a narrow strip of vacant land used for equipment and vehicle storage.

Study Area Industrial Uses



Con Edison also operates a small electrical substation on the city-owned land beneath the Culver Viaduct that serves the subway lines above.

2. Department of Sanitation

The Department of Sanitation operates both its Community District 2 and 6 operations out of the study area. The BK6 garage occupies the 2nd Avenue frontage between 11th and 12th Streets, where it abuts the only park in the south study area. The garage and associated vehicles appear to be major contributors to parking congestion in the area, and residents have for years unsuccessfully sought to move the BK6 operations to DSNY's leased facility between 14th and 15th Streets that currently houses the BK2 garage (another contributor to parking shortages).

DSNY also owns a mostly-vacant, triangular waterfront lot used for road salt storage at the northern terminus of 2nd Avenue. DSNY co-operates this lot (known as the Salt Lot) with the Gowanus Canal Conservancy, who run a community composting program there. The GCC has long-term plans to increase compost capacity at the site, create community attractions, and build a waterfront park along the canal. EPA has suggested that the Salt Lot might be a preferred location for a CSO detention tank; the GCC feels that this is compatible with their plans.

3. Verizon

Verizon leases the two lots on the north side of 3rd Street between 3rd Avenue and the canal. In December 2012, Verizon sold a 100,000sf lot between Nevins Street and the canal in the interstitial area between the north and south study areas to a high-end housing developer; its use of the 3rd Street lots (currently used for parking and some storage) may intensify as a result.

4. National Grid

Once a large landowner in the study area, National Grid now holds only a small waterfront property where its gas pipeline emerges from under the canal. This otherwise-vacant lot contains monitoring equipment.

Con Edison North



DSNY BK6 Garage



Verizon lot



DSNY CD2 Garage

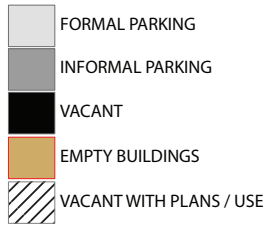


National Grid, a nationwide distributor of natural gas that acquired KeySpan Energy (formerly Brooklyn Union Gas) in 2006, has a larger presence in the study area as the entity financially responsible for remediating the study area's former manufactured gas plant sites and as a responsible party in EPA's investigation of the Gowanus Canal. The Superfund and EPA's selected remedy are discussed further on page 46.

5. Metropolitan Transit Authority (MTA)

The MTA owns a block-long strip of land beneath the Culver viaduct (which carries elevated sections of the F and G subway lines) along the south side of 10th Street, between 2nd and 3rd Avenues. This land, which formerly held the Under the Tracks Playground (closed to the public in the 1990s) is vacant, with the exception of a small Con Edison substation, and fenced off due to rehabilitation of the elevated structure, now coming to a close. Future plans for this parcel are unknown.

Vacant & Underused Land



Parking & Vacant



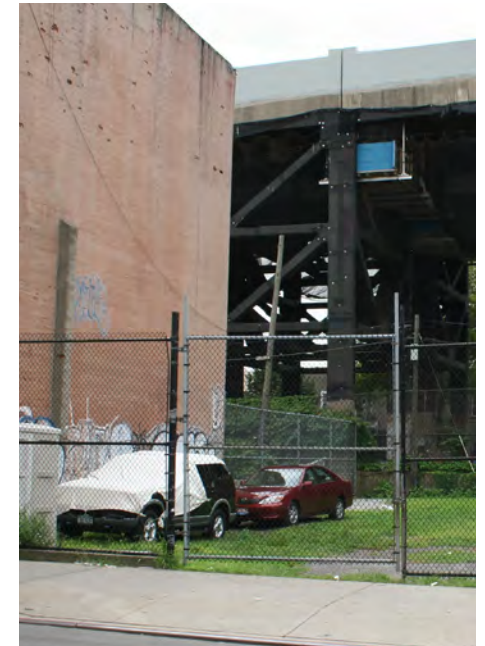
Vacant



Vacant under development



Formal parking



Informal parking

Vacant and Underused Land

Very little of the study area's 29 acres of underused land is truly vacant. Roughly 19 acres are used for parking; another 3.3 acres are in use, in development, or being held for future use; and 4.6 acres are occupied by empty buildings. Only seven lots, about two total acres, are genuinely vacant.

1. Vacant Land with Use or Plans: 3.3 acres

Several large assemblages of vacant land fall into this category. Con Edison's north and south properties, discussed on page 39, are large vacant lots covered in gravel that are being reserved as possible future locations for electrical substations. The Salt Lot, a publicly owned piece of land co-operated by DSNY and the Gowanus Canal Conservancy, discussed on page 40, has a 30-year plan in place to become a center of community activity, waterfront education, and composting.

2. Parking: 18.8 acres

Roughly 14% of the study area is devoted to parking. Formal lots (characterized by marked spaces, official licenses, or signs indicating the name of the primary user) occupy 80% of that land, of which the Hamilton Plaza/Lowe's parking lot accounts for half. Other formal parking lots in the area serve hotels, U-Haul, Verizon, Whole Foods, and smaller companies.

The remaining 20% of parking is informal—occurring on graveled or grassy vacant lots, sometimes with chain-link fences, or in walled-off lots ancillary to other business space. Several of these lots show very little parking use despite known shortages in Gowanus; others are jam-packed with cars, shipping containers, and miscellaneous materials.

Parking shortages are frequently cited as a problem in the study area, which accommodates parking for employees, trucks loading and unloading, customers, and residents (local and upland neighbors). However, much of the land currently reserved for parking is underused. A more efficient parking strategy would benefit the area.

3. Vacant parcels: 2.1 acres

The seven parcels of genuinely vacant land are scattered throughout the study area. They are fairly small in size, ranging from 23,000sf to a mere 1,000sf. The overall lack of vacant land in the study area poses challenges for siting large-scale new development; the majority of vacant and informal-use parking lot sites are suitable primarily for small infill development.

4. Empty Buildings: 7 buildings, 4.6 acres

The study area contains seven buildings known to be vacant, and more whose uses the BOA team was unable to determine. Confirmed empty buildings include a large, multi-unit manufacturing building at the corner of Baltic and Nevins Streets, a complex of four multi-story industrial buildings at the corner of Douglass Street and 3rd Avenue, the historically landmarked Coignet Stone Building at the corner of 3rd Avenue and 3rd Street,

Land Ownership



Source: NYC DOF, NYS DOS

and several more small warehousing buildings. These buildings, particularly the larger ones, have potential for adaptive re-use.

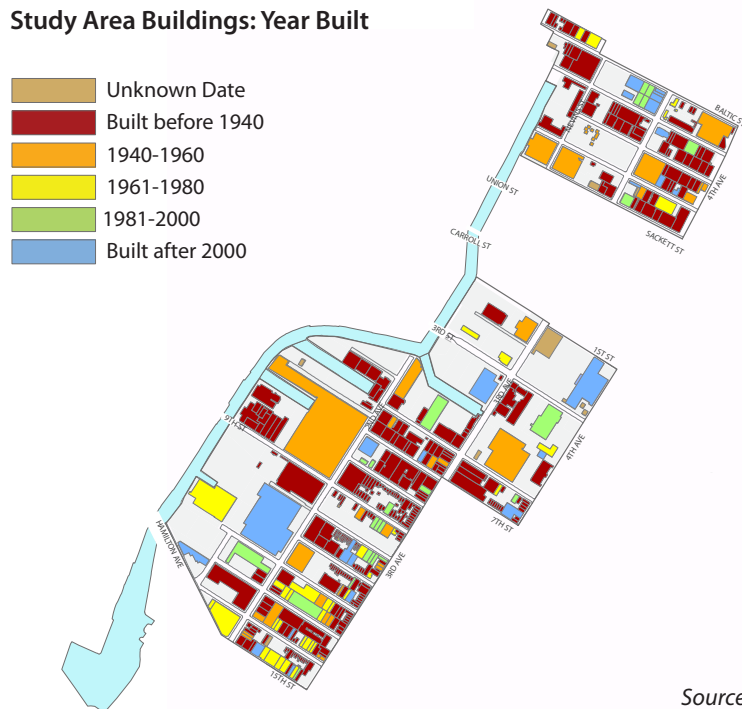
Land Ownership¹³

The majority of land in the study area is privately owned, but a few parcels are publicly owned or held by quasi-public utility companies.

The City owns six parcels of land: the study area's two parks, the Department of Sanitation's CD6 garage, the Salt Lot, the Under the Tracks Playground, and former 12th Street, now a part of the Hamilton Plaza parking lot.

US Customs holds two lots of land in the north area, built out with an empty factory building. The parcels and all property thereon were forfeited to the agency in 1997 as part of a drug trafficking investigation. When the investigation is complete and clear title established, Customs will dispose of the property through a public auction.

Study Area Buildings: Year Built



Source: NYC PLUTO 13v2

Study Area Buildings: Building Class

Building Class	Percent of Total Built Area	Number of Buildings	Number of Total Units
Warehouse	37.0%	128	129
Factory/Industrial	22.6%	92	114
Garage	11.8%	86	73
Stores	7.8%	9	20
Residential	6.9%	120	405
Office Building	4.1%	10	63
Hotel	2.6%	3	183
Residential / Retail Below	2.3%	29	117
Miscellaneous	1.9%	10	5
Lofts	1.9%	4	103
Educational	1.0%	1	1
Utility Bureau	NO DATA	9	NO DATA
Health	<1%	1	1
Outdoor Recreation	<1%	5	N/A
Vacant	N/A	-	-
Grand Total	100%	507	1,214

Source: NYC PLUTO 13v2

As with many areas of New York City, Gowanus had a surplus of abandoned and city-owned property in the late 1970s and early 1980s. Strategic investments made when prices were low concentrated land ownership in the hands of surprisingly few people. Today, the top 20 largest landowners in Gowanus control 63% of the land in the study area. These top 20 owners include public and quasi-public entities like the City of New York and Con Edison ; large corporations and developers like U-Haul, Whole Foods Markets, and Forest City; but also private individuals who have acquired multiple lots (in one case, over 40 lots). While some private owners have been actively developing the land and modernizing buildings to accommodate new tenants, others have been holding on to vacant lots for decades with little demonstrated interest in selling or developing them. This concentration of land ownership increases the possibility for sudden changes in the landscape of the study area, and may contribute to feelings of uncertainty about the area's future.

Building Inventory

The study area is highly built out, with an inventory of 507 buildings (as of October 2013) on 475 lots. In general, the structures are older, and just a few have been modernized. Only 24% of buildings in the study area were built or renovated after 1984, when New York State's Unified Fire Prevention and Building Code took effect, while 77% of buildings were constructed prior to 1940. These older structures are at higher risk not only from fire, but also from flooding, as many owners discovered during Hurricane Sandy in late fall 2012.

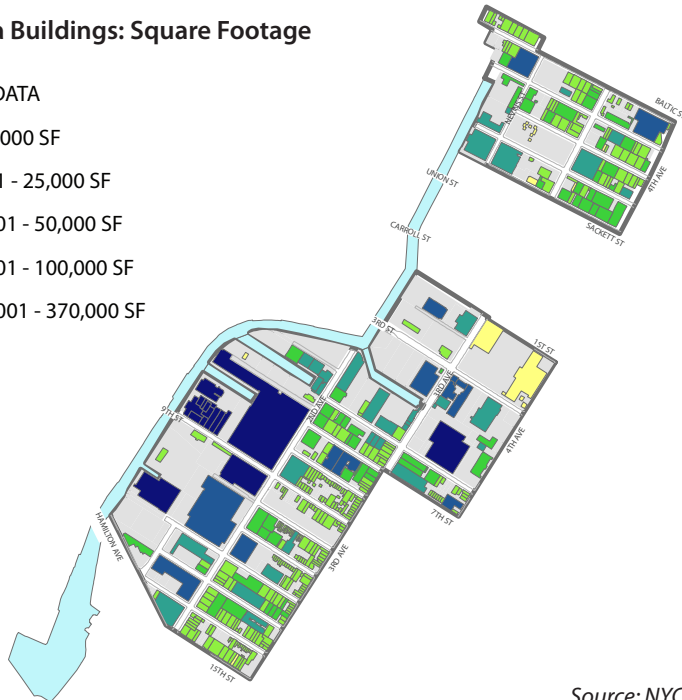
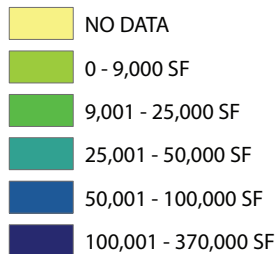
According to city records from 2013, the study area contains over 4.5 million square feet of built space. Factories and industrial buildings account for 23% of that space (92 total buildings), warehouses 37% (128 buildings), garages and gas stations 12% (86 buildings), and residences 9% (149 buildings; 29 with retail or office space below).

Study area structures are typically low-profile, with roughly 100 total structures exceeding two stories. The four buildings that exceed five stories (three hotels and a condo tower) have all been built since 2005.

One and two-story brick warehouses dominate the study area landscape. Ubiquitous and multi-purpose, these buildings are often little more than empty shells ready for modification by tenants. The typical building is equipped with a roll-up gate large enough to accommodate trucks or other vehicles, and may include a small office space. These buildings are generally poorly equipped to handle flooding, unimproved, and small in size (average of 10,000sf).

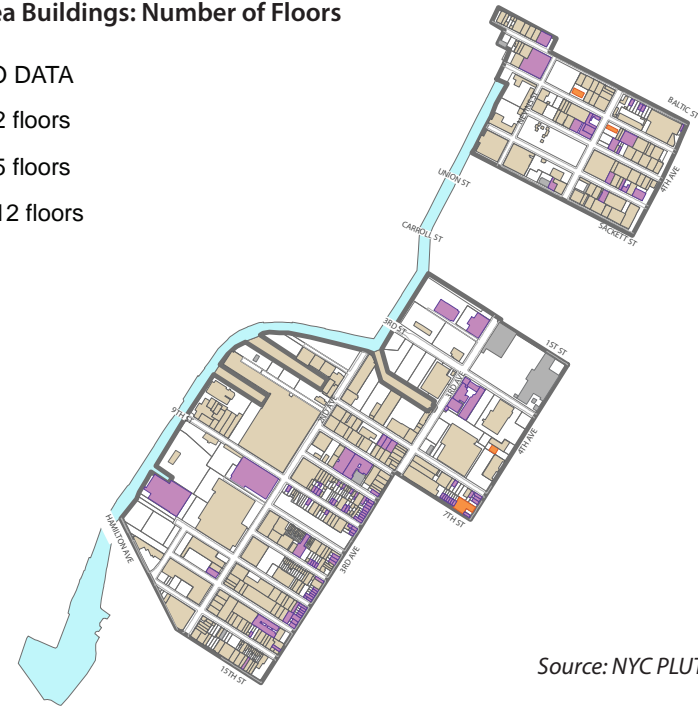
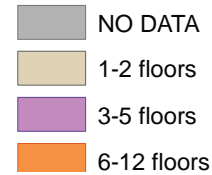
These smaller spaces set the study area apart in the landscape of New York City industrial districts. Where other industrial areas typically have buildings with large floor plates, a significant number of structures in the study area are 2,000sf or less. The area's signature brick warehouses are flexible enough to house almost any type of business, sized to accommodate start-up and other small businesses, and priced affordably. This positions the study area as a natural start-up location, with abundant space for young businesses. (For information on what businesses are locating in Gowanus, see the Economic and Business Analysis, page 68.)

Study Area Buildings: Square Footage



Source: NYC PLUTO 13v2

Study Area Buildings: Number of Floors



Source: NYC PLUTO 13v2

Brick Warehouses



Historic Assets



Site Name	Historic Status
1 Former ASPCA Shelter	SNRE (2008)
2 R.G. Dun & Company Building	SNRE (2008), GCHD Eligible (2008)
3 Brooklyn Rapid Transit Power House	SNRE (2004), GCHD
4 Coignet Stone Building (Brooklyn Improvement Company)	SNRE (2004), NYCL, GCHD
5 Old American Can Factory	SNRE (2008), GCHD Eligible (2008)
6 3rd Avenue Bridge	SNRE (2004), GCHD
7 5th Street Turning Basin	SNRE (2004), GCHD
8 Burns Brothers Coal Pockets	SNRE (2004), GCHD
9 Kentile Building & Sign	SNRE (2008), GCHD Eligible (2008)
10 Former Roulston Grocery Complex	SNRE (2008), GCHD Eligible (2008)

SNRE = State/National Historic Register Eligible
 NYCL = New York City Landmark
 (2008) = Identified by State Office of Historic Preservation

GCHD = Gowanus Canal Historic District
 (2004) = Identified by Army Corps of Engineers

A handful of multi-story buildings sprinkled throughout the study area can accommodate multiple tenants; many small manufacturers, music and art studios, and professionals find these buildings suitable for their uses. The Old American Can Factory, an actively managed multi-tenant space on the southeast corner of 3rd Avenue and 3rd Street, houses a carefully curated tenant group of artists, artisans, small manufacturers, and professionals. Demand for space in the Can Factory routinely outstrips supply, indicating that smaller, move-in-ready spaces may have a market in the area.

Other common building types in the study area include construction yards and low-rise residential buildings built before or at the turn of the century. Big box stores are beginning to make an imprint on the study area, resulting in a very different built form, with large paved parking areas.

Historic & Archaeologically Significant Areas¹⁴

Gowanus contains a wealth of historic industrial structures dating to the early 20th Century. Many buildings with distinctive architectural details or historic ties to the evolution of the neighborhood remain in relatively good condition, and one, the Coignet Stone Building, the oldest known concrete structure in the city, has been named a New York City landmark. In the past decade, students from at least two universities have inventoried historic buildings in the neighborhood; Gowanus was named one of 2012's "Six to Celebrate" by the (New York City) Historic Districts Council; a local community group has worked to get a Gowanus Canal Historic District added to the National Register of Historic Places.

A 2004 National Register (NR) Eligibility Study of the Gowanus Canal Historic District performed for the Army Corps of Engineers identified a number of NR-eligible sites in the study area and beyond. In 2008, as part of the Final Environmental Impact Study (FEIS) conducted for the Toll Brothers development, the NYS Office of Historic Preservation found an additional five sites eligible to be added to the Gowanus Canal Historic District, and several more NR-eligible sites, including two in the study area. A full description of historic resources is included as Appendix B.



The Kentile Floors sign, atop a historic brick warehousing building, and the Coignet Stone building, the oldest known concrete structure in the city, are two beloved historic features in the Study Area. Gowanus's extensive industrial history has left it with a wealth of architectural resources, many of which could be repurposed to serve modern industry.

In 2013, the Friends and Residents of the Greater Gowanus (FROGG) made a formal application to the State Historic Preservation Office (SHPO) to designate a much larger Gowanus Canal Historic District that includes 53 blocks and 369 properties. This more extensive District includes properties of architectural and historic significance along with properties of purely utilitarian function and aesthetic. Many in the community worry that this designation will limit owners' ability to use and redevelop their properties.

Properties eventually named to the State or National Registers would be eligible for tax credits toward preservation-focused building rehabilitation, which could help property owners afford the cost of building improvements. A historic designation challenges building owners to think creatively about accommodating 21st Century businesses in early 20th Century buildings, but can also attract interest among potential tenants and buyers.

Gowanus Canal Contaminated Sediment



EPA has frequently referred to coal tar and NAPL contaminated sediments from the Gowanus Canal as appearing to be "black mayonnaise." This is likely the same material that the official in 1877 claimed "slides from the shovel back into the water as soon as it is displaced."

Source: EPA Remedial Investigation and Risk Assessment, Appendix D-12E

Brownfields

Given its long history of industrial use, it comes as little surprise that Gowanus is littered with known and suspected brownfields. In addition to the site-specific contamination resulting from over 40 years of use by coal yards, tanneries, and foundries, use of the Gowanus Canal as an open sewer for disposal of toxic and household waste resulted in extensive groundwater contamination and the canal's designation as one of the most polluted sites in the country. The canal was added to EPA's national Superfund registry in 2010. The stench and stigma of the canal cast a pall over the neighborhood for 40 years, limiting economic activity and keeping investors at bay.

The largest contributors to contamination of the canal itself and surrounding upland sites were the manufactured gas plants (MGPs) that operated at three sites on the canal banks in the late 1800s and early 1900s. These plants produced gas for lighting, cooking, and heating from coal, oil, and other base products. The base materials were subjected to high heat or pressurized steam, creating gas and byproducts including coal tar, an oily, highly mobile, non-aqueous

phase liquid (NAPL) that sinks into surrounding soils and migrates from site to site.¹⁵ Although the last MGP along the Gowanus closed in the 1960s (Citizens MGP; the two MGPs on the eastern side of the canal closed in the 1930s), considerable stores of coal tar remain on the properties and continue to leach into surrounding properties and the canal.¹⁶

As part of their 2010-2011 remedial investigation into the Gowanus Canal, EPA identified a list of the upland sites with the most significant contamination from NAPL/coal tar waste from the MGPs:

- Fulton MGP site (declared a State Superfund; New York State Department of Environmental Conservation (DEC) is working to finalize remediation plans);
- Citizen's MGP site (aka Public Place; a State Superfund site under DEC's jurisdiction; National Grid is currently beginning remediation work);
- Metropolitan MGP Site (part was cleaned voluntarily as part of the Lowe's site development; remainder is a State Superfund site under DEC's jurisdiction);
- Verizon's service yard on Nevins Street between Carroll and Union Streets (recently sold; no known remediation plans);
- 400 Carroll Street (a DEC spill response site and the site of the Toll Brothers/Lightstone development; will be cleaned as part of Lightstone development);
- MLV Concrete at 3rd Street and the canal; and
- National Grid service yard at Smith and Halleck Streets (west side of canal).

Redevelopment on these sites is necessarily complicated. The presence of NAPL at these locations presents an ongoing contamination threat to the canal and neighboring properties. EPA has referred the Dirty 7 (as they are known) to DEC for remediation and containment. Although remediation plans will vary from site to site, all canal frontages are expected to feature sheet metal containment walls driven to a depth of 14' to prevent re-contamination. At upland sites, DEC has indicated that remediation will likely take a piecemeal approach that disrupts

Known/Suspected Brownfield Sites



the fabric of the neighborhood as little as possible: vacant sites will be remediated, but fully built sites can continue to be used so long as no ground work is done that could expose the public to contaminants. As built sites become vacant, through demolition for development or other means, DEC will step in and remediate the properties.¹⁷

Although a Superfund-level cleanup is not a negligible undertaking, DEC's approach may present opportunities for potential investors in the neighborhood. Costs of remediation at these sites are borne by the responsible party; a potential investor looking to aggregate a large site could purchase several contiguous properties, demolish the existing structures, and allow DEC to perform the remediation to create a fresh site for new development.

In addition to the 25 tax lots included in EPA's Dirty 7, 74 tax lots in the study area are thought to be contaminated. In total, the identified sites with histories of contaminating uses include: 20 sites used for asphalt/coal tar related businesses; 20 sites used to manufacture chemicals, fertilizers, and plastics; 37 coal yard lots; three sites used to

handle oil and petroleum; 32 sites listed in environmental databases for spills, leaking underground tanks, and the like; and 48 general manufacturing locations including manufacturers and processors of: cork, metals, oil burners, cordage and rope, asphalt flooring, electrical switchboards, paint, paper, tinware, soap, and more.¹⁸ A complete list of brownfields is provided in Appendix C.

