



sanitation

Manhattan 09 Containerization Pilot Results

Report to the Public Design
Commission

New York City Department of Sanitation

*125 Worth Street
New York City, New York 10013*

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A. INTRODUCTION AND BACKGROUND

1. Waste Collection in New York City

DSNY collects over 24 million pounds of residential waste daily. For the past 60 years, plastic bags of residential waste have been set out at the curb for DSNY collection. DSNY then collects the bags of trash by hand and loads them into the back of rear loader trucks.

The presence of enormous volumes of plastic-bagged waste directly on New York City sidewalks has presented longstanding quality of life and public health issues. Piles of waste block sidewalks, obstruct pedestrian access, and often spill into the street, creating obstacles for both people and vehicles. Loose plastic bags of waste are easily torn, leading to leaks, generating odors, and attracting vectors (e.g., rats and vermin). When bags rip, their contents become street litter that can enter the City's stormwater collection system and pollute surface waters. Torn plastic bags also pose a work health and safety risk for sanitation workers, who face line of duty injuries from chemical contaminants, improperly discarded needles, and other hazardous items.

In October 2022, DSNY kicked off the “Trash Revolution,” the Citywide effort to move millions of pounds of trash per day from black plastic bags on the sidewalk to rat-resistant, closed containers. As part of the “Trash Revolution,” the City has committed to moving 100% of plastic refuse bags off City streets. Containerization allows DSNY to realize the City's commitment to getting trash bags off the sidewalks and into containers. Moving trash bags off the sidewalks and into closed, rodent-resistant receptacles will improve the overall appearance of public spaces, cut off a source of food for rats, and improve quality of life for all New Yorkers. By replacing loose plastic bags with secure, rodent-resistant containers, the City can ensure cleaner sidewalks and streets; safer working conditions; and healthier, more accessible public spaces in New York City.



Figure 1: Trash bags piled on the curb in New York City



Figure 2: Sanitation workers loading trash bags into rear loader truck

2. On-Street Containers: Pathway to Containerization

The City's distinct mix of environmental conditions, operational demands, and built environment constraints strongly supports the adoption of stationary on-street containers as the preferred approach to trash containerization. New York City produces a high volume of waste in a small area, with little-to-no flexibility to build outside of existing pedestrian and street lanes.

Volume

~30,000 residents per square mile, 44M pounds of trash/day



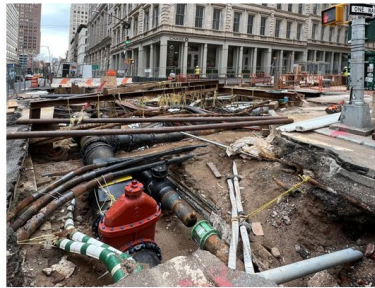
Infrastructure

Complex infrastructure limits ability to build below ground



Streetscape

No alleyways in NYC's 1811 grid plan – no trash storage



New York City is very dense, with nearly 30,000 residents per square mile. Residents and businesses across the city produce 44 million pounds of trash per day. This is a far greater volume of trash produced in a smaller area than in most other cities in the United States and internationally.

New York City lacks alleyways or other spaces to “hide” containers. While many cities in the United States store individual bins for households and businesses behind buildings, most streets in New York City do not have such alleys or rear access points. This means that most buildings have their main entrances and service entrances facing the street. The presence of complex underground infrastructure in New York City further limits the ability to store and manage trash below ground, an alternative approach taken by some cities to free up the curb space. The absence of alleys and underground space requires that New York City's residential waste, by and large, be stored for collection curbside.

For large buildings with more than 30 residential units, and some with 10 to 30 residential units, stationary on-street containers present a containerization solution that is both compatible with New York City's built environment and scalable to meet the needs of properties with varying waste volumes.

3. Current Status of Waste Containerization

In recent years, DSNY has begun to implement different residential waste containerization strategies to eliminate the accumulation of curbside plastic refuse bags and improve the quality of life in New York City (City). Through the efforts undertaken to date, DSNY has containerized 70% of waste and is working towards containerizing 100% of residential waste.

a. Timeline

DSNY has implemented the following containerization strategies to address commercial businesses, specific property types, City agencies, and specific waste streams:

- Starting in **March 2024**, ALL businesses citywide were required to use bins with secure lids when setting out trash for collection. This is in addition to large commercial properties containerized via loading docks.
- In **November 2024**, DSNY initiated implementation of its residential waste containerization program by requiring buildings citywide with one to nine residential units and all City agencies to set out their trash in rigid receptacles with tight fitting lids.
- Effective **April 2025**, DSNY required all residential properties to separate organic materials from the trash and containerize food waste in individual bins.
- And beginning in **June of 2025**, DSNY launched a Pilot Program where the use of stationary on-street containers and individual bins were rolled out for an entire community district, Manhattan Community District 09 (MN09), which includes the West Harlem Neighborhoods of Morningside Heights, Manhattanville, and Hamilton Heights. Manhattan Community District 09 is the first fully containerized district in the City. This pilot was developed after an earlier small-scale assessment of wheeled containers presented challenges during collection and proved to be maintenance intensive.

b. Program Components

The MN09 Pilot Program requires buildings with 31 or more residential units to use stationary on-street containers for refuse, while buildings with 10 to 30 residential units may elect to use either stationary on-street containers or individual bins for refuse. Buildings using stationary on-street containers will be assigned by the Department one or more containers, which the City refers to as “Empire Bins,” to containerize their waste.



Figure 3: Stationary on-street container, "Empire Bin"



Figure 4: Individual bin, "Official NYC Bin"

While individual bins are required to be stored off-street between collection days and placed out on the sidewalk at the designated set out times prior to collection, the stationary on-street containers are installed in the parking lane in front of or near their respective properties where trash can be brought out and stored at any time on any day prior to collection.

Unlike similar containerization programs in Europe that use a shared container model, it was determined that buildings in New York City generate a sufficient volume of waste on their own to support one or more containers. Each stationary on-street container has a capacity of approximately four (4) cubic yards (cy). DSNY assigns Empire Bins to specific properties for exclusive use. Containers are equipped with an electronic locking mechanism, and access is limited to building staff and DSNY via designated keyed access cards. Empire Bins are labeled with a property address sticker, a riveted metal Bin ID number, and an RFID tag. This enables DSNY to track all Empire Bin installation locations.

The stationary on-street containers are designed to enable minimally invasive installation. For each stationary on-street container, two small alignment blocks are affixed to the pavement of the parking lane with bolts and anchors to prevent containers from moving. In addition, delineators are affixed to the pavement on either side of the container(s) to act as a buffer and prevent vehicles from parking too close to the containers.



Figure 5: Alignment blocks anchor containers to the pavement

The alignment blocks, bolts, and anchors can be removed by DSNY along with the stationary on-street container to accommodate street improvement projects, milling and paving, utility maintenance, and/or other types of NYCDOT work or street closures. This modular and mobile infrastructure ensures that on-street containers do not interrupt critical activities taking place on the roadway. DSNY coordinates closely with its NYCDOT partners on all street improvement projects.

DSNY uses Automated Side Loader (ASL) collection trucks to collect the waste from the stationary on-street containers, shifting the work from manual to semi-automatic and reducing the risk of harm and injury for sanitation workers. ASL collection trucks have an arm on one side of the collection trucks whereby a sanitation worker operating inside the truck can mechanically grab, lift, and empty the stationary on-street containers, while a second sanitation worker stands outside the truck to monitor for safety. This will improve safety for sanitation workers handling waste in the City.



Figure 6: Arms of ASL trucks grab, lift, and empty containers

c. Bin Locations and Siting Parameters

The total number of stationary on-street containers per property is calculated based on the estimated volume of waste to be stored in containers for each property. DSNY conducts a waste generation survey at each building to determine how many stationary on-street containers will effectively containerize the property's waste. Furthermore, DSNY performs a container siting assessment for each property prior to implementation to determine the installation feasibility and optimal container placement location.

Containers are installed in the parking lane in front of or near each respective property. DSNY works with NYCDOT and/or building superintendent(s) to confirm the specific placement of containers to ensure accessibility. The stationary on-street container design has a low profile that allows for continued pedestrian visibility of moving vehicles over the container.



Figure 7: Stationary on-street containers preserve pedestrian visibility

When siting containers, DSNY coordinates closely with NYCDOT and follows established guidelines to ensure adequate distance from crosswalks, curb cuts, and fire hydrants. In addition, containers are sited to avoid conflicts with manholes, tree-pits, catch basins, utility access points, and other such infrastructure. As feasible, DSNY groups containers assigned to adjacent buildings together in order to minimize the net impact on on-street parking. To ensure consistent access to the curb, no more than four containers are placed in a row without a gap of several feet.