The necessity of remediation at any given site depends largely on its future use. Many of the brownfield sites in the study area are fully hardscaped, featuring concrete yards with buildings, and can house a variety of uses in their current state without negative impact from lingering subterranean contamination.

For investors looking to do major site work, assistance is available through the NYC Department of Environmental Remediation's Brownfields Cleanup Program (BCP). Developers of the former BRT Power House, who intend to transform the historic structure into a cultural and arts center, have already taken advantage of the BCP.

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- 3) NYC Department of City Planning, "Park Slope Rezoning Proposal." Available here: <http://www.nyc.gov/html/dcp/html/parkslope/parkslope1.shtml>; NYC Department of City Planning, "Special 4th Avenue Enhanced Commercial District." Available here: <http://www.nyc.gov/html/dcp/html/fourth/index.shtml>
- 4) Bloomberg, Michael, "New York City Industrial Policy: Protecting and Growing New York City's Industrial Jobs Base," January 2005.
- 5) NYC Department of City Planning, "Gowanus Canal Corridor Framework," 2007. Documentation related to the Gowanus Canal land use study and proposed rezoning can be found at: <http://www.nyc.gov/html/dcp/html/gowanus/index.shtml>
- 6) NYC Department of City Planning, "Gowanus Canal Corridor Rezoning Study," 2008. Documentation related to the Gowanus Canal land use study and proposed rezoning can be found at: <http://www.nyc.gov/html/dcp/html/gowanus/index.shtml>
- 7) City Planning Commission resolution C090048ZSK regarding Toll Brooklyn LP's request for a special permit and modifications of the zoning text and map
- 8) "Gowanus Whole Foods Approved After 8-Year Saga," ny.curbed.com, February 28, 2012
- 9) New York City Zoning Resolution Article VI, Chapter 2: <http://www.nyc.gov/html/dcp/pdf/zone/art06c02.pdf>
- 10) Land use analysis based on PLUTO 11v2, a field survey conducted in September 2012, and additional research.
- 11) NYC PLUTO, YearBuilt and YearAlter data. This data is based on Department of Finance building and alteration dates. "The Department of Finance defines alterations as modifications to the structure that, according to the assessor, changes the value of the real property." This likely does not include smaller renovations like space fit-outs, and as such is an undercount of total investment.
- 12) NYC Municipal Code, Article 7-C, "Interim Multiple Dwellings." http://www.nyc.gov/html/loft/downloads/pdf/loft_law.pdf
- 13) Ownership analysis based on PLUTO 11v2, NYC Department of Finance's ACRIS database, NYC Department of Buildings' BIS database, NYS Department of State's business registry.
- 14) Historic resource information came from the following:
 - Hunter Research, "Final Report: National Register of Historic Places Eligibility Evaluation and Cultural Resources Assessment for the Gowanus Canal, Borough of Brooklyn, Kings County, New York," Prepared for US Army Corps of Engineers, May 2004
 - AKRF, "353-365 Bond Street FEIS," Prepared for NYC City Planning Commission, February 2009. (Chapter 7, "Historic Resources")
 - Letter from New York State Office of Parks, Restoration and Historic Preservation to AKRF, dated 5/9/08, included in Appendix A of AKRF's "363-365 Bond Street FEIS," above.
 - Historic Districts Council, "Six to Celebrate: Gowanus," 2012. www.hdc.org
- 15) NYS Department of Environmental Conservation, "General Information about MGPs." <http://www.dec.ny.gov/chemical/24911.html>; also EPA Region II, public presentation, January 25, 2013.
- 16) For information about the three MGPs located along the Gowanus Canal, see their individual websites:
 - <http://www.fultonmgrp.com>
 - <http://www.metropolitanmgrp.com>
 - <http://www.citizensmgrp.com>
- 17) EPA Region II, "List of Priority Upland Sites at the Gowanus Canal Superfund Site," June 2011. Remediation details for MGP sites are still in development; possible remedies outlined in the report came from conversation with the DEC project manager for Fulton MGP in August 2013.
- 18) Information used to identify brownfields or suspected brownfields came from:
 - GEI Consultants, Inc., "Draft Historical Study of the Gowanus Canal," prepared for KeySpan Energy, March 14 2003
 - Sanborn maps (various; years including 1886, 1888, 1904, 1908, 1915, 1933, 1969, 1979)
 - NYC SPEED Database
 - DEC SPDES records

Natural Systems & Open Space

The study area today is almost entirely built out, with two small parks and nothing that could be considered a “natural area;” the canal itself is an industrial structure bearing little resemblance to the one-time tidal creek it channelized. Impervious surfaces comprise 62% of the overall Gowanus Canal watershed and a higher percentage of the study area. This degree of urbanization can transform natural processes into disasters: without sufficient opportunities for infiltration and absorption, rainwater runs downhill through streets and sewers, frequently flooding the paved valley of Gowanus’s former marshlands and dumping untreated sanitary sewage into the canal.

Gowanus, once a home to foot-long oysters and tidal pools, subsequently a poster child for environmental degradation, is now a hotspot for remediation, DIY ideals, and green thinking. Grassroots, piecemeal remediation efforts that began a decade prior to the Superfund declaration continue today, stretching from the canal’s edge to upland streets. Remediation activities often double as recreational opportunities, and have cultivated a community of individuals who visit the neighborhood to take part in ecological restoration. The unusual interplay between restoration and recreation in Gowanus results in increased visibility and economic opportunity; community members have long speculated that full cleanup of the canal could result in the neighborhood’s transformation.¹

Parks & Open Space²

The study area contains two publicly-accessible parks (Thomas Greene Playground in the north and Ennis Playground in the south) that comprise 3.1 acres of land. These two predominantly paved facilities are the only public parks in the study area.

At the north end of the study area, Thomas Greene Playground occupies a full city block bounded by Nevins Street, Douglass Street, Degraw Street, and 3rd Avenue. The park contains a children’s play area, basketball courts, and a highly popular in-ground swimming pool (popularly known as the Double D Pool for its location between Douglass and Degraw Streets). The pool sits at the park’s western end,

Local Open Space Resources



Red Hook Recreation Area



Prospect Park

Remediation as Recreation



GCC members come from other neighborhoods to work together in the sun, creating rain gardens along local streets. Here, volunteers work in the garden alongside the Salt Lot. Image Source: parkslopestoop.com

Thomas Greene Playground



Thomas Greene Park Master Plan



Plans for a rebuilt Thomas Greene Playground include a revamped playground, handball and basketball courts, a skate park, and a landscaped lawn, in addition to the Double D pool. Plans may be disrupted by necessary cleanup of the Fulton MGP site, which underlies the western part of the park. The possibility of disruption to use of the pool due to cleanup activities concerns many community members.

Image source: Friends of Douglass/ Greene Park website

Ennis Playground



on part of the former Fulton Manufactured Gas Plant site, now a State Superfund site. At the eastern end of the park, the children's play area was recently renovated according to a master plan that also calls for renovation of the skate park and addition of an accessible lawn. Park improvements and use in the immediate future will likely be affected by DEC's remediation of the Superfund site; over the city's objections, EPA has suggested placing a CSO retention tank below the pool in the course of the State's remediation work.

Ennis Playground is a through-block lot between 11th and 12th Streets, just east of 2nd Avenue. The roughly half-acre park sits between two-story residential buildings and DSNY's Community District 6 garage, and offers a children's play structure, swings, games tables, and a basketball court.

Nearby neighborhoods provide significant open space resources. Half a mile east of the study area is Prospect Park, a rambling Olmsted and Vaux park of over 500 acres with sports fields, a pond, a lake, a skating rink, a wooded ramble, a zoo, and acres of meadows for

relaxing or playing informal games. To the southwest, the Red Hook Recreation Area offers baseball and soccer fields, a running track, fitness equipment, an indoor recreation center, and another swimming pool. Across 4th Avenue from the study area on 3rd Street, Washington Park offers soccer fields, a historic house, an extensive children's playground, a dog run, basketball courts, and a skate park.

Open Space

Gowanus is characterized by an appealing sense of openness, despite the neighborhood's lack of parks and formal open space. The canal, low buildings, and under-used land combine to provide long views along the water, expansive horizons under open skies, and unusual vistas uninterrupted by buildings. This spaciousness is an integral part of the area's character and appeal.

Since the 1999 re-opening of the flushing tunnel alleviated the worst of Gowanus's smell, the canal itself has seen increasing use as an open space and recreational amenity. On the water, a small but dedicated population of boaters have adopted the canal. The Gowanus Dredgers

Non-Traditional Open Space



Image Source: Donna Alberico for The New York Times

Gowanus has considerable open space to offer beyond traditional parks. The canal itself is used for remediation/recreation activity, drawing volunteers from around the borough to engage in socially fulfilling remediation work. Canoes and kayaks ply the water. The canal, low-profile buildings, and under-used land also create a sense of visual openness that provides unusual and striking vistas.

Canoe Club offers free canoeing on the canal and runs an annual boat race. In 2003, over 1,000 people participated in the club's programs, and in 2013, the boat race drew 30 intrepid boaters and 50 spectators. The dredgers' programming combines recreation with restoration as volunteers also engage in canal cleaning events twice a year to remove trash from the water.³ On the canal's west bank, prior to the start of site work at the Lightstone development, an open parcel of land known as Gowanus Grove used to host weekly parties.

Further exploring the idea of canal as open space, the Gowanus Canal Conservancy has long-term plans to develop a continuous, publicly-accessible park along the water. The group currently operates a community composting program at DSNY's Salt Lot, and has canal-side rain gardens in the area.⁴

The first pieces in this potential waterfront park are already being built. As required by the waterfront zoning regulations, several recent developments are implementing publicly-accessible esplanades along the water. Across the canal from the study area, the Lightstone mixed-use development (at 363-365 Bond Street) will include extensive



Gowanus Vegetation



- Grass/shrubs
- Tree canopy
- Bare earth
- Paved
- Roads/railroads
- Buildings

This NYC LIDAR imagery from 2010 classifies types of landcover. The study area, highlighted in white, has very little vegetation.

Source: NYC Open Data file: *landcover_2010_nyc_3ft.shp*

waterfront open space, featuring native plantings, recreation areas, an esplanade with interpretive signs, and exposed historic detail. Whole Foods' new esplanade wraps their property, facing both the main canal and the 4th Street turning basin. Since the 4th Street basin is still actively used for barge traffic by US Recycling, the GCC envisions connecting Whole Foods' esplanade to the Salt Lot via a footbridge spanning the basin. In this way, the GCC hopes to create a publicly accessible amenity that can harmoniously coexist with continued water-dependent industry.

This vision of simultaneously accommodating recreational, environmental, and industrial interests reflects both City policy and local sentiment. DCP's Vision2020 stated a range of goals for Gowanus, including exploration of safe in-water recreation, support for continued industrial use, and support for a variety of environmental mitigation efforts including the Superfund, creation of street-end parks, and implementation of permeable surfaces and other green infrastructure. While industrial use of the canal has declined in recent



A tree survey conducted by GCC in 2012 found that 34% of inventoried block segments had no trees. Most of the barren blocks were in the BOA study area.

Source: Gowanus Canal Conservancy, TreeKit

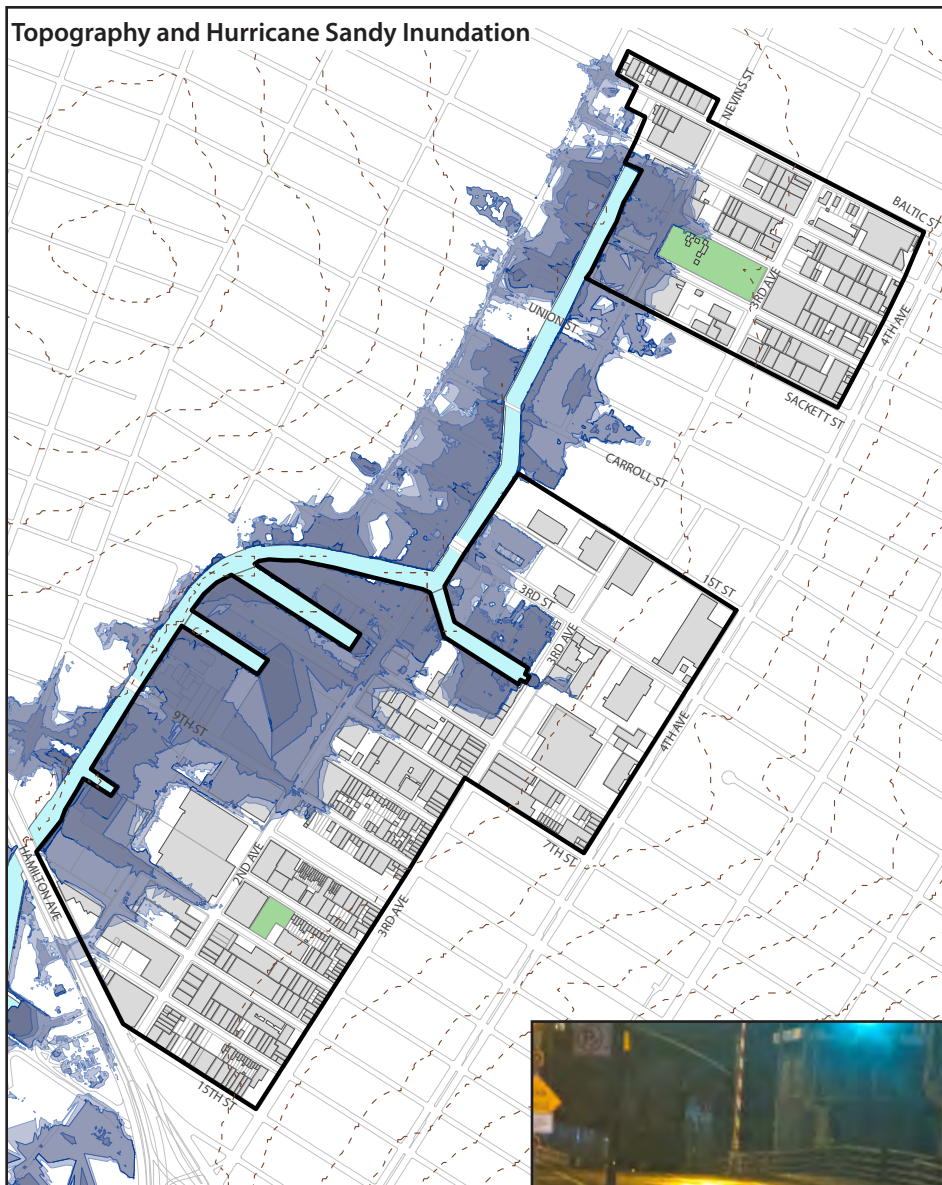
years, community stakeholders expressed support for continuing business-related use.⁵

Vegetation, Topography, Impervious Surfaces, and Flooding

Gowanus's relative paucity of open space corresponds with a general lack of vegetation. Aerial photos show a landscape of gray rooftops; the vast majority of land in Gowanus is paved, and those lots that are neither built nor paved are typically used for parking or storage of materials and machinery (e.g. builders' yards). Even the study area's two parks are predominantly paved, with a slight fringe of tree cover around their perimeters. A recent street tree inventory conducted by the GCC confirms the general lack of greenery; of the 115 block faces they evaluated in the study area, fewer than half had trees.⁶

Lack of vegetation may be unsurprising in an industrial district where parking, materials handling, and truck loading and unloading have long been key concerns. However, the preponderance of impervious surfaces in the area (DEP estimated that 62% of the 1,758 acre

Topography and Hurricane Sandy Inundation



Storm surge and high tides in Gowanus Bay during Hurricane Sandy resulted in the Gowanus Canal overtopping its banks. Floodwater spread for several blocks inland, inundating buildings with up to four feet of water. At right, a car floated at the west side of the 3rd Street Bridge.

*Inundation Map Source: FEMA, c/o NYCEDC
Photograph: foundinbrooklyn.blogspot.com*



Gowanus watershed is impervious;⁷ that percent is likely higher in the study area) exacerbates flooding problems by preventing ground infiltration of storm water. Permeable surfaces, coupled with vegetation, absorb storm water that otherwise is routed to sewers and contributes to urban flooding. Vegetation also improves local air quality and lowers ambient temperatures.

In the absence of permeable ground, storm water drains to street catchbasins and into the combined sewer system. Water is routed to treatment plants until it exceeds capacity; the excess exits the system at CSO outflows. If rain exceeds the capacity of the catchbasins, water rushes downhill on the streets, pooling in low places and routinely flooding areas along 9th Street and 2nd Avenue. In some cases, water has been seen geysering out of catchbasins on 9th Street due to overflow conditions.

Stakeholders identified flooding as an issue of major concern in the area, with impacts on structures, business inventory, telecommunications, transportation, and access. The worst areas for flooding, as identified by stakeholders, are 2nd Avenue, 9th Street, and Nevins Street.

Hurricane Sandy: October 2012⁸

Gowanus is at risk of flooding not only due to high volumes of storm water runoff from upland areas, but due to storm surge and tidal activity. Hurricane Sandy, which hit New York City on October 29, 2012, brought with it very little rain, but high winds and a storm surge which coincided with high tide, inundating the city with seawater. Ocean water flooded inland, raising the level of the Gowanus Canal until it overtopped its banks and flooded surrounding streets, submerging ground floors of buildings near the canal under up to four feet of water. Although Sandy's winds were insufficient to scour the canal bottom and carry industrial contaminants into the neighborhood, floodwaters did contain high levels of bacteria from sewage, as well as lower levels of gasoline and diesel derivatives. Fears about contamination slowed the cleanup response while property owners waited for EPA to analyze floodwater samples and provide cleanup guidance.

Water Quality

Property owners' concerns about cleaning up contaminated floodwaters were well-founded, as the Gowanus is notoriously one of the most contaminated water bodies in the nation. Declared a Superfund site in 2010, the canal has a legacy of contamination dating to its initial construction in the 1860s. Today, contamination typically comes from two major sources: combined sewer overflows and migration of subsurface contamination (e.g. NAPL) from historic upland industrial sites.

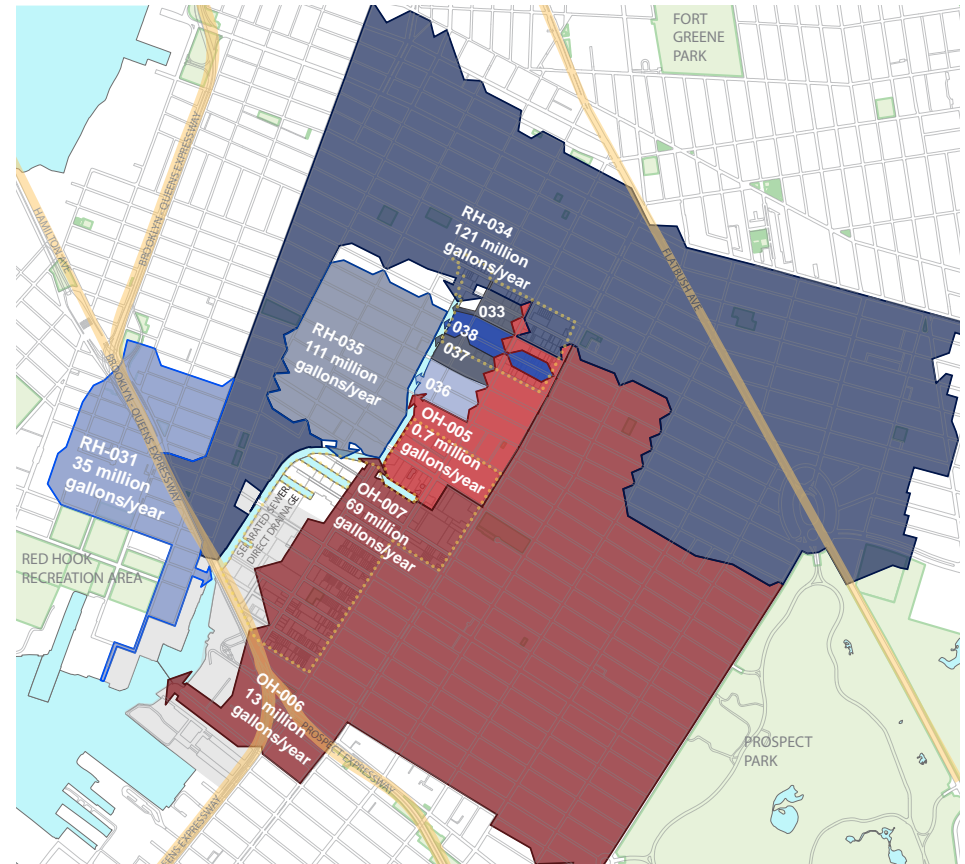
Combined Sewer Overflows

Ten active CSO outfalls line the canal above 19th Street.⁹ During rain events, when the volume of rainwater surpasses the capacity of City treatment plants, excess volume (mixed stormwater and untreated sanitary sewage) is routed directly to the canal via these outfalls. The largest outfall, located at the head of the canal, deposits 121 million gallons of effluent per year into the canal. All together, the outfalls discharge over 350 million gallons each year; the accumulated waste, nearly all of which is deposited north of the 4th Street turning basin, is a major contributor to contamination in the canal.¹⁰

Accumulation of human and other waste in the canal has been a concern of the City's since the early 1900s, when the canal was used as an open sewer, and several attempts have been made to mitigate the problem. The Gowanus Canal Flushing Tunnel diverts water from Buttermilk Channel to the head of the canal in an effort to improve water flow, dissolved oxygen levels, and odor. DEP is currently engaged in a system upgrade to increase the pump capacity of the flushing tunnel by 50% and overall flow through the tunnel by 30-40%. In addition, DEP is beginning a pilot program of high-level separated storm sewers in the northeast corner of the study area. These sewers are expected to capture 50% of runoff in the drainage area, reducing overflows of the sewer system.¹¹

As part of their Record of Decision regarding a remedy for the Gowanus Superfund, EPA recommends additional CSO controls. CSO retention tanks sited near outfalls RH-034 and OH-007 (potentially located beneath Thomas Greene Playground and the Salt Lot) would

CSO Sewersheds and Outfalls



Gowanus Canal Discharge Summary for Baseline Condition

Outfall	Discharge Volume (MG)	Percentage of CSO or Stormwater Volume	Number of Discharges
Combined Sewer			
RH-034	121	32.1	56
RH-035	111	29.5	75
OH-007	69	18.4	47
RH-031	35	9.4	33
OH-024	23	6.2	35
OH-006	13	3.3	33
RH-036	1.6	0.4	21
RH-038	0.9	0.2	18
OH-005	0.7	0.2	5
RH-037	0.5	0.1	16
RH-033	0.2	0.1	14
Total CSO	377	100	75

The 1,758 acre Gowanus Watershed is served by the Owl's Head and Red Hook water treatment plants (red and blue, above). More than 350 million gallons of combined sewage are discharged into the canal each year when rainfall exceeds the treatment plants' capacities.

Source: NYC DEP, "Gowanus Canal Waterbody/ Watershed Facility Plan Report," August 2008

eliminate significant load from two of the largest outfalls, greatly reducing annual discharge into the canal.¹²

Historic Industrial Contamination

Historic upland industrial uses are the other major source of contamination in the canal. Gowanus has been home to a wide range of manufacturers and processors over the years; in the early years of the neighborhood it was common practice to dump industrial effluent directly into the canal. The neighborhood held tanneries, chemical manufacturing plants, metalworks, coalyards, and other industries, many of whom had a hand in polluting the canal.

The contributors with the most pervasive impact were the manufactured gas plants (see page 46). Three of these plants lined the banks of the canal, using heat and high pressure to extract gas for heating and cooking from coal, oil, and other substances. As a by-product they produced noxious gas and liquid coal tar. Coal tar was frequently stored or disposed of on-site, resulting in pockets of upland contamination that continue to affect the canal today. NAPL

from the coal tar permeates the soil around and beneath the canal, and is carried to the surface of the canal waters by gas bubbles from decomposing organic solids (e.g. raw sewage) at the canal bottom. In this way, the contaminants become a health risk for birds, fish, the benthic organisms on which fish feed, and humans who may consume fish or shellfish from the canal.¹³

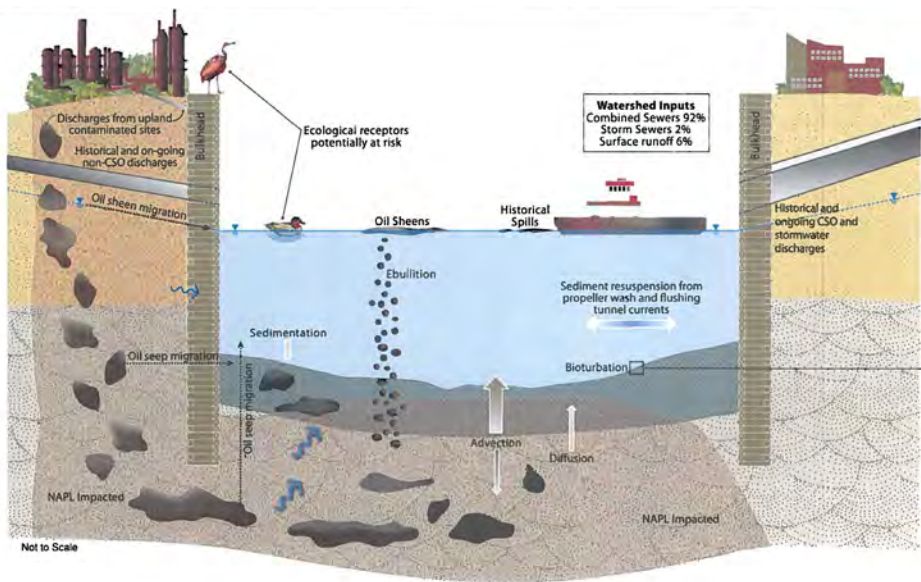
Remediation of contamination from the MGPs involves both upland and in-water work. Upland, cleanup of the State Superfund MGP sites is managed by DEC. The agency is currently working with the responsible parties (notably National Grid; see page 40) to design appropriate remedies.

In the water, EPA, which is primarily concerned with minimizing the health and ecological impacts of contamination, issued a Record of Decision detailing its planned remedy in September 2013. In addition to the CSO retention tanks detailed earlier, the remedy calls for removing sunken debris, dredging contaminated sediment, partially excavating two illegally filled turning basins, and capping the canal bottom to prevent further NAPL seepage and create a new habitat for benthic organisms. EPA's stated timeline includes three years to design the remedy, followed by six years for implementation.¹⁴

Economic Implications

The canal cleanup processes will have multiple implications for the local economy. The Superfund designation has already attracted popular attention: promise of a cleaner canal has whet the appetites of those who envision Gowanus as the "Venice of Brooklyn;"¹⁵ individual properties along the waterfront are being purchased and held by luxury residential developers.¹⁶ Environmental enthusiasts flock to the area, engaging in ecological restoration work and devising creative plans for addressing upland water issues. Gowanus, once a poster child for industrial pollution and abandonment, is steadily becoming known as a center for environmental restoration, recycling, and reuse.

EPA's six-year cleanup remedy involves several processes that could prove disruptive to some local businesses: driving vertical sheet walls to prevent further migration of NAPL into the canal, reconstruction of bulkheads, canal de-watering, and dredging large



Contamination in the canal comes from multiple sources, but CSO and historic industrial discharges are the primary offenders. These contaminants pose continuing health risks to humans, local wildlife, and benthic organisms. Source: EPA, "Record of Decision: Gowanus Canal Superfund Site," Figure 4

quantities of sediment, accumulated organic material, and sunken debris.¹⁷ The work to be done is considerable, and resulting noise, smells, and traffic may pose difficulties for businesses closer to the water that rely on customer access. The remediation work may also provide opportunities, however, for local environmental and contracting firms. Temporarily reduced foot traffic arising from the work could offer short-term benefits to heavier industrial and truck-dependent businesses.

The remediation will ultimately benefit all waterfront property owners and water-dependent uses. Debris removal and dredging will re-open much of the water body to barge traffic as well as pleasure craft, while bulkhead replacement (which property owners are encouraged to do in concert with EPA's work, thereby achieving economies of scale and assistance with the NY State permitting process) will benefit anyone wishing to engage in future waterfront development, whether for industrial use or construction of publicly-accessible open space.

Upland Stormwater and Water Quality Mitigation

In addition to EPA's work at the canal, multiple entities are at work on upland strategies to mitigate stormwater and improve canal water quality.

DEP, as mentioned previously, is exploring use of high-level separated storm sewers in a pilot project. The agency is also working to implement green infrastructure throughout the Gowanus watershed, as part of a citywide initiative to use bioswales and other on-street, green systems to reduce CSO events.¹⁸ DEP's upgrades to the pump house and the flushing tunnel will also improve water quality.

In addition to their waterfront work, the Gowanus Canal Conservancy has a series of green infrastructure projects in the pipeline, partnering with engineers, designers, and City and State agencies to implement a series of rain gardens along Degraw Street, a Green Street Corridor on 6th Street, and dlandstudio's first street-end Sponge Park™ on 2nd Street, west of the canal. Each of these projects is designed to retain and filter storm water, divert runoff from the sewers, and enhance micro-climates and habitats.¹⁹

Other proposals for the upland areas range from incorporation of rain gardens and storm water infiltration on individual lots,²⁰ to organization of the City's green infrastructure around underground streams as mapped by local planner Eymund Diegel,²¹ to implementation of a system of "street creeks" that would combine bioswales with in-street channels to divert storm water from sewers, clean it, and route it to the canal, restoring fresh water flow.²² This great variety of independent and City-sponsored projects complements EPA's work and will help not only to improve water quality and sewer system capacity, but to create habitat areas, improve local air quality, and combat heat island effects.

While water quality, environmental restoration, and flood mitigation are important subjects in Gowanus, this BOA chooses to support the myriad ongoing efforts in this area, rather than propose new courses of action.



Green Infrastructure Projects



The GCC is just one organization working on green infrastructure in the Gowanus Canal watershed. Their ongoing projects include bioswales, rain gardens, and work at the Salt Lot. Source: Gowanus Canal Conservancy

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Transportation & Access

From its earliest days, Gowanus has relied on good transportation networks to connect its producers, suppliers, and markets. Today, businesses cite Gowanus's convenient access to local and regional markets as one of its primary locational advantages. The southern part of the study area provides easy access to the Gowanus, Prospect, and Brooklyn-Queens Expressways (BQE), as well as the Hugh L. Carey Tunnel to Manhattan. Third and Fourth Avenues, the eastern edges of the BOA study area, are both designated local truck routes in Brooklyn. The canal itself is still used for shipping by a handful of waterfront operators, and is seeing greater use by recreational boaters.

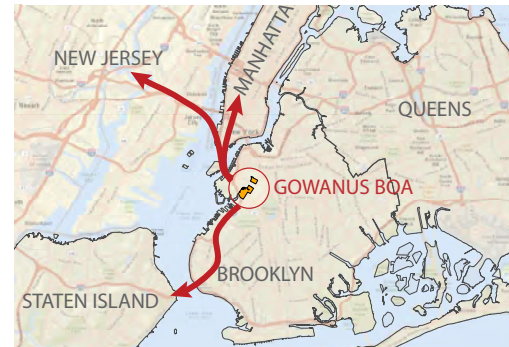
Evolving uses in the area and increased pedestrian through-travel are changing local behaviors in certain areas, and may lead to occasional conflicts. This section explores transportation facilities in Gowanus and offers ideas for simultaneously accommodating multiple modal groups.

Streets and Sidewalks

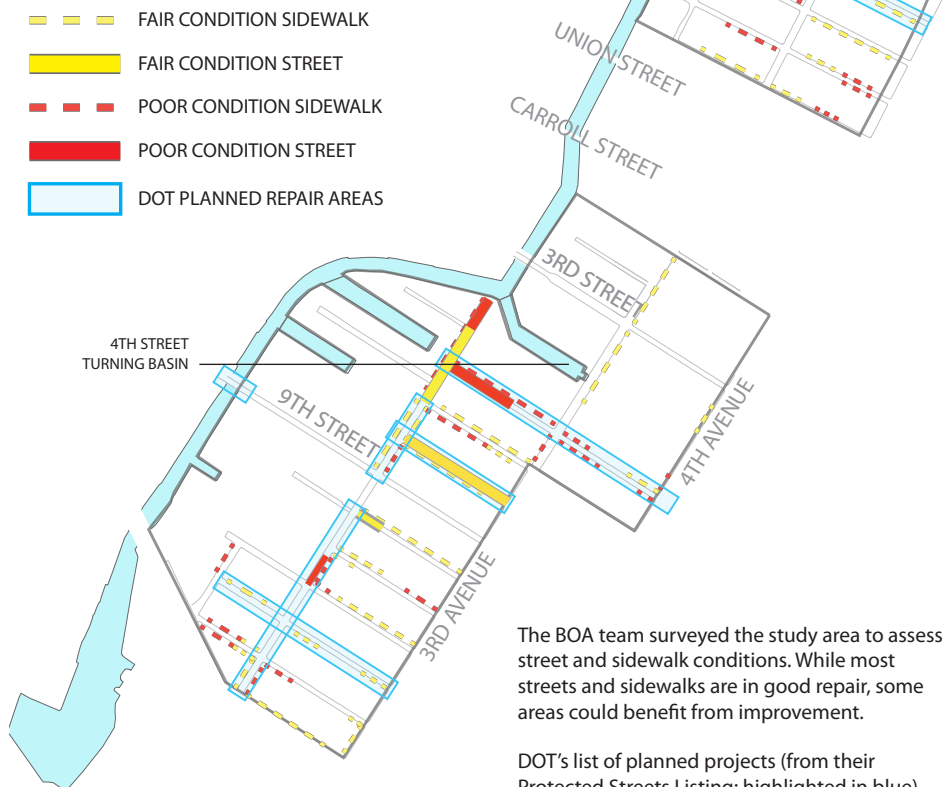
The study area comprises 29 regular blocks and 12 waterfront blocks of varying size. The majority of the streets appear to be in good condition, and several have had reconstruction or resurfacing in the past five years; however, a visual inventory of conditions revealed several areas where improvements are needed. Many of the streets in most serious need of improvements are already on DOT's planning list for reconstruction and resurfacing.¹

One-way streets and the curving path of the canal limit connectivity in the study area. In the south, the canal and the jutting inlet of the 4th Street turning basin create a relatively isolated area that may benefit truck-dependent businesses. Second Avenue, which dead-ends at the canal, connects to Hamilton Avenue, a six-lane arterial south of the study area that provides easy access to the BQE and Hugh L. Carey Tunnel. Ninth Street, the study area's only east-west through-street south of the 4th Street turning basin, carries pedestrians, bicycles, transit, and cars across the canal without routing much traffic onto nearby streets, so truck traffic is relatively unimpeded in this area.

Transportation Access & Street Conditions



Gowanus's proximity to highways creates easy access to suppliers and markets, including access to New Jersey and points beyond. It is less well served by transit.



The BOA team surveyed the study area to assess street and sidewalk conditions. While most streets and sidewalks are in good repair, some areas could benefit from improvement.

DOT's list of planned projects (from their Protected Streets Listing; highlighted in blue) include many of the areas that need most improvement in the study area.

Data Source: NYC DOT Protected Streets List found at <http://www.nyc.gov/html/dot/html/infrastructure/protectedst.shtml>



Poor street conditions (left) and sidewalk conditions (right) on 6th Street, which is on DOT's list to repair.

The majority of east-west streets in the study area dead-end into the canal. Several street ends are used for business operations by nearby property owners. Of the study area's 17 east-west streets, only 9th Street, 3rd Street, Hamilton Avenue, and one block of Baltic Street are bi-directional. These streets also provide the only westbound canal crossings in the neighborhood; Union and Carroll Streets, between the north and south study areas, both provide eastbound canal crossings. For travel north-to-south, Third and Fourth Avenues (both bi-directional) run the length of the study area, providing connection to Flatbush and Atlantic Avenues in the north, and the Prospect Expressway, Gowanus Expressway, and Belt Parkway to the south. West of 3rd Avenue, Nevins Street runs south from Flatbush Avenue to Union Street (and north-south from Union Street to Carroll Street); Second Avenue provides bi-directional connection between Hamilton Avenue and its terminus at the 4th Street turning basin. Second Avenue's limited connectivity and location have made it a de facto truck route, despite its susceptibility to flooding.

Circulation & Traffic²

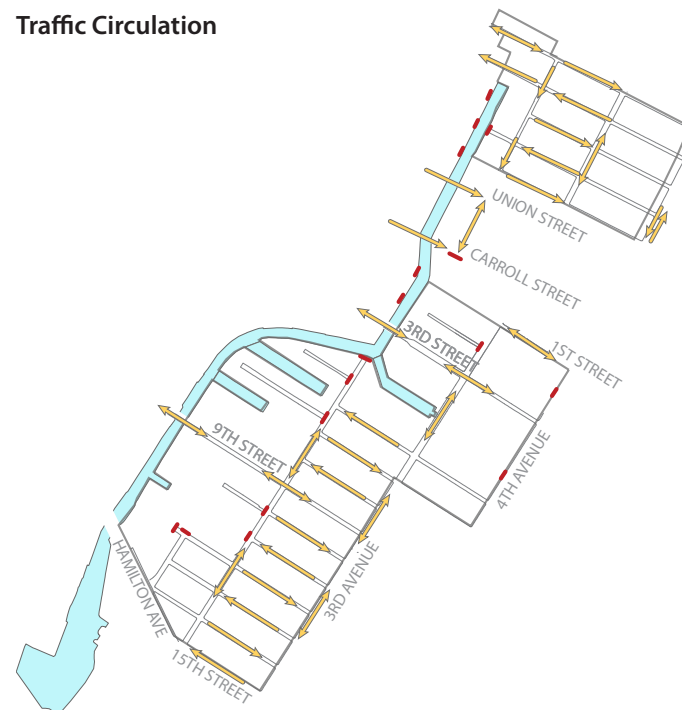
Traffic circulation in the study area is affected by the presence of the canal as a barrier and resulting limited connectivity of local streets.

Local east-west traffic largely travels over the (bi-directional) 3rd and 9th Street Bridges, with average daily vehicle counts of 9,300 and 10,300 in 2011, respectively. Hamilton Avenue, which sees more through traffic, had average daily volumes of 47,000 vehicles per day in the same year.

According to data from 2011, Fourth Avenue (between Union Street and the Prospect Expressway) is traveled by 35,000 vehicles per day. Third Avenue sees less volume, hitting 18,550 vehicles per day.

At the south end of Third Avenue, local highway interchanges see significant volume, with 140,000 vehicles traveling on the BQE in this area and 12,500 making the transfer between the BQE and Prospect Expressways. Although average daily traffic volumes were not available for the 3rd Avenue/Prospect Avenue entrance to the westbound BQE,

Traffic Circulation



Traffic circulation in Gowanus is complicated by the canal and a pattern of one-way streets and dead ends. Westbound travel over the canal is possible only at 3rd Street, 9th Street, and Hamilton Avenue.

In the southern part of the study area, these conditions, coupled with lack of residential housing, may be beneficial for truck access.

anecdotal evidence suggests that traffic backups at the interchange can be significant.

Truck Access

Truck access is essential for many businesses operating in Gowanus. To operate efficiently, trucks need loading and unloading areas and favorable parking regulations. These regulations may disallow daytime street parking by residents, workers, or customers. Truck traffic through a neighborhood can be loud and is commonly seen to conflict with bicycle and pedestrian traffic, as people on bikes and on foot can be difficult for truck drivers to see.

In general the study area accommodates truck access well. Many of the buildings have curb cuts and loading docks or roll-up doors sized to handle vehicles. Approximately 30 of the study area's roughly 110 block faces have parking regulations that favor businesses, varying from "no parking" areas aligned with curb cuts, to regulations preventing non-commercial vehicles from parking or standing during

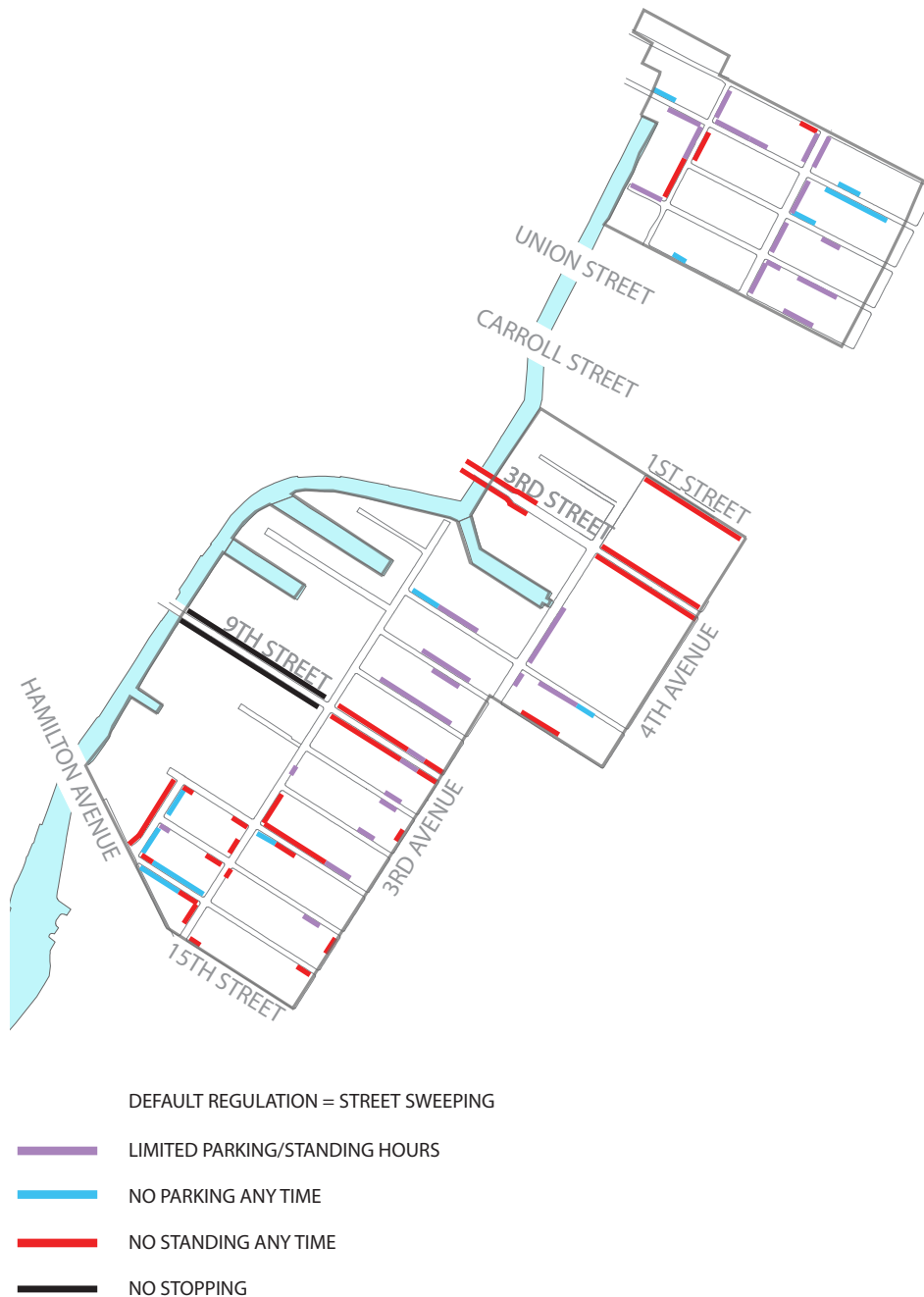
standard business hours.³ The majority of blocks lack street trees or other potential obstacles to trucks, and some stakeholders expressed preference for unimproved streets, indicating that lack of repair to streets and sidewalks deters pedestrians and keeps inter-modal conflicts to a minimum. Stakeholders who owned businesses were not opposed to on-street green infrastructure so long as it was sited thoughtfully to avoid conflicts with business activities.

As stated above, the southern part of the study area presents advantages for trucks, with easy access to highways via 2nd and 3rd Avenues, relative isolation from through-traffic, and very little housing (no residential presence on 2nd Avenue) to create parking competition. A few side streets between 11th and 15th Streets have historic housing clusters, the Lowe's attracts some small degree of foot and car traffic, and DSNY's two parking garages contribute to traffic congestion and parking pressures, but overall the area appears to work well for trucks.



Several blocks in the southern study area accommodate both historic housing and industrial businesses. Along a single block of 15th Street, above, rowhouses share space with many businesses including an auto repair shop, a glass manufacturer, and office space for a snack food company. Truck loading and unloading dominates the western end of the block near 2nd Avenue.

On-Street Parking Regulations



Data Source: DOT map of parking signs; www.nycdot.info

In the northern study area, conflicts between trucks, pedestrians, and residential car owners are more common and problematic. Hotel guests and residents of upland residential neighborhoods appear to use the area for parking, while neighborhood facilities like Thomas Greene Park, the Douglass-Degraw pool, nearby gyms, bars, restaurants, and entertainment venues attract considerable foot traffic. As the waterfront develops with new, publicly-accessible amenities, pedestrian traffic through the area should be expected to increase, possibly compounding difficulties for truck access.

Parking

Parking is a common concern for many stakeholders. In addition to truck access, the study area must accommodate customer and workforce parking in order for businesses to function. Residents of the neighborhood also park in the area, and there are anecdotal reports of hotel guests and upland residents competing for parking as well.

As stated above, almost a third of block faces in the study area have parking regulations that limit non-business use of streets for parking



Outside the DSNY CD6 garage on 2nd Avenue, cars frequently park on the sidewalk as well as on the street.

during weekday business hours. Some areas, particularly in proximity to bridges and utility-owned parcels, have regulations against standing or stopping at any time. On the vast majority of block faces, however, the only parking prohibition is during street sweeping hours. Most of the blocks are scheduled for nighttime, bi-weekly sweeping (from 3am-6am).

During weekdays parking pressures are visible in the area, particularly on the blocks surrounding the DSNY garages, where cars frequently park on sidewalks. A traffic study conducted in 2011 as part of Whole Foods' Environmental Impact Statement found that 95-100% of available parking spaces were occupied during weekdays from 7am-2pm.⁴ With little vacant land available for parking lots, and little market support for parking structures, the situation seems unlikely to change. Some formal surface parking areas, notably the Lowe's/Hamilton Plaza parking lots, appear consistently underused. This underuse may represent an opportunity both to support re-examination of parking requirements for large retail developments at the policy level, and to create shared parking space that could offset local demand.



Street and sidewalk parking along Baltic Street in the north study area.