B. MANHATTAN 09 CONTAINERIZATION PILOT

1. Overview of Pilot

In June 2025, DSNY launched a district-wide pilot of residential containerization in Manhattan Community District 9 (MN09), which includes the West Harlem neighborhoods of Hamilton Heights, Manhattanville, and Morningside Heights. MN09 is the first fully containerized community district in New York City. Across the district, smaller residential buildings now store their waste in individual wheeled bins and larger residential buildings, which produce too much putrescible waste to be effectively serviced by individual bins, use Empire Bins to containerize their waste.

The objective of the pilot was for DSNY to test a flexible containerization strategy that would scale Citywide, while minimizing the overall impact on parking. The official pilot period ran from June 1, 2025 to May 31, 2026. To date, the pilot has successfully installed Empire Bins across:



Figure 8: Map of Manhattan Community District 9



20 schools (135 bins)



>760 properties (997 bins)



>30,000 residential units

2. Pilot Outcomes

Since implementation, the MN09 Pilot Program has resulted in the following outcomes, discussed in greater detail in later sections of this report, while impacting **<4% of total parking** in the district:

- Record-breaking **reductions in rat sightings**
- **Improved cleanliness** at set-out locations
- Excellent performance of stationary on-street containers during **major snow and rain** events

Across the pilot period in MN09, DSNY mitigated issues and recorded valuable learnings with applications within the district and Citywide. To evaluate the performance of the MN09 Pilot Program, DSNY assessed the following performance areas:

- a) [Empire Bin Performance](#)
- b) [Automated Side Loader Performance](#)
- c) [Collection Operations](#)
- d) [Interagency Coordination](#)
- e) [Community Response and Feedback](#)
- f) [District Cleanliness](#)

a. Empire Bin Performance

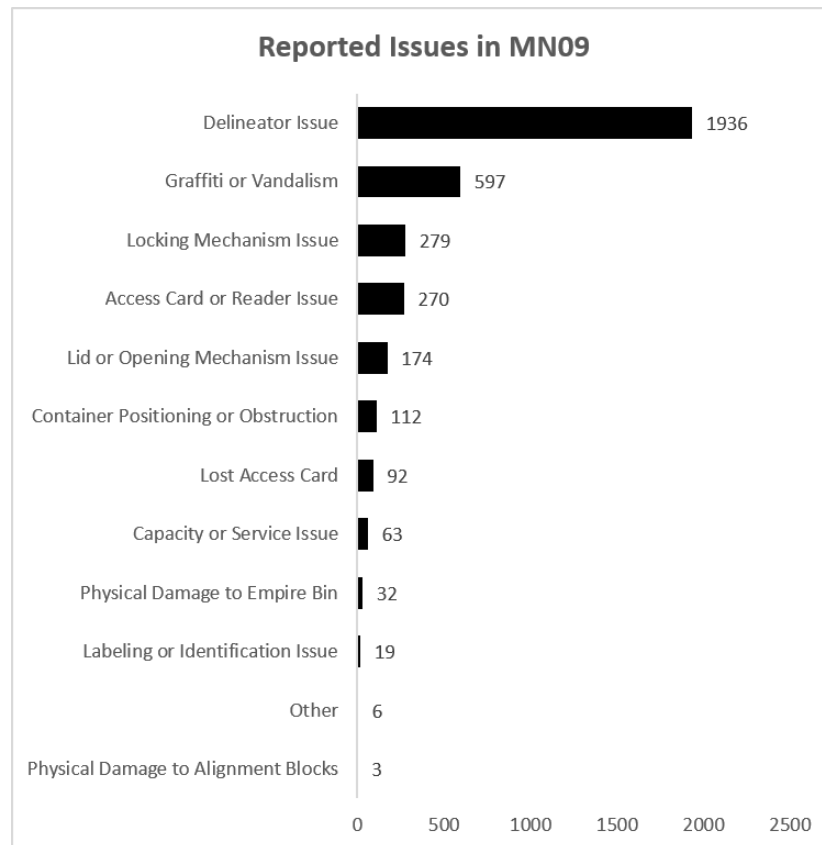
The stationary on-street containers selected by DSNY have been in use by its vendor, Contenur, for over 20 years. The containers are guaranteed for 10 years of on-street use and are specifically manufactured to withstand both regular use and variable environmental conditions. The body and lids of the stationary on-street containers consist of high-density polyethylene (HDPE), a durable material with high resistance to impact, chemicals, and weather. Additives improve product's resistance to weathering – UV protection prevents color degradation in the sun and anti-humidity features prevent stains from humidity in the container. Furthermore, the domed lid design withstands variable weather conditions, shedding snow, rain, and wind.



Figure 9: Empire Bin

Across the pilot period, DSNY closely monitored the performance of Empire Bins to assess durability, reliability of bin access, and long-term maintenance needs. Analyzing the Empire Bin service request data of the pilot period indicates strong performance of Empire Bins across these areas.