Whole Foods Parking Study

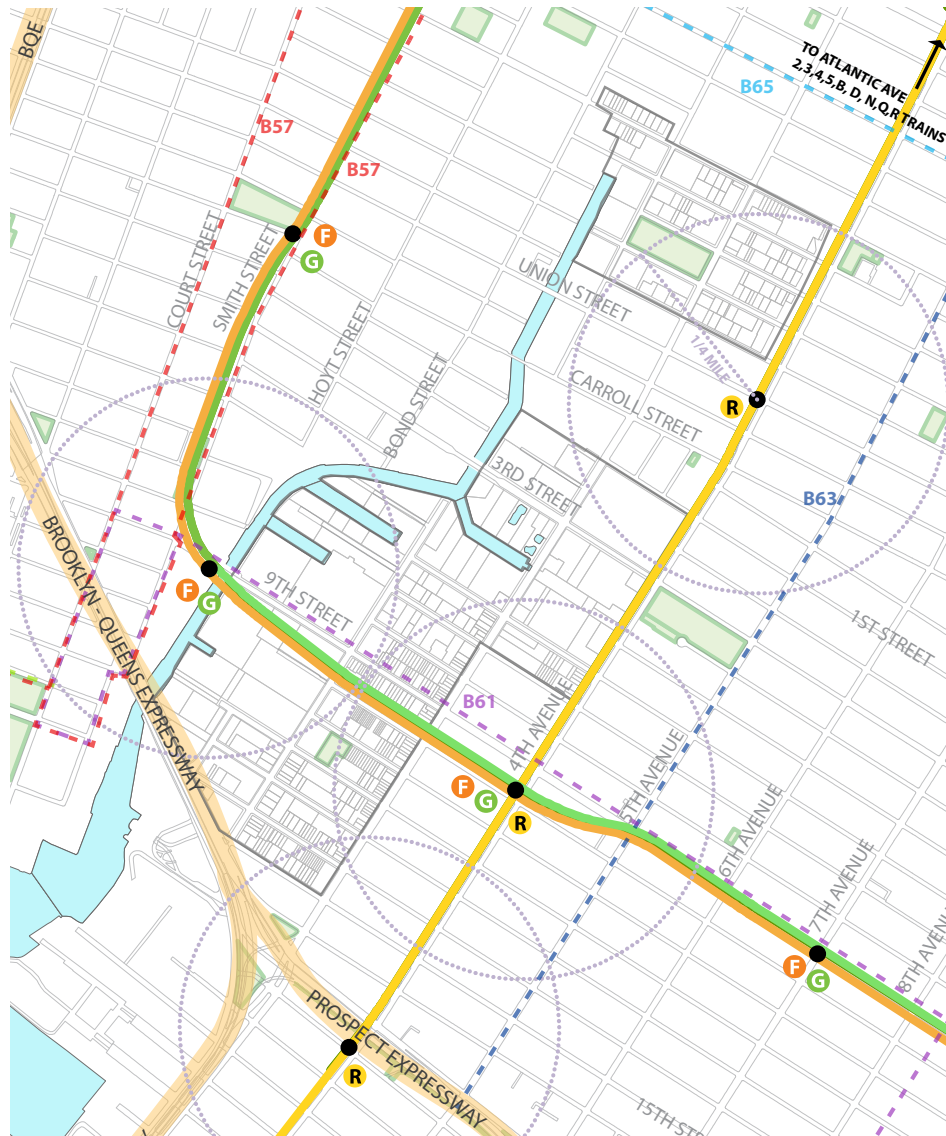


EXISTING ON-STREET PARKING SUMMARY

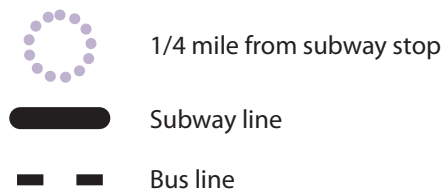
Peak Period	Approximate Legal Capacity	Number of Spaces Occupied	Percent Occupied
Weekday 7 - 10 AM	1,918	1,813	95
Weekday 11 AM - 2 PM	1,918	1,915	100
Weekday 4 - 7 PM	1,918	1,681	88
Saturday 12 - 5 PM	2,009	1,533	76

The traffic study conducted as part of Whole Foods' EIS in 2011 confirmed that parking within 1/4 mile of that property is challenging. Although the study examined only part of the study area, its findings are believed to be representative. Source: Eng-Wong Taub, *Whole Foods Traffic Study (March 2011)*, Table 3, pg. 8

Transit Access



The study area has moderate transit access; only one bus passes directly through the area, and no subway stops fall within the study area boundary. More transit options are accessible just beyond the study area boundary, and Atlantic Avenue is a major transit hub. A local circulator bus could facilitate connections to the larger transit network.



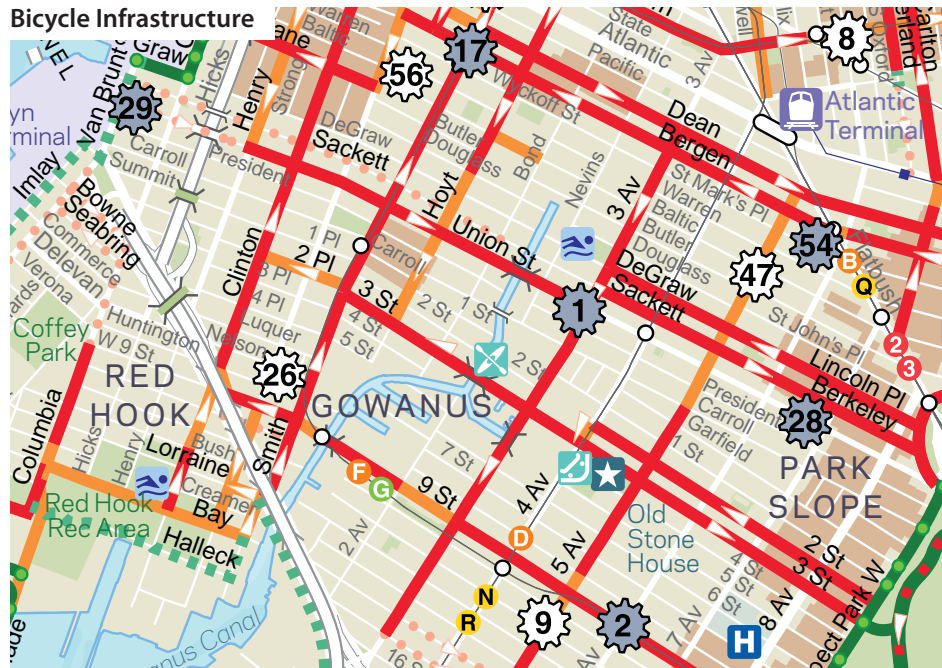
Transit

The source of parking congestion in the study area is unclear, and should be studied further so that appropriate remedies might be found. Where parking congestion arises from daily users (business owners, workers, and customers), improving transit access can help alleviate the problem.

Three subway lines and one bus route pass through the study area, with another three bus routes in proximity. The F and G trains travel from Manhattan and Queens, respectively, through Carroll Gardens and across the 9th Street Bridge. These lines are accessible at the 4th Avenue/9th Street and Smith/9th Street stations, a block beyond the study area limits to the east and west. The R train travels along 4th Avenue between Bay Ridge and the Atlantic Avenue station, where transfers are available to many other lines, including the Long Island Rail Road. Three R stops are within a quarter mile of the study area: Union Street, 4th Avenue/9th Street, and Prospect Avenue.

The one bus line that travels through the study area is the B61, which connects Windsor Terrace with Downtown Brooklyn via Red Hook and Columbia Street. Available on Smith Street, 2 blocks west of the study area, the B57 connects Maspeth, Queens with the IKEA terminal. The B63 runs along 5th Avenue in Park Slope between the Verrazano Bridge and Atlantic Avenue, where it turns west to reach Brooklyn Bridge Park. The B103, a limited-service bus that travels between Canarsie and Downtown Brooklyn, has a stop at Atlantic Avenue. Several express buses that connect outlying areas of southern and eastern Brooklyn pass through the study area en route to Manhattan without stopping.

The current level of bus service reflects system changes made for budget purposes in 2011. Prior to that, four bus lines (B37, B71, B75, and B77) passed through the study area. The MTA eliminated these routes, which had low and declining average ridership numbers. Although some of the service provided on those lines is retained in the new configuration, many stakeholders appeared to feel the loss of the B37 in particular, which traveled along 3rd Avenue, and the B71, which traveled along Union Street. The MTA is scheduled to reinstate the B37



Gowanus is surrounded by a dense network of bicycle infrastructure.

Source: 2013 NYC Bike Map; downloadable at <http://www.nyc.gov/html/dot/html/bicyclists/bikemaps.shtml>

in June 2014 along a curtailed route, but as the route largely parallels the R train, it is not expected to see great use. Local proponents are interested in developing an alternate route that would meld the old B37 route with the B71 to create a local circulator.⁵ Addition of this route could help defray parking demand by providing commuter and customer access to local businesses.

Non-motorized access

Bicycling is an extremely popular mode of transportation in this part of Brooklyn, and the DOT, which had a goal to triple the number of bicycle commuters in the city between 2007 and 2017, has been working to create a city-wide network of bike lanes. The biggest recreational bicycle attraction is the Brooklyn Waterfront Greenway, which will create a continuous waterfront route from Greenpoint to Sunset Park. Sections of the Greenway currently exist at Brooklyn Bridge Park and in Red Hook, and more stretches are in development. Bergen and Dean Streets, which provide access to the Greenway and the Manhattan and Brooklyn Bridge approach routes, are the biggest



Bi-directional bike lanes on Union Street bookend the eastbound vehicular traffic, reflecting the need for more westbound crossings.

east-west bike connectors near the study area, but a number of smaller routes exist as well.

Four streets in the study area are designated bicycle routes. Union, 3rd, and 9th Streets are bidirectional east-west routes with painted lanes. Third Avenue, also a local truck route, bears a southbound bike lane which has to navigate the highly-used interchange with Hamilton Avenue and the BQE/Gowanus Expressways.⁶

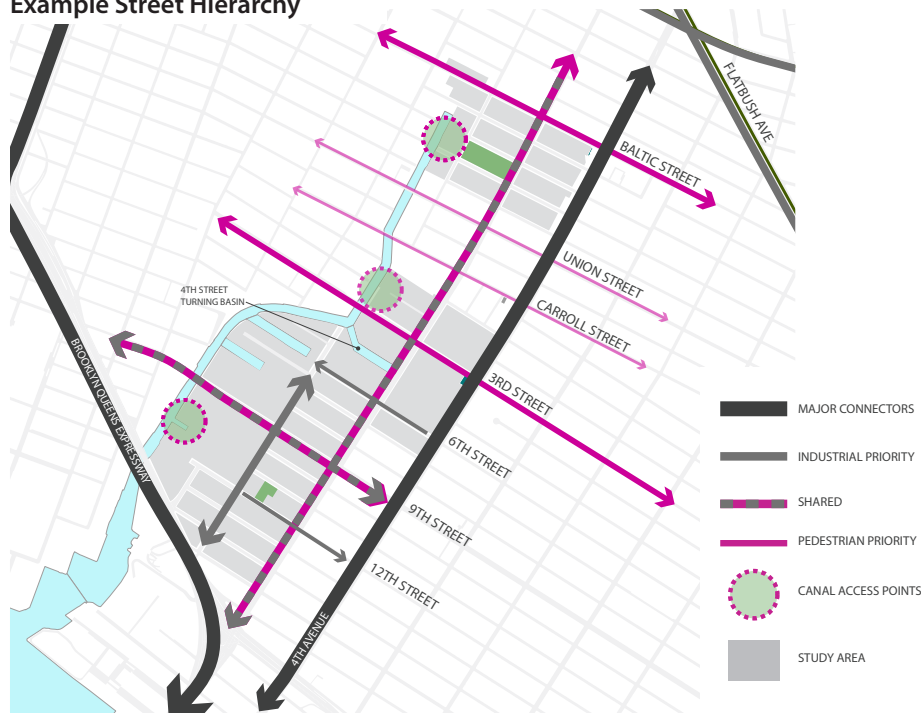
Pedestrian activity is greatest in proximity to subway stops. The EIS performed for Whole Foods included pedestrian counts at major intersections and found 350 pedestrians per hour in the intersection at 4th Avenue and 9th Street, and 600 per hour at 4th Avenue and Union Street.⁷ In the study area, pedestrian activity is concentrated near amenities and along routes that cross the canal, with the most activity occurring along Union, Carroll, and 9th Streets. Third Street has seen a considerable gain in pedestrian traffic since the opening of Whole Foods. As more businesses arrive that cater to foot traffic, and

9th Street Looking West—Rendering

9th Street is one of the study area's major connectors, an important cross-canal route for cyclists, pedestrians, motorists, and transit riders. Improved transit and cycling infrastructure, such as bus shelters and bike racks, carefully sited green infrastructure (shown here as a bioswale but more likely green or blue roofs), and activated street frontage could turn the street into a model of the type of integration the BOA seeks to achieve. IBZ and other business-positive signs attract attention to the variety of activities occurring along the street, reinforcing the image of Gowanus as a productive, predominantly industrial district that is friendly and welcoming.



Example Street Hierarchy



as the opportunity for waterfront recreation increases, pedestrians will become a larger presence on the streets of the study area.

Opportunities for improvement (urban design analysis)

As the range of activities and uses in Gowanus continues to become more diverse, and as the neighborhood becomes a destination not just for business but also for recreation and environmental restoration, local streets and sidewalks will need to accommodate a wider range of users and travel modes. If industry and truck-dependent business is to remain and thrive in the study area, systems must evolve to integrate pedestrians, cyclists, and motorists into a truck-friendly neighborhood.

One method for achieving this integration could be implementation of a street hierarchy, which uses urban design elements to subtly prioritize different uses on different streets. Streets like 3rd Avenue and 9th Streets, which are major area connectors but also carry transit and have an array of pedestrian friendly businesses, could be designated as shared routes, while streets in the south study area that do not have

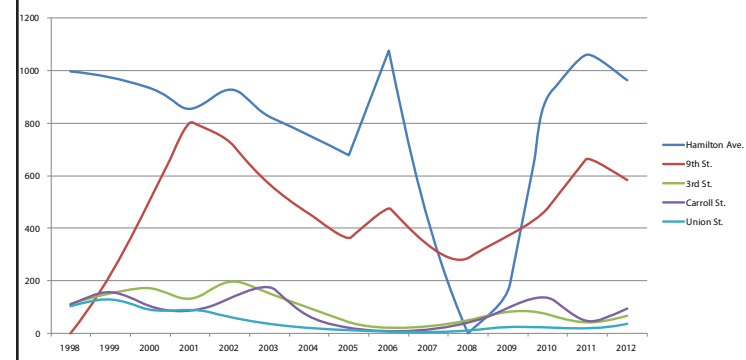
sizable residential populations or many storefronts could prioritize industrial traffic, creating a relatively low-conflict circulation route for trucks. Other streets, such as Baltic, 3rd, Union, and Carroll Streets, could prioritize pedestrians, guiding walkers and cyclists away from truck-heavy areas by creating attractive alternatives through planting, street furniture, materials, or other street design elements. In this way, Gowanus's streets could accommodate a wide range of users with a minimum of conflicts.

Canal Waterway

The canal itself is another transportation route, with another set of potential conflicts, this time between industrial and recreational users. While marine transportation use of the canal has fallen off considerably since its heyday, a handful of businesses still move material up and down the canal by barge, and stakeholders have confirmed that they wish to support this continued use of the canal. As DOT's annual bridge openings data demonstrates (below), the main use of the canal by vessels that require bridge opening (i.e. shipping vessels) occurs

Canal Use 1998-2012

Summary of Vessel Openings 1998 - 2012															
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Hmltn Ave. (K)	996	982	933	832	946	824	757	677	1077	354	0	150	905	1060	965
9th St. (K)	0	192	513	808	733	547	457	360	480	333	287	387	475	670	585
3rd St. (K)	112	157	178	117	212	152	99	43	31	39	49	89	74	27	68
Carroll St. (K)	110	174	102	80	124	186	49	22	28	13	38	91	146	29	95
Union St. (K)	103	144	85	101	62	24	21	11	9	5	10	28	32	4	36
Total G	1321	1649	1811	1938	2077	1733	1383	1113	1625	744	384	745	1632	1790	1749
TOTAL (CITY)	5999	6352	6041	6761	6015	5935	6595	5163	5347	4652	3873	3666	4704	4901	4819



The five bridges along the canal open to allow ships through. The Hamilton Ave. Bridge, which has clearance below of 19' above mean high water, was replaced in 2008. Barges were able to pass beneath without the bridge opening.

Source: NYC DOT 2012 Bridges and Tunnels Annual Condition Report

below the 3rd Street Bridge. This data confirms reports that little marine business activity occurs north of the 4th Street turning basin.⁸

Obstacles to continued use of the canal for shipping include siltation resulting in loss of canal depth, and encroachment of some bulkheads on the width of the canal, particularly along the main bend at the terminus of 5th Street.

Recreational use of the canal has increased markedly over the past decade. Volunteers flock to the canal to participate in remediation work; boaters display their affinity for adventure by taking tours up and down the waterway. The primary access point for recreational users is the 2nd Street boat launch on the western bank of the canal, well north of the last known business users. Contamination is a major factor limiting use of the canal for recreation; any activities that involve direct contact with the water are discouraged.

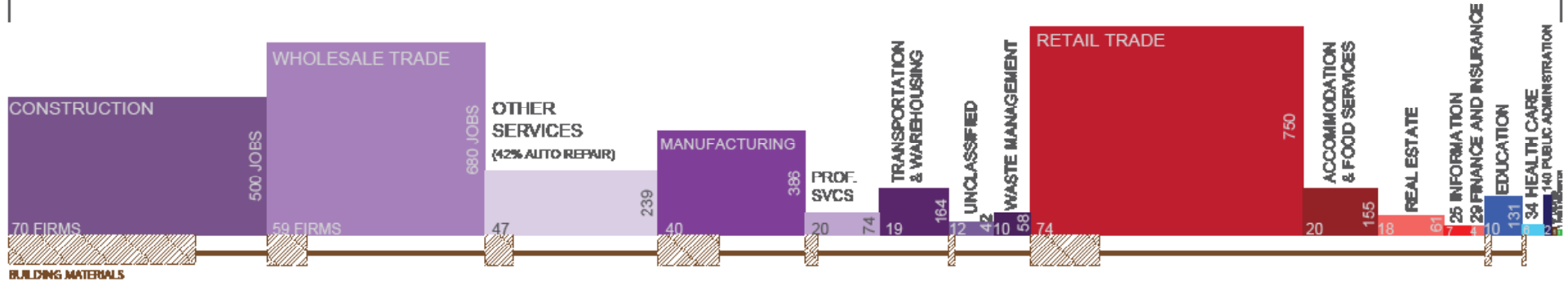
EPA's plans to dredge and remediate the canal will help to facilitate continued use by all parties. The planned remedy involves dredging the canal bottom to a depth that will support continued barge use, reconstructing (and encouraging private property owners to reconstruct) bulkheads as necessary, and capping the bottom of the canal with clean fill that can support healthy ecosystems.⁹ Stakeholders and officials alike hope that the remediated canal will support both business and recreational use; while waterborne business activity is desired, it is not expected to rebound sufficiently to create serious conflicts between the two.

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- 3) NYC DOT parking signs data, viewed at <http://www.nycdot.info>
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- 6) 2013 NYC Bike Map. <http://www.nyc.gov/html/dot/html/bicyclists/bikemaps.shtml>
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- 9) EPA, "Record of Decision: Gowanus Canal Superfund Site," September 2013

Economic & Business Analysis

420 BUSINESSES (AS OF JULY 2012)



The study area's lowered pull-down gates and lack of foot traffic belie the level of activity generated by its businesses. Hundreds of businesses provide thousands of jobs in the study area, and new enterprises are flocking to the neighborhood, hoping to settle and grow. These firms face challenges from physical infrastructure, a stagnant real estate market, and uncertainty about the future, but owners and managers spoke glowingly of a convivial atmosphere and excellent connectivity to suppliers and markets. Many of the industries represented in the study area are primed to grow in coming years, and nascent business clusters are starting to appear. Addressing gaps in the real estate market and clarifying City policies could help promote the future of Gowanus's business community.

Business Profile

The Gowanus BOA study area is a vibrant hub of industrial, manufacturing, and commercial business activity. According to Claritas data, 420 businesses and 3,500 jobs existed in the study area in July 2012, spanning a range of sectors. Primary industries (as identified by North American Industry Classification System (NAICS)) are retail, construction, wholesale trade, and manufacturing, with a cross-sectoral concentration in building materials that reflects the area's history.

While retail is the largest sector by NAICS code, with over 70 businesses and 700 employees, passersby would be unlikely to characterize the

study area as a retail corridor. Big-box stores like Lowe's and Staples, and a handful of boutiques, bars, and cafés, mostly found along 3rd Avenue, are the most visible manifestations of retailing in the area. The majority of businesses classified as retail blend into the industrial character of the area due to the types of products they deal in, or because they have off-site or non-store points of sale. Examples of businesses whose sales activities are largely invisible include: PostScript Brooklyn, a graphic design and printing firm whose retail outlet is on 7th Avenue in Park Slope; New York Art Foundry, a full-service foundry offering workshops and custom fabrication services for artists; and Adams Book Company, a nationwide distributor of textbooks, workbooks, and other reading material for grades K-12. These and other similar operations have a negligible retail presence in the neighborhood. The more visible retail operations in the study area include purveyors of lumber, other building materials, salvaged housewares, car parts (and service), awnings, appliances, and similar products, with a small number of discount and specialty operations mixed in.

Wholesaling, the next largest employer in the study area, supplies 680 jobs at 59 businesses. Area wholesalers handle food, building and construction materials, car parts, electronics, machinery, and assorted products including office supplies, petroleum, and recyclable materials. Recycling activity in Gowanus includes U.S. Recycling, a large-scale processor of cardboard, paper, and plastics that ships

worldwide. Its facility on 6th Street comprises warehouse and yard space, truck access, and old coal storage silos that date to 1915. Recycling and reuse are a recurring theme in Gowanus, with a large-scale junkyard across the canal (outside the study area) and several businesses devoted to reclamation, restoration, and reuse of building materials and home furnishings.

The 70 construction and contracting firms in the study area employ 500 people. Forty percent of the firms are engaged in construction of buildings, while 56% are “specialty trade contractors,” dealing in construction management, trucking, mechanical systems, woodworking, plumbing, electrical contracting, roofing, etc. Four heavy/civil engineering firms also call the study area home.

With 40 firms and 386 jobs, manufacturing is the fourth-largest sector in the study area. Area manufacturers produce everything from chemicals to cell phones, coffee to metal grilles, and neon light tubes to knitwear, in facilities that employ as few as one person to as many as 50.

Old American Can Factory

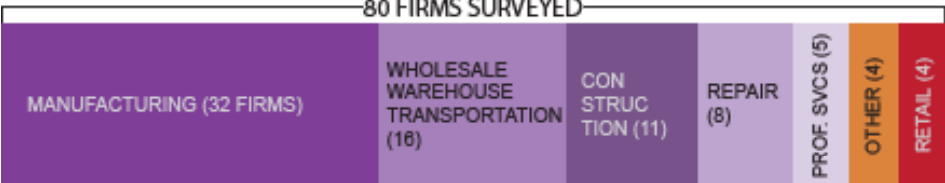


Old American Can Factory, a curated, multi-tenant space.

Gowanus is notable for its cross-sectoral concentration in building materials and trades. Related businesses range from contractors and lumber yards to retailers (Build it Green on 9th Street resells materials salvaged from deconstructed buildings) and social services (Brooklyn Woods, located on 8th Street, provides free workforce training in woodworking), creating a continuum of building-related activity. Coupled with the area’s focus on environmental reclamation and recycling, this positions Gowanus as a natural home for “green building” enterprises that operate at the cross-section of these concerns.

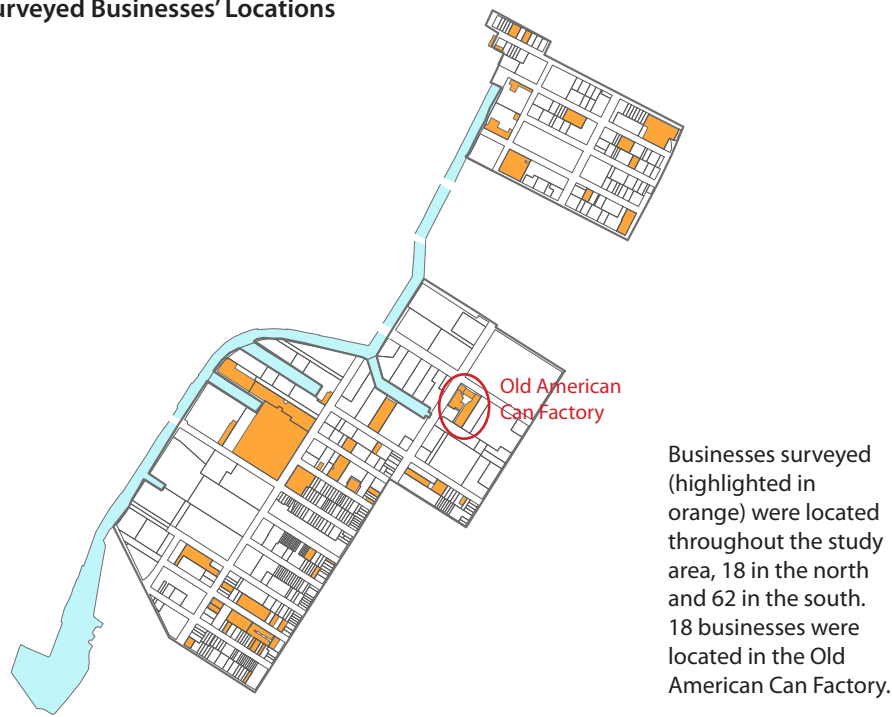
Gowanus increasingly has a reputation as a burgeoning district for small manufacturers, artists, and media businesses. Several graphic design and printing companies call the neighborhood home, along with film companies, group and individual artists’ studios, and designers and producers of textile products, jewelry, all-natural soaps, and more. Many of the smallest businesses find homes in the Old American Can Factory, a multi-tenant building complex at the corner of 3rd Avenue and 3rd Street that offers space to a curated tenant group comprising artists, very small manufacturers, and creative professionals (e.g. architects and designers). The Can Factory provides move-in ready spaces that appeal to businesses that benefit from a collaborative atmosphere. According to the manager of the facility, demand is high for space in the building.

Industrial Business Survey



To better understand the experience of doing business in Gowanus, the BOA team conducted a survey of 80 industrial businesses in the study area. The non-random sample was targeted to create fair representation of the 230 total industrial businesses in the study area, reflecting as closely as possible the range of sectors, geographic locations, and business sizes. The survey was conducted by employees

Surveyed Businesses' Locations



of the Southwest Brooklyn Industrial Development Corporation, which has established relationships with many area businesses. Businesses were surveyed between September and November, 2012.

It is important to note that Hurricane Sandy hit New York on October 29, 2012; the 17 surveys completed after Sandy's impact were limited to the American Can Factory, as many businesses downslope were closed due to severe flooding and utility disruptions. As a result, survey respondents' remarks about flooding and drainage in the study areas were largely unaffected by the storm.

Manufacturing (32 firms, 349 employees), wholesale/warehousing/transportation (16 firms, 409 employees), and construction (11 firms, 228 employees) were the largest sectors among surveyed businesses, accounting for 59 of the 80 total firms. Other sectors represented were repair, professional services, retail, and "other," which included a film equipment company, an exhibit fabricator, a moving company, and a sculpture studio.

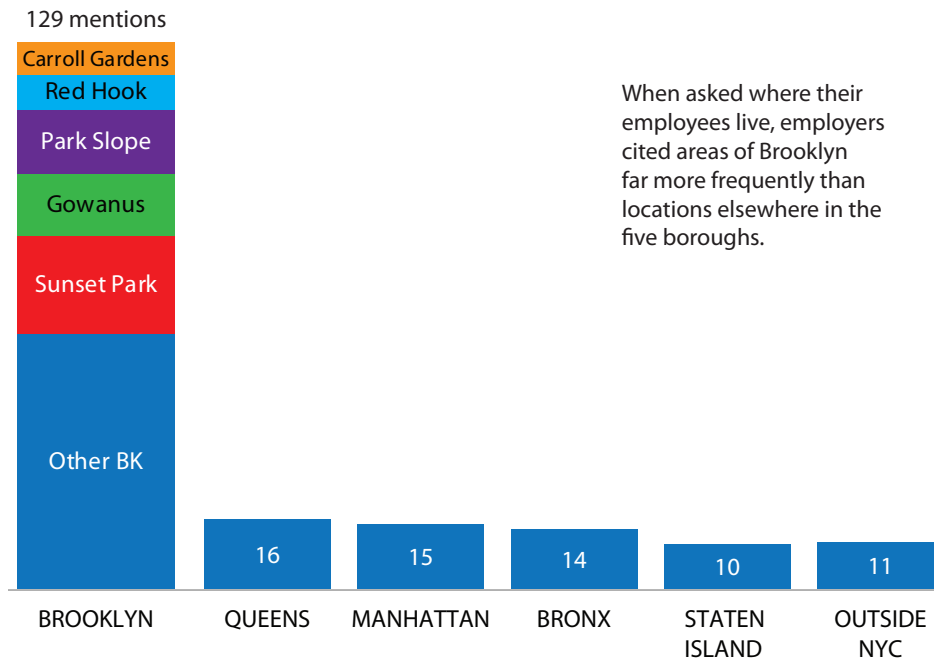
Manufacturing businesses surveyed included four large businesses (two metal fabricators and two food manufacturers) with 45-80 employees, 10 mid-sized businesses with 5-15 employees, and 18 businesses with fewer than five employees, 15 of which are located in the American Can Factory. For the purposes of survey analysis, the BOA team defined a subclass of manufacturers called "artisan manufacturers." These businesses:

- Produce one-of-a-kind, custom products;
- Have limited production runs;
- Have in-house design as well as production capabilities; and
- Tend to have few employees (74% of those surveyed had fewer than five full-time employees; 50% report only one employee).

This category included 21 of the total 32 manufacturing businesses surveyed, including all 15 manufacturing businesses located in the American Can Factory. These businesses produce a range of products, including apparel, ceramics, glass, jewelry, printed material, and skincare items. Average wages, where reported, tend to be high. Manufacturers excluded from this category were larger-scale operations producing food, fabricated metal items, cabinets, and other building materials.

On the whole, the surveyed businesses tended to be small: fewer than half employed more than five full-time workers, and only eight businesses had more than 30 full-time employees. Businesses spanned a wide range of ages, from newly formed in the months prior to the survey to over 100 years old. Businesses also tended to be mobile: 30 of the 80 surveyed businesses (37.5%) reported that they had been at their present location for less than five years: eight started operations in their current location; 12 had moved from elsewhere in the New York metro area; and nine relocated from elsewhere in Gowanus. While most of the recently-located businesses were young, seven had been in business for more than 10 years. This mobility indicates that the study area is appealing as a business location to both newly forming and established businesses, but also reveals a trend for businesses within Gowanus to move around.

Gowanus's Employment Draw



Gowanus's Appeal

The study area appears quite attractive to manufacturers, wholesalers, and construction businesses. Of the 12 surveyed businesses that moved into Gowanus from elsewhere in the NY metro area in the past five years, eight were manufacturers, two were wholesalers, one was a construction company, and one was a retail business dedicated to salvaging and reselling building materials. Of the eight surveyed businesses that started operations in the past five years, three were manufacturers, 3 wholesalers, and one was a construction firm.

Area businesses appear to be doing well financially; among all surveyed businesses, construction and manufacturing firms reported generally positive revenue growth over the past five years. Revenue growth was stronger among new-locators than in the general survey population (with the exception of wholesalers): 60% of businesses who have been operating in the study area for five years or less reported growing revenues, including 100% of new construction

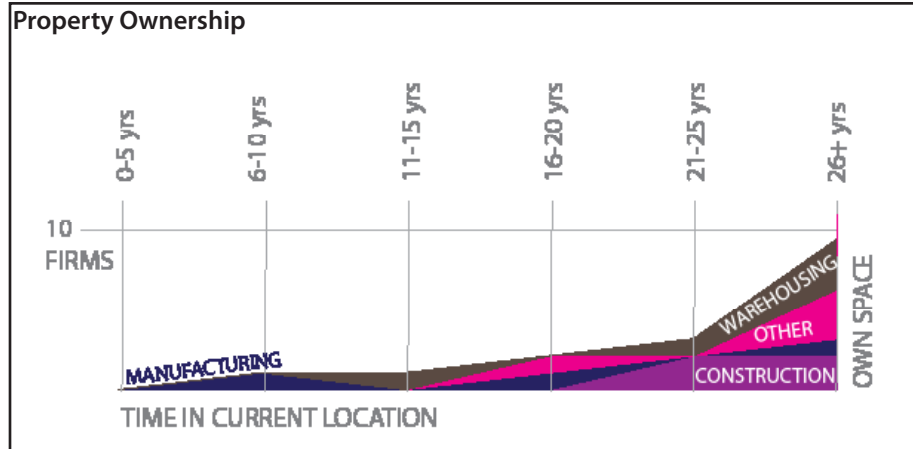
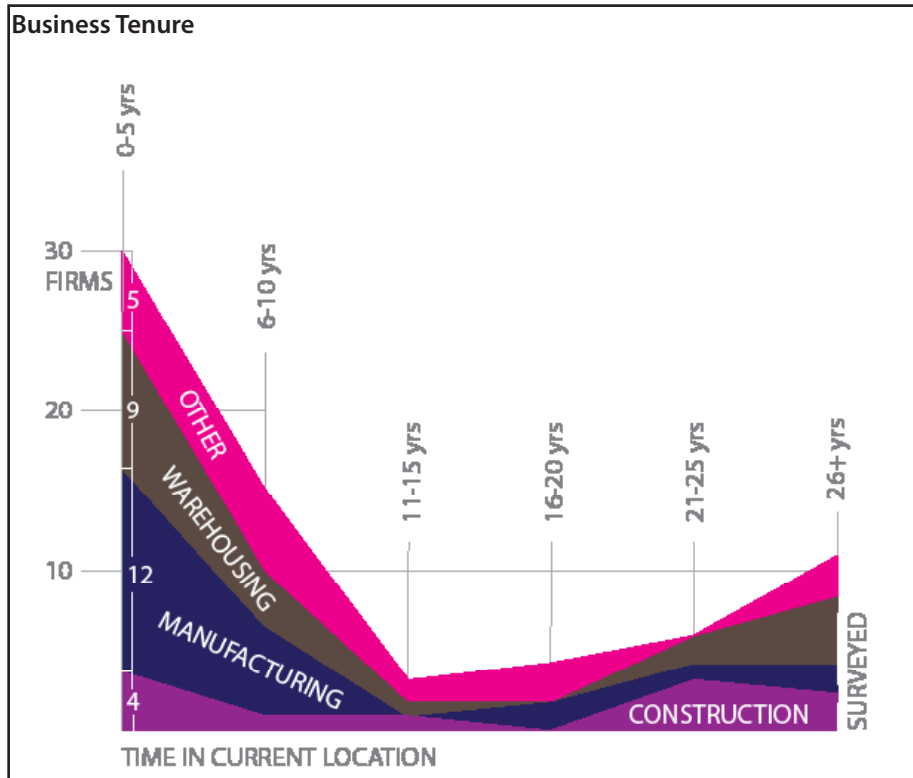
businesses (total 4), 75% of manufacturers (9 of 12), and 38% of wholesalers (3 of 8).

A substantial number of surveyed businesses expect to grow in the next three years: 63% anticipate adding staff, and 36% expect to need more space. Among the new arrivals, those numbers are even greater—88% expect to add staff and 53% expect to add space; fully one third anticipate at least doubling their facility size.

The majority of businesses surveyed had positive opinions of the area, with 66% reporting that they would look for space again in Gowanus if they needed to expand. Gowanus's advantages were largely locational: highway access, proximity to markets, access to and from Manhattan, and convenience to customers and clients (via car, truck, or transit) were all mentioned. Two respondents, a fish market and a marine engine repair company, said that waterway access was important. General comments about benefits of the study area included affordable space and affordable labor. Businesses located in the American Can Factory also remarked on the neighborhood culture and aesthetics, the quality of their spaces, and convenience to their homes. These comments were unique to Can Factory tenants.

Proximity to complementary businesses and a convivial atmosphere in Gowanus were appreciated by the majority of surveyed businesses. The general perception among survey respondents was that Gowanus is a thriving, business-friendly location that provides and encourages business-to-business activity. Manufacturers accounted for 35% of reported business-to-business activity, while 40% came from the building materials cluster (105 businesses spanning construction, wholesaling, retail, manufacturing, repairs, and professional services). Other nascent clusters implied by Claritas data that could benefit from increased concentration and business-to-business activity include food production (41 businesses across wholesale, warehousing, manufacturing, retail, and food services), automotive parts and service (33 businesses spanning service, wholesale, warehousing, transportation, retail, and rental/leasing), and film and media production (27 businesses across a wide range of sectors, including film production, equipment and stage rentals, sound studios, graphic design, and custom printing services).

Surveyed Business Characteristics



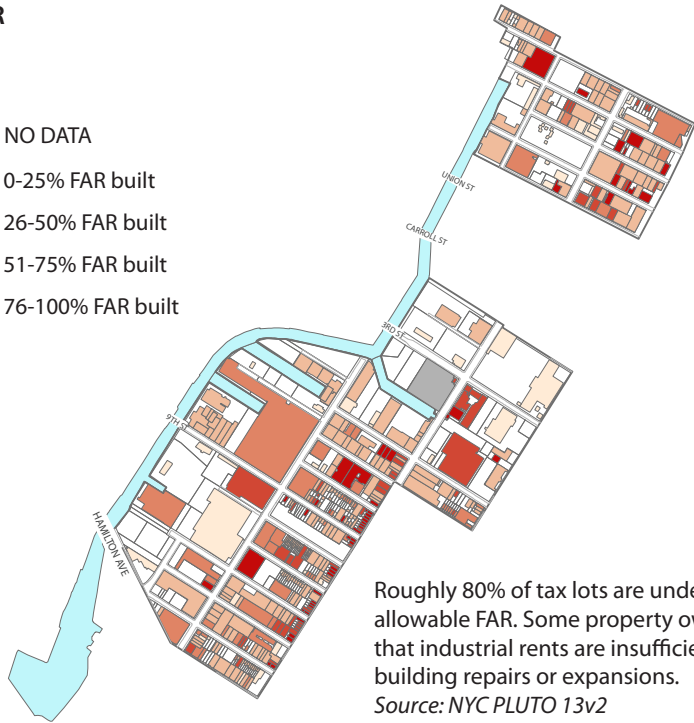
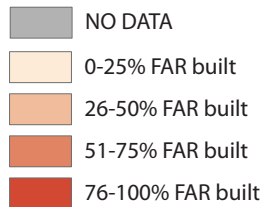
Real Estate Instability

Instability in the real estate market is a significant obstacle to businesses in Gowanus. Despite their enthusiasm for the neighborhood and the business community, few firms have much control over their ability to stay in the area. Space ownership among surveyed businesses was rare: only 20% of businesses own their space, while 80% rent. Most of the spaces are relatively small; 41% of businesses operate in 5,000sf or less, with the smallest occupied space only 300sf. Size correlates somewhat with ownership; while a handful of rental spaces are large (largest 62,000sf), the average size among rentals is 7,350sf, while average size among owner-occupied properties is nearly 20,000sf. Manufacturing businesses are most likely to rent (81%), while construction businesses are most likely to own (36%), and have the longest median tenure in their locations (14 years). In general, ownership correlates with longevity; the majority of business-owned locations are held by businesses that have operated in their current space for more than 25 years.

While correlation of longevity with property ownership may be unsurprising, the overall low ownership rate points to a significant difficulty that study area businesses face in securing long-term space. Analysis of business tenure among the survey sample corroborates this issue: the peak of businesses who have been in the study area for five years or less drops off sharply, with significant underrepresentation of businesses resident in their locations between 11-20 years. Above 20 years, the number of businesses rises again, with firms that bought their properties years ago and have been able to grow in place.

Among renters willing to supply information (total 55), 56% reported having lease terms of less than five years. Two-thirds of those are leases for only one year. Only seven businesses reported lease terms longer than five years (and only four are for more than 10 years). The inability of businesses to secure long-term leases hampers their willingness and ability to invest in their spaces. On average, the survey revealed that businesses that own their spaces invested \$10 more per square foot in capital and space improvements than businesses that lease space. Inability to secure long-term space may also limit the types of firms willing and able to locate in Gowanus; businesses that rely

Built FAR



Roughly 80% of tax lots are underbuilt to allowable FAR. Some property owners say that industrial rents are insufficient to finance building repairs or expansions.
Source: NYC PLUTO 13v2

on mobile inventory (e.g. wholesale and warehousing) may have an easier time finding suitable locations than businesses that need more permanently equipped spaces (e.g. construction).

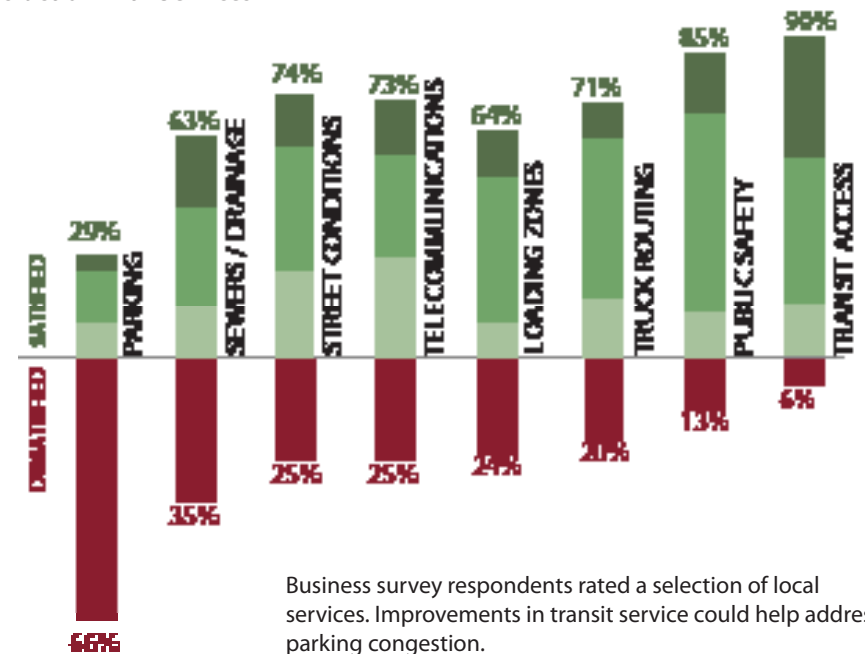
Businesses on both sides of the growth spectrum—those who anticipate needing to expand, and those who find that they need to reduce their footprint—expressed concern about finding appropriate space. Real estate brokers confirmed a high instance of mismatch between desired and available spaces; in addition, they pointed to instances where potential buyers were priced out of building purchases. The brokers also identified a mismatch between landlords' desired rents and typical industrial rents paid in the area.

Businesses' difficulty locating appropriate space seems to have little to do with inadequate supply of space. Although definitive counts are impossible to come by, there are a number of significantly underused spaces in the study area, as well as a preponderance of older structures that are underbuilt to allowable FAR, and unimproved in ways that could attract long-term tenants. Two trends may influence property

owners' ability and willingness to improve their buildings. Owners who are committed to supporting industry in Gowanus nonetheless find that low industrial rents coupled with an allowed FAR of 2.0 make it impossible to recoup the investments needed to improve structures. Some owners suggested that increasing the allowed FAR would enable them to build commercial office space above their industrial spaces and charge higher rents that could pay for their investments. The second factor limiting property investment seems to be the perception that Gowanus is changing, and will soon allow residential development. This belief encourages owners, even in the study area (which was never considered for rezoning), to hold onto properties in hopes of making a profit through conversion, and makes the prospects of upgrading spaces for business tenants or offering long-term leases unappealing.

With the exception of the businesses in the Can Factory, surveyed businesses have few unique ties to Gowanus, and are largely flexible enough to go elsewhere. Most rely on a non-local workforce drawn primarily from greater Brooklyn but also from Manhattan, Staten

Satisfaction with Services





Drainage was identified as an issue in the area even before Hurricane Sandy. Here, significant ponding at the corner of 6th Street and 3rd Avenue in the absence of rain.

Island, Queens, and the Bronx. A significant number of the businesses have national and international sales, and are not exclusively relying on local markets. If unable to find the space they need in Gowanus, despite affection for the neighborhood, most businesses say they would move to other parts of Brooklyn.

Gowanus Day-to-Day

While its location is convenient to highways and markets, Gowanus's physical environment is not always seen as conducive to business. Survey respondents were asked to evaluate a range of city services and local conditions; the results reveal areas of weakness and strength.

Parking and drainage were the most problematic issues for the majority of respondents, and were the only things the tenants of the American Can Factory rated negatively. Anecdotal responses indicated difficulty of truck access, dissatisfaction with traffic, and a general feeling that nearby residential neighborhoods were competing for the limited available parking.

Although transit access received very positive ratings, several businesses commented that their locations could be inaccessible and difficult for clients to find. A location on a street that dead-ends at the canal was troublesome for one business in the northern part of the study area.

Lack of reliable telecommunications service was an impediment for 25% of businesses surveyed, many of whom described routinely losing internet and phone service during even small rain events. High-speed internet is particularly hard to come by: area businesses do not have access to cable service, and fiber-optic is available only in a limited area in the northern part of the study area.

Despite positive survey reviews of Gowanus's business community, which some referred to as "tight-knit," when asked to name types of businesses they desired to see locate in Gowanus, several businesses named services already present in the area. Others noted a need for more networking events, and one expressed desire for a database of businesses. In general respondents seemed to encounter difficulty connecting with other businesses to the degree they desired.

Lack of nearby amenities like food and entertainment bothered some respondents, even as a recent increase in the number of these businesses bothered others. Some wished for a more local customer base; many were bothered by local pollution and smells emanating from the canal.

By far the largest set of survey comments referred to increasingly unaffordable rents and concerns about neighborhood change. Some of those comments were:

- "Still affordable, good place to do business but getting harder. City should do more—offer more incentives to business and less to residential."
- "Neighborhood will not be industrial in future"
- "Want to maintain area as industrial, worried about residential real estate pushing manufacturing out"



On 7th Street between 2nd and 3rd Avenues, a typical industrial structure was recently turned into a 2-story Turkish restaurant with courtyard. Industrial business owners worry about being priced out of their locations by commercial and other more lucrative tenants.

- “Too residential, making it too residential friendly to conduct industrial business”
- “I love it and I hope Whole Foods doesn’t price us out.”

Real Estate Market

To better understand real estate conditions and pressures affecting the study area, the BOA team evaluated several available sources of data. Because the study area is not co-terminous with any extant data product, the data reflect overall trends in the local area, rather than information specific to the study area.

According to data from CoStar, a proprietary collector of commercial real estate information that collects data by ZIP code, the industrial vacancy rate at the end of 2012 in ZIP code 11215 (which includes Gowanus, as well as the largely residential Park Slope and Windsor Terrace neighborhoods) was less than 5%. Industrial rents and sales prices in the area are significantly lower than rents or sales prices for commercial, retail, or residential space: industrial rents in Gowanus hover around \$12/sf, where office space in nearby neighborhoods rents for \$18-\$40/sf, and retail rents can rise to \$87.50/sf. Although Gowanus is unlikely to command the highest rents, the difference between industrial and non-industrial rents can still persuade landlords to court non-industrial tenants.

Sales prices reflect similar differences. Averaged sales prices from five ZIP codes surrounding Gowanus show office space selling for \$100/sf more than industrial space, while retail generally sells at more than twice as much per square foot (with the exception of an anomalous year in 2010).

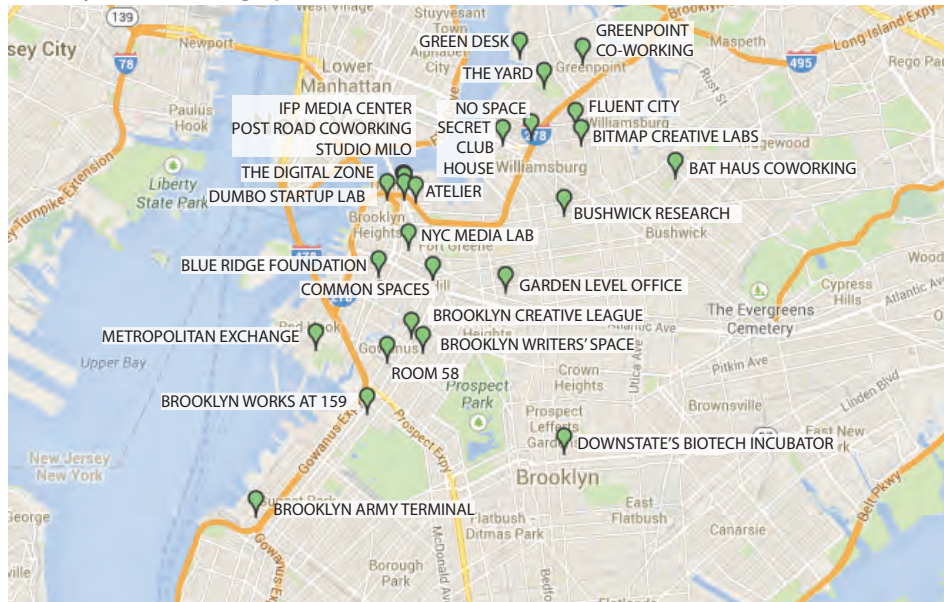
Sales Prices per Square Foot

Column1	2007	2008	2009	2010	2011	2012	% Ch, 07-12
Industrial	\$168.25	\$168.74	\$193.67	\$647.56	N/A	\$169.64	0.80%
Office	\$285.85	\$265.56	N/A	\$184.88	\$201.05	\$295.86	3.50%
Retail	\$453.92	\$557.24	N/A	\$172.11	\$231.50	\$418.85	-7.70%

Source: RCA

Residential sales prices are much higher per square foot than any other class of space. According to StreetEasy, average sales price in 2012 for condo space in Gowanus was \$695/sf. In the nearby neighborhoods of

Brooklyn Co-Working Spaces



In January 2014, [Technical.ly/Brooklyn](http://technical.ly/Brooklyn) identified 30 co-working facilities in the borough, specializing in everything from writing space to biotech.

Source: <http://technical.ly/brooklyn/2014/01/06/brooklyn-coworking/>

Cobble Hill and Park Slope, average sales prices for condo spaces were as high as \$830/sf. Although residential conversion is currently illegal throughout the study area, locals are not wrong when they say that pressure is mounting for conversion. Local commercial real estate brokers reported multiple inquiries per month from people looking to purchase industrial properties in order to convert them to live/work or residential spaces. In the meantime, survey respondents spoke of feeling pressure from an influx of commercial businesses—they, too, are not wrong to worry that commercial uses could price them out.

Real Estate Opportunity: Co-Working and Shared Space

One promising trend in Brooklyn is co-working or shared studio space. These developments provide a range of flexible spaces for small start-up companies, individual entrepreneurs, artisan manufacturers, freelance professionals, artists, and others who benefit from small or shared spaces. Housing many enterprises under a single roof creates security for owners, who may charge a range of rents, offers opportunities for businesses to relocate relatively easily as their needs

change, and provides a built-in support network among tenants. Through an informal survey, the BOA team identified 34 locations in Brooklyn that currently offer this kind of space, ranging from 1,500 to more than 100,000 square feet. Managers of these buildings say that demand for space is consistently high, and at curated buildings like the American Can Factory, rents per square foot are higher than average for industrial space.

Industry Outlooks

Despite mounting real estate pressures, many area stakeholders are interested in maintaining the study area as a center of industrial activity. Among industries already represented in the study area, construction, small-scale artisanal and food manufacturing, and film and sound recording are expected to thrive in coming years, while wholesaling is expected to remain stable. Brooklyn as a whole has a tremendous appetite for retail, and although the study area is not a typical retail center, it does have considerable representation in non-store retailing and retailers of building materials, both sectors that have higher-than-average wages among retailers.

Construction

Construction and contracting are a strong presence in the study area and have a generally positive outlook for the near term. In the borough, construction and contracting accounted for nearly 5% of private-sector employment and over 8% of self-employment in 2010. Although the recession of 2008 caused a decline in the industry, continued economic and population growth in the metro area, a recovering housing market, and post-Sandy reconstruction point to plenty of work in the next decade. As noted earlier, construction businesses tend to have the longest tenures in Gowanus. As the industry continues to shift to accommodate increased interest in green products and practices, Gowanus is poised to become a home for green building specialists and suppliers.

Construction businesses typically require open space for equipment and materials storage; although the study area is relatively low on open space, there are several sites that could accommodate this need.

Manufacturing

Although Brooklyn's manufacturing sector has been in decline for several decades, and the reasons for this decline (including relatively high costs of land, labor, and energy, and the scarcity of modern industrial spaces) are likely to persist, specific sectors and types of manufacturing businesses still have optimistic outlooks. The Boston Consulting Group has identified seven sectors where U.S. manufacturers are expected to be increasingly competitive in the coming years, including: machinery, transportation equipment, appliances and electrical equipment, fabricated metals, plastic and rubber parts, computers and electronic equipment, and furniture. Other sectors, such as food production, remain strong. In 2012, private-sector manufacturing employment in Brooklyn increased for the first time in many years; this could indicate that growth in new manufacturing firms is beginning to offset losses elsewhere.

Anecdotal evidence suggests that very small, craft-based manufacturing businesses (similar to those this BOA identifies as



Gowanus manufacturing spans a wide range of products. Clockwise from top left, products of: Architectural Grille, Waffles and Dinges, Soapwalla, and Makeville.

artisan manufacturers) are thriving in Brooklyn. While there are many examples of such businesses, little data exists to characterize this trend. The Quarterly Census of Employment and Wages (QCEW) for Kings County showed a decline in the average number of employees per manufacturing firm from 16.8 to 11.2 between 2000 and 2011, which could indicate either a shift toward smaller businesses or overall sector decline. The Census Bureau also shows a significant number of "non-employer businesses" (businesses with no paid employees, e.g. an owner-operated furniture restoration business) in manufacturing, which may reflect these small enterprises.

New and flourishing digital technologies in manufacturing may benefit small businesses that combine design and production under one roof. 3D printers increase the economic viability of manufacturing specialized products in small quantities, and their relatively small footprint (compared to traditional manufacturing equipment) allows them to operate in smaller spaces, including multi-unit buildings. Several New York firms have engaged in selling 3D printers or 3D printing services (including X-Object, based in the Can Factory); as the technology becomes more widely available, it could be harnessed by a range of manufacturers.

Several underused, multi-story buildings in the study area offer potential locations for shared work or flexible sized spaces that could accommodate small manufacturers; the study area's core of single-story space with truck loading capacity also serves manufacturing well, although older spaces may require upgrades before they can serve this sector efficiently.

Wholesale

Wholesalers have a significant presence in Gowanus, where much of the industrial space consists of one-story brick warehouse buildings well-suited to inventory storage and parking space. Wholesaling is the study area's second largest employer, with 688 employees and 60 firms.

According to the QCEW, wholesaling has been a relatively stable source of employment in Brooklyn for the past four years, accounting for roughly 5% of all jobs in the borough. Earnings per worker average about \$45,000 per year.

Retail

Retail employment is booming in Brooklyn, with a 16% increase between 2000 and 2011, and accounting for 13% of all private-sector employment. Growth in food retailing, health and personal care products, general merchandise, and building materials stores is particularly robust. Although not a strong visual presence, retail trade is the study area's largest sector; Lowe's, a large chain supplier of building materials and tools, is the largest single employer, with 150 employees.

Although retail typically has lower wages than other industries, wages at electronics and appliance stores, building materials providers, and non-store retailers (businesses that sell primarily by mail or the internet) equal or exceed wages in some lower-paid manufacturing industries. The Census Bureau shows a 35% increase in non-employer retailers from 2000-2011, which may indicate concomitant growth in non-store retailers. Retail jobs also tend to be low-skilled, and can provide employment opportunities for younger or less well-educated members of the workforce.

As Brooklyn's residential population continues to grow, so will its demand for retail services. While the study area may not be ideal for a traditional retail district, it can be a good location for non-store retailers and purveyors of products that support other local businesses. Retail creates important business-to-business links that can strengthen and stabilize economic clusters.

Transportation

While the study area's transportation sector is relatively small, it benefits from distance from residential properties and proximity to highways. Currently, a taxi depot, charter bus tour company, and ambulance dispatch center find homes in the area, along with trucking companies and related parts and service providers.

Several factors have been contributing to a growth in ground passenger transportation in Brooklyn over the past few years, including an aging population and increasing number of single-family homes. These trends are likely to continue for the next 5-10 years at



Transportation businesses in Gowanus include a taxi depot, an ambulance dispatch center, and a charter bus company.

least. Opportunities for entrepreneurship abound; the ability of the study area to harness these opportunities will depend on real estate concerns – in an area where parking space is limited, storage of fleets of cars may be problematic.

Film and Sound Recording

Film production companies, sound recording studios, and ancillary services have just begun to be a presence in the study area. Growth in the study area may be paralleling growth in Brooklyn, where this small industry has seen a 67% increase in employment in the last decade. Citywide, film and television are a \$7.1 billion industry, and Brooklyn's piece of that pie is likely to keep growing as other production spaces in the city strain to meet demand. Industrial space is well-suited to these enterprises. In addition, the overall success of the film industry creates opportunities for growth in support businesses and related industries; one local business combines nascent growth in this sector with Gowanus's bias toward sustainability and recycling by receiving,



Eastern Effects, which leases space in the study area, rents sound stages and equipment to TV and film productions including FX's "The Americans."

storing, and redistributing/renting used props, wardrobe, and set materials from local film, TV, and theater productions.

Professional and Technical Services

Computer design, law, consulting services, architecture, accountancy, IT services, and engineering are all segments of Brooklyn's professional and technical services industry, which QCEW identifies as having grown by 39% in the past decade. Earnings in this industry are high, ranging from \$49,000 to \$81,000 among private-sector employees. The majority of workers in this sector, however, are self-employed; as of 2010 the Census Bureau identified 32,000 "non-employer" professional and technical services businesses in Brooklyn. This sector is expected to see strong growth in the coming years, with forecasts projecting increases of 1,600 to 8,000 jobs by 2016.

Gowanus's industrial character is already attractive to professional and technical services businesses with a creative bent. Open-plan manufacturing spaces that are easy to subdivide, smaller buildings

with historic industrial character, and proximity to similar businesses all appeal to new and growing firms in this sector. The study area's location also creates easy access to the highly trained workforces of Park Slope, Carroll Gardens, and Downtown Brooklyn. With higher revenues, these businesses are likely to be able to afford the higher rents that landlords wish to command. Architects and other professionals in design fields may be able to connect with nascent economic clusters around building and construction, or film and media.

Health Care

Minimally represented in the study area by a handful of storefront and street-level clinics on 4th Avenue, health care represents the largest sector of Brooklyn's economy, accounting for nearly 23% of private payroll jobs. It is also a sector in transition, moving away from emphasis on hospital-based services and toward home care and ambulatory care. The financial difficulties of several Brooklyn hospitals and State-level efforts to restructure health care delivery in the borough are likely to result in loss of hospitals and hospital-based jobs. Combined with trends in medical practice and cost reductions, this likely means growth in other facilities like ambulatory care clinics, physicians' offices, and community health centers.

The M2 zoning in the southern part of the study area prohibits health care uses, but the northern M1-2 zone and highly accessible C8 zone along 4th Avenue may provide possible locations for additional ambulatory care or laboratory uses.

Strategic Sites

Businesses need buildings, and an economic development plan to attract and retain industry must necessarily be site-specific. As part of this Nomination Study, the BOA team identified 19 properties where strategic investment and redevelopment could have a catalytic effect on economic development in the study area. An initial 18 sites were presented to the stakeholder group for review and prioritization on April 3, 2013. (The 19th site was added based on information uncovered following the April meeting.)

The initial 18 sites were identified as:

- underused or vacant properties;
- properties of significant size;
- advantageous locations;
- building or property types suited to attracting industry; or
- properties whose owners or occupants evinced interest in the BOA or in redevelopment.

Based on stakeholders' input, outreach to property owners, and further research, the team winnowed the list to five strategic sites: two sites where projects in line with the BOA goals are currently in development, and three target sites with the potential to fill identified real estate gaps in the study area and support significant job creation.

19 Potential Sites

Site 1: R.G. Dun Building, 255 Butler Street

The R.G. Dun building is a four-story, 99,500sf building built in 1914 that has the potential to house multiple industrial (or other) tenants in a shared facility. The owner has had two development proposals (for housing and for a school) rejected in the past decade, and may be amenable to alternate development plans. The building was formerly used to manufacture plastics and chemicals. Since being selected as a strategic site, this property was leased for development. FCB6 and SoBro are pursuing any opportunity to influence the development of the site, which is rumored to be slated for a hotel.



- | | |
|--|--|
| 1) RG Dun Building, 255 Butler St. | 11) 9th St. South Cluster, 144-150 9th St. |
| 2) Con Edison North, 223 Nevins St. | 12) 9th St/2nd Ave, 128 9th St. |
| 3) Manifold Supplies, 269 Douglass St. | 13) Under the Tracks Playground, 12th St. |
| 4) Fulton MGP sites, Sackett/Degraw/Nevins | 14) Lowe's Frontage, 34-70 9th St. |
| 5) BRT Power House, 322 3rd Ave. | 15) DSNY BK6 Garage, 129 2nd Ave. |
| 6) Verizon lots, 201-225 3rd St. | 16) Kentile Building, 58 2nd Ave. |
| 7) Con Edison 3rd Ave Lot (partial), 323 3rd St. | 17) Roulston Grocery Complex, 124 9th St. |
| 8) Coignet Stone Building, 360 3rd Ave. | 18) Quality Woodworking, 260 Butler St. |
| 9) DSNY/GCC Salt Lot, 2 2nd Ave. | 19) Blue Chip Coffee, 605-615 Sackett St. |
| 10) 9th St. North Cluster, 153-157 9th St. | |

Strategic Sites

Site #	Site Name	Publicly Owned	Vacant/Underused	History of Contaminating Use	Owner or business interest	Location / Local significance / visibility	Size	Development / Industrial Job Potential	Public Use Potential	Historic Value	Description
1	RG Dun Building		●	●			●	●			Multi-story historic building with potential to house multi-tenant industry. Owner has been looking for development options.
2	Con Ed North		●	●				●			45,000sf vacant lot owned by Con Edison
3	Manifold Supplies Building		●		●		●				Vacant 4-story, 3 building complex. Owner was looking to demolish and redevelop.
4	Fulton MGP Sites		●	●					●		Five tax lots on the former Fulton MGP State Superfund site. Varying uses.
5	BRT Power Station		●	●		●	●	●	●	●	5-story historic energy generating facility surrounded by open space.
6	Verizon Sites		●	●		●	●	●			2 lots along 3rd Street; currently used for parking.
7	Con Ed 3rd Avenue Lot (Partial)		●	●		●					Approx. 36,000sf vacant graveled portion of lot owned by Con Ed; lightly used for parking.
8	Coignet Stone Building		●			●				●	NYC landmark building at the corner of 3rd Street and 3rd Avenue.
9	Salt Lot	●	●	●	●				●		City-owned lot used for salt storage; co-operated by GCC.
10	9th Street North Cluster		●								Several vacant lots on 9th Street, used for parking.
11	9th Street South Cluster		●								Several vacant lots on 9th Street, used for parking.
12	9th Street/2nd Ave		●								Vacant lot at 9th Street & 2nd Avenue.
13	Under the Tracks	●	●						●		Block-long space below Culver Viaduct between 3rd and 4th Avenues; former playground.
14	Lowe's Edge Lots			●		●			●		2 lots below the Culver Viaduct on 9th Street. Vertical room for development is limited.
15	DSNY BK6 Garage	●		●			●	●	●		Parking and operations garage for DSNY's District 6 operations.
16	Kentile Building			●		●	●			●	370,000sf industrial and warehouse building on the canal.
17	Roulston Grocery Complex			●		●	●	●		●	Multi-story, multi-tenant, 5-building complex at 2nd Avenue/9th Street.
18	Quality Woodworking		●		●			●			5 lots with industrial buildings; owner indicated need to sublet or subdivide.
19	Blue Chip Coffee	●	●					●			2 warehouses on Sackett Street held by US Customs for role in drug trafficking. Will be auctioned eventually.

Site 2: Con Edison North, 223 Nevins Street

Across Nevins Street from the R.G. Dun Building, Con Edison maintains a 45,000sf, vacant, gravel-covered lot. Previous uses on the property include a garage, a laboratory, a paper product manufacturer, and a mattress factory. The three story building on the site was demolished in 2009. Con Edison may be holding the property for future use as an electrical substation. Stakeholders valued this location for its proximity to the R.G. Dun Building, and for its potential to house temporary uses such as markets. In conversation, Con Edison has expressed reluctance to allow any public use on the site. FCB6 would like to see a temporary, educational demonstration project of green energy generation use on the site.

Site 3: Manifold Supply Building, 269 Douglass Street

269 Douglass Street is a complex of five multi-story buildings whose zoning lots were recently agglomerated by the owner in hopes of demolishing the complex and building a charter school. This plan fell through when studio tenants in two of the buildings attempted to get the buildings declared an Interim Multiple Dwelling; this appeal was denied, and the owner is believed to be seeking alternate opportunities. The site has a history of general manufacturing including screen printing, but no major suspected contaminants. The condition of the buildings is unknown, but the site has potential either as a restored multi-tenant industrial facility or for demolition and new construction.

Site 4: Fulton MGP Sites (five lots), 270 Nevins Street, 537-563 Sackett Street, and 560 Degraw Street

The five sites (not including Thomas Greene Park) that underlie the Fulton MGP State Superfund Site include a used car dealership, a junkyard, a mostly vacant lot, a well-maintained warehouse, and an industrial building alongside the canal. As parts of the former Fulton Manufactured Gas Plant, these are State Superfund sites which must be remediated. The cleanup, funded by National Grid, will most likely occur in a piecemeal fashion; as sites are demolished by their owners, the State will remediate. In their current state, built sites are available for occupation and use without remediation; building modifications

Site 1: R.G. Dun Building



Site 2: Con Edison North



Site 3: Manifold Supply Co. Building



Site 4: Fulton MGP Sites



that involve moving ground will trigger cleanup. This could create an opportunity for a patient purchaser seeking a large site for new construction to purchase multiple properties, demolish the structures, allow the state to remediate, and then start fresh.

Site 5: BRT Power House, 322 3rd Avenue

The Power House, locally known as the Batcave, is a five-story building once used by the Brooklyn Rapid Transit company for power generation. The structure has been vacant for decades, and is surrounded by significant open space along the canal. Prior to the 2010 Superfund declaration, the site was slated to become a new mixed-income housing development with hundreds of units, but those plans were eventually scrapped. The site was purchased in 2012 and is being remediated and redeveloped as a publicly-accessible arts and cultural center.

Site 6: Verizon Lots, 201-225 3rd Street

Verizon leases two paved lots that occupy the north-side street frontage of 3rd Street between 3rd Avenue and the canal. Corrugated metal equipment storage sheds occupy part of the lots, the rest of which are used for storage. Verizon recently consolidated its operations in the area, selling off a larger facility to the north, which may result in more intensive use on these sites. The location of the sites, directly opposite the new Whole Foods on an increasingly high-traffic route over the canal, make them a key opportunity for redevelopment. The sites were formerly used for coal storage by the Brooklyn Rapid Transit company.

Site 7: Con Edison 3rd Ave Lot (partial), 323 3rd Avenue

Con Edison's holdings on the block bounded by 1st Street, 4th Avenue, 3rd Street, and 3rd Avenue include office spaces and areas for parking and equipment storage. Roughly 36,000sf of the block, diagonally across 3rd Avenue from the new Whole Foods, is fenced off and covered with gravel. This area stood empty for more than a year before Con Edison recently started using it for truck parking.

Site 8: Coignet Stone Company Building

An NYC Landmark, the Coignet Stone Building is a two-story structure

Site 5: BRT Power House



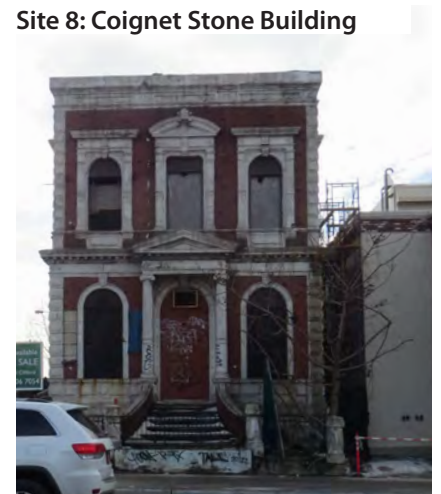
Site 6: Verizon Lots



Site 7: Con Edison South



Site 8: Coignet Stone Building



Site 9: Salt Lot



at the corner of 3rd Street and 3rd Avenue, and was the first concrete building to be built in the city. The structure originally served as the offices of the Brooklyn Improvement Company, which developed much of residential Park Slope and excavated several of the canal's turning basins. While the building used to dominate the "big sky" area at this intersection, it is now mostly surrounded by Whole Foods, which is committed to restoring the structure. The building has iconic value to local residents and is in an excellent location for foot traffic.

Site 10: 9th Street North Cluster



Site 9: DSNY/GCC Salt Lot, 2 2nd Avenue

Just west of the northern terminus of 2nd Avenue is a triangular parcel of land where the Department of Sanitation stores road salt. DSNY has an executed MOU with the Gowanus Canal Conservancy to operate a community composting facility on the site. The GCC's long-term plans, which have received considerable community support and financial backing, include expanding the site to create a publicly-accessible waterfront park.

Site 11: 9th Street South Cluster



Site 10: 9th Street North Cluster, 153-157 9th Street

These three fenced and vacant lots on the north side of 9th street may be used informally for parking. A single owner controls the lots; there are no plans for development.

Site 11: 9th Street South Cluster, 144-150 9th Street

These five vacant lots on the south side of 9th Street are controlled by two owners. Three lots are paved and used as a licensed parking lot; two lots have grass cover and show signs of informal parking use. There are no known plans for these properties.

Site 12: 9th St/2nd Ave



Site 13: Under the Tracks Playground



Site 12: 9th Street/2nd Ave, 128 9th Street

This is a single vacant lot at the corner of 9th Street and 2nd Avenue. Although small, the site has an excellent location. There is no evidence of contamination at the site.

Site 13: Under the Tracks Playground, 12th Street

The block-long area on 10th Street beneath the Culver Viaduct between 2nd and 3rd Avenues was used as a public playground until the deterioration of the viaduct's facade made it unsafe. The

area was fenced off during the structure's restoration; as repairs near completion, the fate of this parcel is unknown. Stakeholders were interested in seeing the land returned to public use.

Site 14: Lowe's Frontage, 34-70 9th Street

Two lots occupy a narrow strip of land between the Lowe's parking lot and 9th Street. These sites, located directly beneath the Culver Viaduct, have severely constrained air space and somewhat marginal current uses as storage and an open-air antiques market. Stakeholders wondered if the sites could be made more publicly accessible. The sites are likely contaminated due to proximity to the (partially remediated) Metropolitan MGP site.

Site 15: DSNY's BK6 Garage, 129 2nd Avenue

The through-block lot along 2nd Avenue between 11th and 12th Streets houses one of two sanitation garage facilities in the study areas. These facilities contribute to parking pressures as trucks take up curb space. Local residents would prefer to see the BK2 sanitation garage relocated to Community District 2, and the BK6 operations moved to the existing BK2 garage (at 2nd Avenue and 15th Street), which would allow for redevelopment of the BK6 site; however, DSNY has been unable to find a suitable location in Community District 2.

Site 16: Kentile Floors Building, 58 2nd Avenue

The largest manufacturing building in the study area, the two-story Kentile building houses multiple warehouse, a film production company, a screen printer, and more. The building's historic sign is a neighborhood icon, and with a large footprint and a highly visible location, the building is a local anchor. The older building does not withstand flooding well, however, and many occupants suffered inventory losses during Hurricane Sandy. Stakeholders were very interested in this site due to its location, size, and opportunity for job creation.

Site 17: Roulston Grocery Complex, 124 9th Street

This complex of five multi-story, multi-tenant buildings was constructed in 1910 as a grocery warehouse. Today the building seems well-used for artists' and other studio space. Stakeholders

Site 14: Lowe's Frontage



Site 15: DSNY BK6 Garage



Site 16: Kentile Floors Building



Site 17: Roulston Grocery Complex



Site 18: Quality Woodworking



Site 19: Blue Chip Coffee



found the property's size, location, and proximity to the Kentile building compelling.

Site 18: Quality Woodworking, 260 Butler Street and 255 Douglass Street

Quality Woodworking occupies five buildings in the north study area. Due to business difficulties, the owner is looking to reduce his footprint and sublet the extra square footage.

Site 19: Blue Chip Coffee, 605-615 Sackett Street

These two adjoining, vacant warehouse spaces have been held by US Customs since 1992 for their involvement in a drug trafficking operation. When investigations into criminal activity on the site are complete, Customs will dispose of the sites through public auction.

Selection Factors

At the April workshop, stakeholders evaluated the list of strategic sites and the team's criteria for including them, before identifying their own top choices. Stakeholders' selections centered around three main factors:

- **Size and Location:**
Stakeholders saw more potential for catalytic development in sites that were larger, located at key intersections or along significant east-west thoroughfares, and were clustered near other potential development sites;
- **Potential for Industrial Development and Job Creation:**
Buildings in good condition, that could be put to work generating jobs quickly, were desirable for stakeholders; and
- **Potential for Public Access, Programming, and Open Space:**
Sites with the potential for public use were also prized.

The BOA team analyzed the potential sites in light of stakeholder priorities, owner response, and site information to establish a list of five strategic sites for the Gowanus BOA. Two of the five, the Salt Lot and the BRT Powerhouse, are currently in development (or in use) as publicly-accessible cultural and open space amenities. The other three have potential to be significant employment centers and catalysts of continued neighborhood investment.

Cultural & Open Space Sites

BRT Power House

Purchased in 2012, the BRT Power House is an 8,000sf, five-story building shell. Development plans for the site include extensive, privately funded remediation of the land and restoration of the building structure. The site is intended to be a permanent home for the arts, and will likely include studio and gallery space, as well as publicly-accessible gardens. Along the north side of the property, EPA will be excavating the 1st Street turning basin.

Status: Site remediation is expected to begin in the summer of 2014. The development team is inviting public input about future program at their website, <http://www.powerhouseworkshop.org>. The project is expected to be complete and the building open in 2016-2017.

DSNY Salt Lot

The GCC envisions the Salt Lot as the centerpiece in a continuous waterfront park along the banks of the canal. The 30-year plan for the Salt Lot expands the site's current use as a road salt storage and community composting facility, while adding native plant gardens, a community nursery, an education and volunteer center, a boat launch, and expansion of the street-end and canal-edge gardens currently being built at the site. More information about the GCC's plans can be found in Appendix E.

Status: The GCC has a signed MOU with DSNY confirming joint management of the site. Expansion of the compost facility received \$296,000 in public funds in 2013; \$165,000 was awarded by community vote in City Councilman Brad Lander's participatory budgeting process, and an additional \$131,000 was contributed by City Councilman Stephen Levin and former City Councilwoman Sara Gonzalez.

Industrial Development & Job Creation Sites

The three remaining strategic sites were chosen for their potential to address gaps in current real estate offerings. The sites are large and well-located, and appear able to support a diverse range of real estate

Site 5: BRT Power House



Volunteers working at the Salt Lot



solutions. The owners of the properties, while not uniformly interested in the BOA, have evinced interest in redevelopment possibilities.

Information about real estate gaps came from business surveys; interviews with businesses, brokers, and local leaders; and from stakeholders at meetings. The strategic sites could supply:

- medium-to-large “step-up” spaces;
- small start-up spaces similar to those offered at the Old American Can Factory;
- incubator spaces or shared workspace that could support emerging industries like food manufacturing; and
- job training facilities to connect public housing residents with employment opportunities among district businesses.

255 Butler Street location



Strategic Site 1: 255 Butler Street

The property at 255 Butler Street has tremendous potential for redevelopment. Located at the northwest corner of Butler and Nevins Streets, the 37,500 square foot lot has frontage on Butler, Nevins, and Baltic Streets. A vacant four-story former printing plant fronts on Butler Street, while a single-story extension fronts on Baltic. The property's location near two public housing campuses and the Boerum Hill neighborhood creates easy access for local workers and consumers, while its size could encompass larger uses like a vocational training center, business incubator, or trade school.

Since being selected as a BOA strategic site, this property has been leased to a developer believed to be interested in creating a hotel at this location. No work has yet begun, and SoBRO and Friends of Brooklyn Community Board 6 are attempting to contact the developer to explore revenue-generating use options that are more suited to economic development of the neighborhood. The multi-tenant space could be ideal for a curated development similar to the Old

255 Butler Street



American Can Factory, with additional incubator space in the one-story extension on the north side.

Site Details

- Lot Area: 37,500sf
- Building Area: 99,500sf
- Year Built: 1914
- Zoning: M1-2
- Allowable FAR: 2.0
- Built FAR : 2.65
- Fireproof Construction
- Lot Frontage: 200'
- Lot Depth: 200'

255 Butler—Rendering



A re-invented 255 Butler Street could bring renewed energy to the northwest corner of the study area. Run on a similar model to the Old American Can Factory, it could provide a mix of work spaces according to any of a number of financial models, whether co-working with shared facilities or smaller spaces for artists, small manufacturers, and professionals. The northern extension may have potential to provide larger industrial space or to house a business incubator or job training facility. Located diagonally from the Wyckoff Houses, the building is an excellent location for job creation.

269 Douglass Street Location



Strategic Site 2: 269 Douglass Street

This L-shaped lot bounded by Douglass Street, 3rd Avenue, and Butler Street houses five vacant, multi-tenant buildings, the largest of which is three stories tall. The condition of the buildings is unknown. There is some open space on the site's north side along Butler Street. Situated immediately north of Thomas Greene Park, west of the Fairfield Inn hotel, and one block north of Degraw Street's nightclub, hotel, and bevy of physical culture facilities, the site is well-positioned for foot traffic. Only one block south of the Wyckoff Houses, it is easily accessible for workers or customers.

Given the size and accessibility of the building, it could have potential for reuse as a job training center or incubator, or as a multi-tenant industrial space. Incubators or job training programs could be linked with NYCHA given the site's proximity to Wyckoff Houses. The Fifth Avenue Committee, a local nonprofit with experience in developing workforce training programs affiliated with NYCHA, has expressed

269 Douglass Street



interest in potentially partnering to do workforce training in this area; this site could be an opportunity for that.

The lot also has potential for demolition and redevelopment as a purpose-built structure to house a larger manufacturer, or a multi-use building that takes advantage of the site's location adjacent to Thomas Greene Playground and new social and cultural uses appearing on Degraw Street and further south on 3rd Avenue. The site has no significant indicators of contamination, and should not require extensive remediation activities.

Site Details

- Lot Area: 10,000sf
- Building Area: Unknown
- Year built: 1931
- Zoning: M1-2
- Allowable FAR: 2.0
- Built FAR : Unknown
- Misc. Warehouse
- Lot Frontage: 100'
- Lot Depth: 100'
- Close to transit

Kentile Building 2nd Ave Frontage



Strategic Site 3: Kentile Building

The Kentile building is the largest industrial space in the study area. The one to two story, 370,000 square foot building is occupied by a variety of businesses. During Hurricane Sandy, the structure was significantly flooded, leading to inventory losses among tenants. Located at the northwest corner of 9th Street and 2nd Avenue, the site has excellent connectivity to transit and vehicular routes, in addition to canal access. The site includes a parking and loading area west of the structure on 9th Street. Because the site falls within the boundary of the Southwest Brooklyn Industrial Business Zone, new tenants could be eligible for a Business Relocation Tax Credit.

The building is subject to significant flooding during storms, and was inundated during Hurricane Sandy, subjecting several warehousing tenants to significant inventory losses. Given that the building is underbuilt to allowable FAR, it may be possible to expand upwards, allowing building mechanicals and even inventory storage to be relocated to a higher level.

Kentile Building Location



Given the size of the building, there may be space within it to house a business incubator that could provide space and institutional supports for small and niche manufacturers (e.g. food manufacturers). The Southwest Brooklyn Industrial Development Corporation has indicated interest in acting as an operating partner on an incubator development.

Site Details:

- Lot Area: 252,575sf
- Building Area: 370,000sf
- Year built: 1952
- Zoning: M2-1
- Allowable FAR: 2.0
- Built FAR : 1.46
- Fireproof Construction
- Lot Frontage: 479'
- Lot Depth: 538'
- Close to transit

Development Opportunities

Within the study area, there are unmet needs that these properties could address through redevelopment or repurposing.

Among young and growing businesses, there is a need for mid-to-large size spaces into which they can grow. While the going rate for space in Gowanus is fairly low (\$12/sf for industrial), the success of the Old American Can Factory shows that there is demand for higher-priced small spaces in a facility that is well-maintained, has an interesting and thoughtfully curated tenant group, and offers reliable utilities. The three target sites are sufficiently large to be able to offer a mix of spaces that can diversify the current supply.

Co-working, shared workspaces, job training facilities, and formal business incubators also have potential to succeed in Gowanus. Geared toward a range of tenant types and income levels, these types of facilities can be intermixed to create revenue-generating buildings that positively contribute to desired economic development and revitalization in the neighborhood. The area is increasingly attractive to entrepreneurs, and is adjacent to a ready workforce to the north.

Next Steps

Turning these targeted strategic sites into catalysts for local investment requires entering into dialogue with the property owners about potential redevelopment options that could both generate revenue and benefit the neighborhood. To that end, Friends of Brooklyn Community Board 6 has been receiving assistance from the South Bronx Overall Economic Development Corporation, who have contracted with the Mayor's Office of Environmental Remediation to provide real estate advisory services for BOA recipients. This work is funded through a separate BOA grant received by OER.

In the first phase of their work, SoBRO met with local institutions, developers, and community groups, and identified two potential local nonprofit partners, SBIDC and the Fifth Avenue Committee (FAC), with strong interest in incubator development. Possible incubators could follow a traditional model, combining shared workspace for arts, industrial, or food manufacturing with a ground-floor store to

generate local interest and subsidize maintenance and operations costs. Alternatively, an incubator could follow more of a workforce development model, engaging local low and moderate income residents and connecting them with opportunities at area businesses.

SoBRO has also identified potential funding sources for incubator development projects, including the Community and Economic Development Grant administered by the Office of Community Services, and a program of tax credits for investors administered by the Empire State Development Corporation.

With these partnership and funding opportunities in mind, SoBRO will facilitate meetings with property owners and FBCB6, to gauge owners' interest in positioning their properties to align with local desires for neighborhood development and the priorities outlined in this study. As a result of these meetings, FBCB6 hopes to find a willing and eager partner in at least one of the property owners.

SoBRO will additionally identify a critical path of next steps to facilitate implementation of the desired projects within the study area. The recommended implementation strategy will include information about potential partnerships, financial and procedural models for establishing the desired results, and recommended consultants, agencies, and funders with whom the property owner or FBCB6 can partner to move the projects forward.

Partnering with Agencies

As a result of their participation on the BOA Steering Committee, the NYC Economic Development Corporation has identified the BOA strategic sites as possible case studies for an upcoming study into strategies for re-activating industrial properties. This pilot study would ask industry professionals to evaluate the effectiveness of a range of options for influencing property development and acquisition, including incentive packages, regulatory changes, marketing approaches, and more. Completion of such a study in the BOA project area would result a tailor-made package of recommendations for improving the local business climate.

Recommendations

While redevelopment of strategic sites could drive considerable reinvestment in the study area, other steps, pursued independently, could also advance stakeholders' goals.

Stakeholders identified three goals for the neighborhood:

- 1. Support and grow industrial business presence in Gowanus**
- 2. Preserve a navigable canal for all users**
- 3. Integrate evolving interests in Gowanus (cultural, environmental, recreational) with existing industrial and business interests to foster a multi-faceted, productive, creative economy**

Together these goals envision a future Gowanus that is inclusive of many types of activity while remaining an active and vibrant economic center that supports a variety of businesses and jobs.

1 SUPPORT AND GROW INDUSTRIAL BUSINESS PRESENCE IN GOWANUS

Gowanus is a historic and enduring center of industrial activity nestled among residential neighborhoods. Since the canal's construction, the neighborhood has provided building materials and supplies for upland communities, as well as jobs for local residents. Today, its role as a center of business activity continues, with new and varied businesses drawn to the neighborhood. The area hosts nearly double the number of manufacturing jobs as can be found in surrounding neighborhoods, and nearly as many construction jobs; nonetheless, overall blue collar employment has declined over the past decade, while service, information, and retail jobs have grown.

The study area's proximity to highways and transit affords businesses convenient access to markets and suppliers; the supportive local business community is seen as a particular asset. There are also challenges: industrial tenants, prospective tenants, and prospective buyers have difficulty finding and securing appropriate space;

business-to-business connections suffer from incomplete knowledge; inadequate infrastructure limits business capacity. Despite these obstacles, businesses say they want to remain in Gowanus, and stakeholders want them to stay. Establishing some basic supports and removing impediments could enable industrial activity to remain and thrive in Gowanus for years to come.

Key Findings:

- The study area is home to significant economic activity, with 420 businesses supplying 3,500 jobs as of July 2012. Economic activity appears to be increasing; the census tracts encompassing the study area saw 83% job growth between 2002 and 2011. The Old American Can Factory, a curated, multi-tenant space that houses small manufacturers, artisans, artists, and professionals, consistently maintains a 0% vacancy rate and a waiting list for openings. A majority of newly-arrived businesses surveyed for this project anticipate growth in the next three years and want to remain in Gowanus if possible.
- Although businesses surveyed largely said they wanted to remain in Gowanus, many firms have difficulty locating step-up space as they grow. Gowanus is rich in small spaces with low costs of entry, but lacks an available supply of mid-size and larger spaces. Lease terms tend to be short, with 56% of reported leases extending for less than five years, and 35% lasting one year or less. 5.2% of the land in the study area is being held unused despite apparent demand for tenancy and ownership opportunities.
- The majority of buildings in the study area are older and unimproved. Lack of improvement is attributed variously to poor return on investment from industrial rents rendering improvements infeasible, and a reluctance among property owners to commit to long-term investments due to persistent local uncertainty about future zoning and land uses. Lack of improvement diminishes appropriateness of buildings for many businesses, and increases risk of floods and fires that can result in catastrophic losses.

- Inadequate infrastructure leads to unacceptable conditions for businesses, including: insufficient high-speed internet access, loss of telecommunications during rain events, local flooding, and chronic perceived parking shortages.
- Although overall employment has increased in the past decade, the percent of the workforce drawn from Gowanus census tracts has declined from 7% to 1%. Gowanus's population, which has lower educational attainment and higher unemployment than neighboring populations, might benefit from workforce training and expanded blue collar employment opportunities.

Recommended strategies to strengthen and grow industrial presence in Gowanus fall into three categories:

1. Improve essential infrastructure (drainage, telecommunications, parking/transit) to facilitate day-to-day business activities;
2. Promote investment in industrial business, in both emerging and traditional sectors; and
3. Promote investment in industrial building stock.

1. Improve essential infrastructure.

Businesses reported difficulty with infrastructure from drainage to telecommunications. Parking complaints seemed centered around lack of parking for workforce access; this could be mitigated through improved transit and multi-modal transportation options.

A. Improve telecommunications service in Gowanus.

Reliable high-speed internet access is increasingly indispensable to businesses, whether used for marketing, receiving orders, or sending and receiving files central to core business operations. Access to high-speed internet is limited in the Gowanus area, and businesses complain of disruptions in all telecommunications services during rain. Improvements to telecommunications are vital to supporting the business community.

Action Items:

- *Organize businesses to approach telecommunications companies en masse to request addition of infrastructure.*
- *Partner with SBIDC to submit to NYCEDC's Fiber Construction RFEI and create opportunities for businesses to access fiber optic infrastructure.*
- *Explore additional opportunities to improve telecommunications infrastructure, including harnessing FCC's newly released unlicensed airwaves.*

B. Support ongoing investments in green infrastructure, sewer capacity expansions, and CSO reductions.

Drainage poses a significant issue for businesses in the study area. Streets flood during rainstorms, basements flood, and during Hurricane Sandy, several blocks were inundated with overflow from the canal, leading to inventory losses, structural damage, and complicated cleanup. Multiple entities, including DEP, EPA, and local groups such as the Gowanus Canal Conservancy are advancing concurrent and complementary strategies to address these issues. Those strategies include: implementation of green infrastructure (e.g. bioswales) to remove street runoff from the sewer system and provide preliminary treatment and screening; a demonstration installation of a local network of "high-level" separated sewers; capacity increases to the Gowanus flushing tunnel; dredging and remediation of the canal; installation of CSO detention tanks; and more. Insofar as these projects will cumulatively result in a net improvement to local drainage, flooding, and water quality issues, they should all be actively supported.

C. Expand transit and alternative transportation infrastructure.

Although surveyed businesses claimed satisfaction with existing transit, they were overwhelmingly dissatisfied with parking availability in Gowanus. Improved transit and alternative transportation access could help to defray parking demand. The MTA plans to restore B37 bus service on a trial basis in early 2014, but as the B37 parallels the 4th Avenue R subway line,

ridership numbers are expected to be low. Efforts are afoot to design a circulator route that replaces both the B37 and B71 routes, connecting to local traffic generators and providing appropriate service. A circulator could expand accessibility of businesses to potential customers and employees, reducing overall parking demand.

Action Items:

- *Work with MTA, DOT, and local partners to explore alternatives for improved bus service in and around Gowanus.*
- *Encourage strategically located bicycle network improvements in Gowanus.*

D. Commission a parking study to uncover the root causes of local parking congestion.

While improving transit access for the study area may help to lessen parking demands, the issue is difficult to address without a better understanding of the root cause. The study area addresses myriad needs in a small space: truck deliveries, loading and unloading, employee parking, customer parking, and residential parking, possibly from upland neighborhoods. A parking study could reveal trends and identify specific solutions (such as modified street parking regulations) that can reduce parking conflicts and congestion.

2. Promote investment in industrial business, in both emerging and traditional sectors.

Businesses are drawn to Gowanus, but surveys found that relatively few businesses were able to grow in place. Implementation of several institutional supports could serve to fill information gaps, increase the visibility of the district, facilitate business investment, and improve business longevity.

A. Connect potential investors with information about incentive programs that support industrial and remedial activity in NYC.

While businesses in Gowanus are investing in their operations and facilities, none of the businesses surveyed had taken

advantage of the extensive array of incentive programs offered by local and state government to offset costs. The considerable resources available range from financial supports to mentorship programs and technical assistance, but relevant information can be difficult and time-consuming to access and interpret. Creating a simple, user-friendly, widely-accessible guide to incentives may be a low-cost, easy first step toward increasing business investment.

Action Items:

- *Create and disseminate a user-friendly, comprehensive guide to incentive programs that support industrial and remedial activity in NYC.*

B. Explore formation of an Industrial Business Improvement District that supports local businesses and arts organizations.

New York City is home to over 60 commercial Business Improvement Districts, the majority of which are devoted to improving the pedestrian environment and “quality of life” for consumers by maintaining cleaner streets and sidewalks, employing safety personnel, and pursuing district branding opportunities such as banners, branded trash cans, tree pit fences, seasonal flowers, etc. BID services are paid for through yearly contributions assessed to each participating property owner.

Industrial Business Improvement Districts were introduced in 2012 as a way to support local industry. The four pilot IBIDs focused less on pedestrian experience and more on facilitating services essential to industrial businesses: cost sharing for infrastructure improvements, coordination of rail shipping of imports and exports, shared waste/recycling disposal, group purchasing of health insurance products, and advocating for district-wide IT network upgrades.

In Gowanus, an IBID could coordinate a range of identified infrastructure improvements, and provide a central point of information, communication, and coordination for the local business and arts communities. The IBID could help relieve real estate tensions by connecting interested tenants with

appropriate space in the district, and would be a natural home for the Gowanus Business Advocate, identified below.

Action Items:

- *Identify and pursue funding sources that can support the costs of IBID formation: feasibility study, outreach, and application. Sources include: discretionary funding grants from City Councilmen Lander and/or Levin; private/foundation community development grants.*

C. Establish a Gowanus Business Advocate to foster business-to-business relationships, explore branding, and act as an information clearinghouse.

Interviews with local businesses, real estate brokers, and stakeholders revealed a series of information gaps that hindered businesses' success. Prospective investors have difficulty finding the spaces they need, despite space availability; businesses want to deal with other local businesses but are unaware of products and services available; businesses are failing to take advantage of available incentive programs. A Gowanus Business Advocate, employed by an appropriate local nonprofit or IBID, could maintain information resources; broker connections among businesses, investors, spaces, and services; target specific firms to fill local business-to-business gaps; coordinate events; and even explore options for "Made in Gowanus" branding or other messages that identify Gowanus as a vibrant and productive center of creative industry. If an IBID is formed in the district, the Gowanus Business Advocate position should be enfolded within it.

Action Items:

- *Identify capacity and resources required to support the Gowanus Business Advocate.*
- *Identify home organization for the Advocate (e.g. the IBID).*

D. Encourage formation of new and small businesses through incubator, training, co-working, or flexible spaces.

With small spaces and low rents, Gowanus is a low-cost-of-entry location for new and small businesses. In many ways, the area

acts as a de facto business incubator, but the spaces available may not be suitable for more capital-intensive start-ups (e.g. food manufacturing), and can quickly be outgrown by young businesses. Developing some true incubators, with equipped spaces and institutional supports, may enable new types of businesses to find their start in Gowanus. Co-working and flexible space facilities could accommodate businesses whose size fluctuates.

Action Items:

- *Reach out to strategic site owners to gauge interest in creating incubator, co-working, or flexible spaces to support local industry.*
- *Engage NYCEDC for guidance in developing incubators.*
- *Reach out to local nonprofits (e.g. SBIDC) to gauge interest in assisting with development / organization / management of incubators or similar facilities.*

E. Engage Gowanus's resident workforce with job training programs targeted to fill positions within the neighborhood.

Although the majority of the study area's workers are drawn from Brooklyn, Census data indicated that very few residents of Gowanus Census tracts are employed in the area. Local job training programs targeted to develop skills needed by resident industries could forge mutually beneficial connections between the area's low-income and unemployed residents and local businesses. Developing a hyper-local workforce could also help reduce parking demand. Brooklyn Workforce Innovations, an affiliate of the Fifth Avenue Committee, currently conducts job training programs throughout the borough, including the Brooklyn Woods program on 8th Street, and could be a valuable partner in creating a targeted job training program for Gowanus.

Action Items:

- *Connect with likely nonprofits (e.g. Brooklyn Workforce Innovations, Fifth Avenue Committee) and local businesses to explore interest in developing job training facilities in the study area.*

3. Promote investment in industrial building stock.

Lack of investment in building stock is one of the biggest impediments to continued use of Gowanus for industrial and manufacturing business. Buildings are old and unimproved; owners are reluctant to invest in improvements to structures; several structures stand vacant.

A. *Stabilize market conditions by clarifying zoning expectations.*

Despite the fact that the BOA study area comprises lots where rezoning was never entertained, and despite the presence of the Southwest Brooklyn IBZ, local uncertainty about the future of zoning and land use in Gowanus remains strong. The participation of hundreds of local residents in City Councilman Brad Lander's *Bridging Gowanus* community visioning process, which focuses on the future of land use and zoning in the neighborhood, confirms this. There is widespread belief among BOA stakeholders that this pervasive uncertainty is contributing to real estate stagnation by inciting owners to retain underperforming, increasingly dilapidated properties and offer only short-term leases. Recent news stories and anecdotes document several property sales that have resulted in properties lying fallow. Insofar as uncertainty and local perceptions have become impediments to the sale, leasing, and improvement of industrial property, clarification about the City's intentions in the area could help to alleviate the problem.

Action Items:

- *Advocate for clarification by Mayoral administration or DCP leadership regarding zoning priorities and the preservation of manufacturing uses in Gowanus.*
- *Support ideas generated through Bridging Gowanus and other community processes that promote and protect manufacturing uses, e.g. inclusionary manufacturing zoning and support for "maker uses."*
- *Advocate for Gowanus to remain a home for permanent jobs, manufacturing/maker uses, and economic development.*

B. *Explore regulatory modifications that can result in further protections for industrial uses.*

Although M-zoning exists to carve out space in the city for as-of-right industrial activity, stakeholders identified two aspects of the current zoning as problematic for businesses: as-of-right hotel construction in M-1 zones, and FAR of 2.0 in both M-1 and M-2 zones.

Hotels and their occupants are seen as having expectations—e.g. for parking space, quiet, and cleanliness—that are perceived to conflict with industrial activity. Guests traveling by foot or by car can conflict with truck loading and unloading and with other on-site activities. In addition, a recent spate of hotel construction has left the area feeling oversaturated. Four of the seven new hotels in Gowanus are located in the study area. As one of the BOA strategic sites (a 99,500sf building suitable for revenue-generating contextual use) is being considered for yet another hotel, the opportunity cost of allowing as-of-right hotels in industrial zones becomes clear.

Among property owners eager to improve their properties for industrial use, the existing allowed FAR of 2.0 is seen as too restrictive to allow structural improvements to their buildings with a favorable return on investment. Because industrial rents in Gowanus are fairly low (\$10-\$12/sf), landlords say they cannot afford to improve structures without creating space for higher-priced office space above their manufacturing facilities.

Participants in the *Bridging Gowanus* process have proposed several alternative methods for improving industrial security within M-zones, ranging from modifications of existing zoning to the creation of entirely new kinds of zones that protect and preserve industrial uses while allowing more lucrative uses above.

The extent to which under-investment in Gowanus can be attributed to insufficient FAR or other regulatory constraints is unclear. The study area as a whole is under-invested, under-built compared to allowable FAR, and surprisingly vacant, given apparent demand for space in this location. Under-used

ACTION ITEMS: GOAL 1

1. Improve essential infrastructure.

- Organize businesses to approach telecommunications companies en masse to request addition of infrastructure.
- Partner with SBIDC to submit to NYCEDC's Fiber Construction RFEI and create opportunities for businesses to access fiber optic infrastructure.
- Explore additional opportunities to improve telecommunications infrastructure, including harnessing FCC's newly released unlicensed airwaves.
- Work with MTA, DOT, and local partners to explore alternatives for improved bus service in and around Gowanus.
- Encourage strategically located bicycle network improvements in Gowanus .

2. Promote investment in industrial business, in both emerging and traditional sectors.

- Create and disseminate a user-friendly, comprehensive guide to incentive programs that support industrial and remedial activity in NYC.
- Identify and pursue funding sources that can support the costs of IBID formation: feasibility study, outreach, and application. Sources include: discretionary funding grants from City Councilmen Lander and/or Levin; private/foundation community development grants.
- Identify capacity and resources required to support the Gowanus Business Advocate.
- Identify home organization for the Advocate (e.g. the IBID).
- Reach out to strategic site owners to gauge interest in creating incubator, co-working, or flexible spaces to support local industry.
- Engage NYCEDC for guidance in developing incubators.

- Reach out to local nonprofits (e.g. SBIDC) to gauge interest in assisting with development / organization / management of incubators or similar facilities.
- Connect with likely nonprofits (e.g. Brooklyn Workforce Innovations, Fifth Avenue Committee) and local businesses to explore interest in developing job training facilities in the study area.

3. Promote investment in industrial building stock.

- Advocate for clarification by Mayoral administration or DCP leadership regarding zoning priorities and the preservation of manufacturing uses in Gowanus.
- Support ideas generated through *Bridging Gowanus* and other community processes that promote and protect manufacturing uses, e.g. inclusionary manufacturing zoning and support for "maker uses."
- Advocate for Gowanus to remain a home for permanent jobs, manufacturing/maker uses, and economic development.
- Encourage City and State economic development efforts to promote policies and incentives for capital reinvestment and business activation in industrial properties.
- Use momentum and community interest generated through the *Bridging Gowanus* process as an opportunity to engage DCP about possible modifications to M-zoning to support industrial uses.
- Encourage the review of hotels' as-of-right status in M1 zones, and explore possible ramifications of classifying hotels as Special Permit uses instead.
- Create and disseminate user-friendly, comprehensive guide to incentive programs that support industrial building rehabilitation and improvements.

buildings are not sold; lease terms are short. More information is needed to determine root causes of these conditions and develop appropriate interventions to re-activate properties. NYCEDC is proposing a pilot study to identify strategies and interventions for activating industrial real estate, and has expressed interest in potentially using one or more BOA strategic sites as case studies. This study should result in practicable solutions specific to Gowanus, which can be used to develop planning, regulatory, marketing, or other approaches for encouraging investments in local building stock.

Action Items:

- *Encourage City and State economic development efforts to promote policies and incentives for capital reinvestment and business activation in industrial properties.*
- *Use momentum and community interest generated through the Bridging Gowanus process as an opportunity to engage DCP about possible modifications to M-zoning to support industrial uses.*
- *Encourage the review of hotels' as-of-right status in M1 zones, and explore possible ramifications of classifying hotels as Special Permit uses instead.*

C. Leverage existing and create new incentives to foster investment and improvements in building stock.

Numerous incentives exist at the state and local levels to encourage investment in brownfields and industrial property. Connecting property owners and potential investors with the array of available resources may be a low-cost first step toward reactivating dormant spaces. Working with NYCEDC to identify and create additional instruments to encourage investment in Gowanus is a second step.

Action Items:

- *Create and disseminate user-friendly, comprehensive guide to incentive programs that support industrial building rehabilitation and improvements.*

2 PRESERVE A NAVIGABLE CANAL FOR ALL USERS

The Gowanus Canal is a tremendous asset that has always been the heart of the Gowanus neighborhood. In the early days, the canal was the primary source of transportation for goods shipped in and out of the area; although it fell into disuse for many years, the 1999 reactivation of the flushing tunnel led many to believe that the canal could be the catalyst that led to neighborhood revitalization. The Gowanus Dredgers, a local activist group, began holding community clean-up events and even canoe races on the canal; the Gowanus Canal Conservancy and others have implemented street-end gardens; the Sponge Park proposal and locally-held design competitions ignited imaginations; and large-scale housing developers looked to the canal as a budding recreational amenity ripe for residential access. Where the Superfund designation slowed some development plans, it has also fueled visions of a future Gowanus: one that is clean and welcoming, a waterfront to celebrate. Stakeholders valued the idea of the canal functioning as an asset for multiple constituencies.

Key Considerations:

- The canal south of 9th Street is part of the Sunset Park Significant Maritime and Industrial Area; 5-10 businesses still use the canal for shipping; the City and the Community Board have expressed interest in supporting continued water-dependent industrial use.
- The canal has a growing constituency of recreational users; the City and the Community Board have both endorsed the idea of in-water recreation (within safe limits set by environmental regulators) and waterfront access.
- EPA's selected remedy will facilitate both recreational and business use of the canal, by improving water quality, removing hazardous material and physical obstacles, and restoring the depth of the canal through dredging. Because the canal will need to be monitored in years after the remedy is complete, and because solid accumulations will be strictly curtailed through

both DEP and EPA's interventions, the canal is expected to remain navigable in the future.

- Bulkheads along the canal are remarkably deteriorated. A 2000 survey by Brown Marine Consulting found that 42% of bulkheads were in fair to poor condition, and concluded that existing bulkheads would not be able to withstand dredging due to deteriorated conditions. Improved and stabilized bulkheads are key to continued canal use and access, whether for marine shipping, recreational boat use, or waterfront esplanade construction.

The BOA recommends four strategies for preserving the waterfront as an engaging and accessible space for all users.

A. *Help waterfront property owners take advantage of the opportunity to upgrade bulkheads in concert with EPA's cleanup process.*

EPA's selected remedy provides a unique and limited opportunity for waterfront property owners to upgrade bulkheads. EPA's excavation of the 1st and 5th Street turning basins will create new open-water habitat areas that will count as offsets for any habitat area lost through bulkhead repair and reconstruction. By proceeding in coordination with EPA, property owners will be able to count this offset toward their own work rather than finding offsets on their own property. As offsets can be difficult to find in situ, this will greatly facilitate NY State permitting.

EPA is eager to coordinate bulkhead work, in order to ensure that all work is done to a standard that will remain in good condition and facilitate ongoing waterway monitoring. By participating in a coordinated and standardized process, property owners can take advantage of economies of scale.

Action Items:

- *Work with EPA and DEC to identify property owners who have not yet agreed to upgrade bulkheads; conduct outreach to facilitate their participation.*

ACTION ITEMS: GOAL 2

- Work with EPA and DEC to identify property owners who have not yet agreed to upgrade bulkheads; conduct outreach to facilitate their participation.
- Develop Waterfront Access Plan that advances the community's goals for public waterfront access.

B. *Develop a Waterfront Access Plan that advances the community's goals for public use of the Gowanus Canal.*

The City's waterfront zoning regulations are designed to protect industrial and water-dependent uses while guaranteeing community amenities if properties are redeveloped for other uses. While stakeholders, nearby residents, and elected officials all agree on the desirability of requiring publicly accessible waterfront amenities from developers of properties with non-contextual uses (e.g. big box stores or residential buildings), and many in the community wish to eventually see continuous waterfront access along the canal, the current regulations may not foster the kind of treatment many would like to see.

The current zoning regulations are triggered by a change in use of a waterfront lot. Any new, non-industrial, non-water-dependent use triggers the requirement to construct a 40' wide esplanade with a paved circulation path, public access, plantings, seating, and upland connections. These obligations represent a considerable financial burden which may deter smaller operations from occupying waterfront sites—including contextually appropriate enterprises classified as commercial. Since the regulations were applied to the canal in 2009, a national chain retailer was able to build big-box retail on a prime industrial site despite the expense of building the waterfront esplanade, while a resident film industry business was deterred from buying and improving the waterfront property it leased, due to financial and logistical concerns. Since both businesses were classified as commercial, the regulations applied equally to

both, but the net effect was a new location for a national retailer and a lost location for a resident business in an industry with a growing local presence. A Gowanus Canal Waterfront Access Plan (WAP) could potentially refine the regulations' triggers to exclude desirable non-industrial uses that the community would welcome without penalty, or to exempt resident businesses who seek to purchase and improve their existing space.

A WAP could also make it easier for industrial and other non-obligated property owners to participate in the community's vision of a continuous waterfront park without constructing the full esplanade specified in the current waterfront zoning regulations. Many ideas have been articulated for waterfront access along the canal, variously emphasizing the area's industrial past/present, environmental remediation, stormwater capture and filtration, and effective stewardship of urban waterfronts; few if any of these ideas would be compatible with the current zoning regulations. A WAP could define alternative design parameters that reflect with the area's unique character and allow for less intense development options for voluntary implementation by non-obligated property owners.

Guiding principles for a WAP:

- Thoughtfully integrate public access amenities with existing and future maritime uses.
- Offer alternative design options for sites adjacent to active industrial/maritime sites.
- Enhance the future of Gowanus's thriving business environment.
- Incorporate environmental remediation standards, e.g. permeability, storm water capture and filtration, etc.
- Refine triggering uses (exemption for maker uses, e.g.)
- Define a lower standard/temporary provision for voluntary implementation by non-obligated property owners.
- If possible, allow for soft edges, waterfront rain gardens, etc.
- Specify desirable locations for water access to minimize conflicts with industrial canal users.

- Do not reduce obligations for residential / big box developments.

Action Items:

- *Develop Waterfront Access Plan that advances the community's goals for public waterfront access.*

C. Support environmental restoration and contextually-appropriate waterfront access.

Cleaner water, a usable canal, and improved drainage benefit everyone who lives and works in Gowanus. Currently, environmental restoration work is proceeding on multiple levels. In addition to work by EPA, DEC, and DEP, local groups have been contributing to cleanup of the canal, its edge, and upland contributory areas. Notable efforts in this area are credited to the Gowanus Dredgers and the Gowanus Canal Conservancy, both of which engage local volunteers and couple restoration with education.

The Dredgers and GCC are also responsible for creation of waterfront access points: the boat launch at 2nd Street and the rain garden at the northern terminus of 2nd Avenue (adjacent to the Salt Lot). These facilities incorporate environmental mitigation opportunities: a rain garden at the boat launch retains and filters storm water, and the site is slated for pilot implementation of the Sponge Park. The GCC's 2nd Avenue rain garden is the first piece of their intended waterfront park, which will incorporate infrastructure and education in a recreational amenity intended to connect to the Whole Foods esplanade. Waterfront access is seen as highly desirable, and well-sited access points provide the public with opportunities to get close to the water well away from areas with higher industrial traffic.

While EPA's work will necessarily take precedence among restoration efforts in the waterway during the remediation phase, community-supported work by local organizations is providing well-used recreational amenities and upland environmental remediation features, and in the process sustaining a committed and diverse stakeholder base interested in the future of the canal.

D. *Promote increased maritime movement of people and goods.*

A remediated, deepened Gowanus Canal with repaired bulkheads represents an asset for the neighborhood that can attract new economic activity, whether in the form of new water-dependent businesses taking advantage of shipping capabilities, or recreational boaters looking to support upland businesses. Promotion of the remediated canal will help attract this audience and encourage increased economic activity in the neighborhood.

3 INTEGRATE EVOLVING INTERESTS IN GOWANUS (CULTURAL, ENVIRONMENTAL, RECREATIONAL) WITH EXISTING INDUSTRIAL AND BUSINESS INTERESTS TO FOSTER A MULTI-FACETED, PRODUCTIVE, CREATIVE ECONOMY

Gowanus's economy is evolving from one dominated by traditional industrial and manufacturing activities to a new, more diversified model that incorporates a robust array of sectors, including food, film, and media. Artisanal manufacturers are bringing a sustainable, small-scale, craft focus into the neighborhood. Meanwhile, the area is becoming desirable for pedestrian-focused businesses as well, with boutiques and restaurants on 3rd Avenue, plus new entertainment and physical culture establishments that have a difficult time finding homes among residential neighbors. Environmental activists are drawn to the Superfund site and find places to volunteer and make tangible improvements with local community based organizations like the Gowanus Canal Conservancy. Successful integrations of all these varied concerns will contribute to Gowanus's lasting appeal, but the process is not without potential conflicts. Using urban design mechanisms to designate specific pedestrian-welcoming streets, improving transit access to curtail auto travel by neighborhood visitors, and encouraging collaborative siting discussions between environmental groups and business owners about green infrastructure projects can all contribute to a smoother integration.

A. *Encourage strategic implementation of on-street green infrastructure facilities that complement local business activity.*

DEP and the Gowanus Canal Conservancy both have funded projects to install bioswales and other green infrastructure that can help mitigate stormwater contributions to sewer overflows. These facilities have the potential to be tremendous assets to the community, but they need to be thoughtfully sited, particularly in traditionally industrial areas with many curb cuts and active loading zones. Active engagement of business owners early in the planning process can lead to outcomes favorable to all.

Action Items:

- *Work with local business owners and DEP to strategically site new green infrastructure facilities.*
- *Facilitate collaboration between businesses and the Gowanus Canal Conservancy about siting of rain gardens and bioswales.*

B. *Define a street hierarchy that simultaneously accommodates business, incidental, and recreational access to local destinations.*

Recreational, social, and retail destinations in Gowanus have increased in number over the past decade, attracting more pedestrian and incidental trips into the neighborhood. This growth, and corresponding growth in trips, can be expected to continue, especially as waterfront amenities develop along the remediated canal. Designating a street hierarchy and using design interventions to define street types can help to direct pedestrian flows to appropriate areas while preserving other streets for truck circulation. Attention should also be paid to thoughtful siting of bicycle infrastructure and amenities.

C. *Promote Gowanus's emerging, non-traditional industry, and arts clusters alongside traditional uses.*

A diversified economy is good for Gowanus, and traditional industrial businesses have expressed enthusiasm for supporting relative newcomers to the area, including artists, film and media businesses, and food manufacturing. Promoting Gowanus to

ACTION ITEMS: GOAL 3

- Work with local business owners and DEP to strategically site new green infrastructure facilities.
- Facilitate collaboration between businesses and the Gowanus Canal Conservancy about siting of rain gardens and bioswales.
- Work with strategic site owners to develop economically productive adaptive re-use strategies.
- Support National and State designations of historic properties where such designation aligns with owner interest.
- Apprise owners of historic properties of State and Federal funding opportunities to support historically-sensitive building restoration and improvements.
- Invite representative of SHPO to offer a public presentation of accurate information about the N/SHP registration of the Gowanus Canal Historic District.

these new sectors, and promoting the products they create, will work to attract additional economic activity, enhance Gowanus's economy, and bolster the neighborhood's reputation as a locus of creative enterprise.

D. Preserve built character through adaptive re-use of existing architecture where possible.

Gowanus has a distinctive architectural character that distinguishes it from surrounding residential neighborhoods and is attractive to many community members and prospective tenants. The Old American Can Factory, an actively managed multi-tenant space, is also a well-maintained historic structure with interior spaces suitable for modern industry and office space. The facility, which has a 0% vacancy rate, is a success story of adaptive re-use, and can provide a useful precedent for other property owners interested in restoring their buildings.

The recent nomination of 53 blocks and 369 properties to the State and National Historic Registers was accompanied by little factual information about the impact of designation. Although the BOA does not support nomination of properties to the National or State Registers of Historic Places where owners oppose such nominations, or where such nomination could limit development possibilities for productive, job-creating, contextual industrial uses, designation as a historic site does confer some benefits. State and Federal tax credits exist to support the historically-sensitive rehabilitation and improvement of designated structures. Insofar as a National or State historic designation would enable property owners to access funding opportunities that could support local economic development by reducing the costs of building improvements, and the designation would not restrict use or future development opportunities at the sites, the BOA supports historic designation for properties whose owners are in favor.

Action Items:

- *Work with strategic site owners to develop economically productive adaptive re-use strategies.*
- *Support National and State designations of historic properties where such designation aligns with owner interest.*
- *Apprise owners of historic properties of State and Federal funding opportunities to support historically-sensitive building restoration and improvements.*
- *Invite representative of SHPO to offer a public presentation of accurate information about the N/SHP registration of the Gowanus Canal Historic District.*

Outcomes & Next Steps

To date, this BOA Nomination Study has begun building and strengthening partnerships among the stakeholders of Gowanus, including business leaders, local nonprofits, environmental and community advocates, and property owners. The BOA steering committee has fostered collaboration among representatives of Federal, State, City, and local government bodies. Elected officials are tuned in to the concerns and needs of Gowanus's business community, and Councilman Lander's *Bridging Gowanus* effort incorporated many of the BOA findings into its discussion with members of the broader community interested in Gowanus's fate.

Through outreach conducted by SoBRO, this BOA has opened up new avenues of exploration that could result in formation of incubators and/or job training facilities in Gowanus, and made first connections with possible project partners for those initiatives.

Finally, through participation in media interviews and in concurrent planning efforts like *Bridging Gowanus*, the BOA has helped to raise the profile of the Gowanus business community and highlight that the study area is far from vacant.

Product: Incentive Guide

The first product to come out of the Gowanus BOA was a Comprehensive Guide to Brownfield and Industrial Development Incentives, now posted to FBCB6's website (and included with this report as Appendix H). This user-friendly guide allows area property and business owners to quickly and easily access summary information about more than 30 incentive programs available through New York State and New York City.

Priority Steps

While the BOA has developed a range of recommendations and corresponding action items, the highest-priority items for FBCB6 to pursue in order to strengthen the business environment in Gowanus and advance stakeholders' goals for the area are:

- Build on SoBRO's work by continuing to engage strategic site owners, local developers, and nonprofits to advance development solutions that address real estate gaps that currently hinder development.
- Pursue formation of an IBID by securing funding that can support the necessary outreach, assessment, and application processes needed to create this body, and by building a coalition among business and arts leaders.
- Use the momentum generated by this BOA and by *Bridging Gowanus* to open a discussion with the Mayor's office or DCP leadership regarding the future of land use and zoning in Gowanus, and options for preserving and protecting manufacturing and maker uses.