Out of the total issues reported by both the public and DSNY staff, a majority of reported issues, 60% of them (2,136), concerned delineator post damage (which has been significantly mitigated with the introduction of a more resilient post) and other non-repair issues. Another 17% of reported issues (597) concerned graffiti or vandalism, which were resolved by DSNY. Less than 5% (174) of reports related to issues opening the bins and less than 8% (270) related to access card or reader issues. Less than 1% of reported issues (32) required repair to a damaged Empire Bin. Furthermore, only six Empire Bins, approximately 0.5% of bins installed, required field replacement due to unrepairable damage. This is well below the 6% warranty replacement rate.



i. Rain and Snow Performance

Across the pilot period, New York City experienced significant rainfall and one of its most significant snow seasons in recent history, with an accumulation of more than 43" of snow across several large storms. Empire Bins remained fully serviceable across this uncharacteristically harsh winter and enabled trash to be stored in containers during severe snow rather than piled in snowbanks. Opening and lifting pins on Empire Bins remained accessible despite snow accumulation. As further detailed in the next section, automated side loader trucks had very few issues servicing the Empire Bins during snow conditions and were successfully used during snow plowing events.

In addition, in late July 2026, slow-moving thunderstorms made their way through the New York City area. The National Weather Service warned that the storms would "pose threats to life and cause significant disruptions," bringing rain accumulation of 2 to 3 inches per hour. The Empire Bin lids shed rainfall as designed and did not allow rain to enter the bins. Despite the heavy volume of rainfall, with accumulation of 5 to 8 inches of rain, stormwater was able to flow freely in front of and under the Empire Bins.



Figure 10: Empire Bins in heavy rain and deep snow

b. Automated Side Loader Trucks

Across the pilot period, DSNY used 16 automatic side loader (ASL) trucks in MN09. This is significantly fewer trucks than the Department's rear loader fleet, but the newly designed custom DSNY ASL trucks performed well in their first year of operations.

Over the past year, ASL trucks had lower down rates compared to other collection equipment and experienced fewer issues per vehicle compared to rear loader collection trucks of the same age. ASL trucks performed well in inclement weather, including heavy rain and snow, and were used successfully during plowing operations.



Figure 11: Automated side loader truck



Figure 12: Automated side loader truck in snow

c. Collection Operations

Over the year-long containerization pilot in MN09, stationary on-street containers successfully **containerized 35.4M pounds of waste** across the district, as detailed below:



Trash: 32.4M LBS (schools and residential)



Organics: 847.9K LBS (schools only)



Paper: 312.5K LBS (schools only)



Metal / Glass / Plastic: 79.9K LBS (schools only)

Across the pilot period, DSNY successfully adapted to the operational differences of containerization and the new automated side loader trucks and mitigated challenges to collection operations encountered as MN09 residents adjusted to the changes. These issues largely centered around the improper use of bins and interactions with cars in the curb space.

For example, as schools began the use of Empire Bins, DSNY found that cardboard was not being appropriately broken down before disposal in containers. This led to overfilled containers and disruptions to collection schedules. DSNY also noted illegal dumping of waste adjacent to Empire Bins as residents in the district were unaccustomed to the locked containers early in the pilot. These issues have largely been successfully resolved through customer messaging and training.

In addition, DSNY encountered challenges with vehicles interfering with bin operations. Cars were often found parking too close to containers, preventing scheduled collection service and causing damage to delineators. Double-parked cars adjacent to containers similarly impeded service to the containers, and DSNY employed aggressive enforcement to ticket violators and reduce the occurrence of illegal parking practices.



Figure 13: Illegal dumping adjacent to Empire Bins



Figure 14: Cars parked illegally over delineator posts

Most of the challenges DSNY encountered were ultimately resolved through targeted, incremental refinements across key operational areas.

- **Community engagement:** DSNY undertook broad efforts to educate community members, including both residents and property waste management staff, on the appropriate use of Empire Bins and individual containers to store waste. DSNY also implemented enhanced signage around Empire Bins to encourage proper use.
- **Collection schedule:** DSNY adjusted collection schedules in MN09 to more effectively collect from Empire Bins.
- **Enforcement operations:** DSNY worked to ensure a consistent enforcement approach across the district to ensure adherence to containerization requirements, proper use of Empire Bins, and compliance with parking regulations.

d. Interagency Coordination

DSNY has collaborated significantly and developed strong working relationships with partner agencies across the MN09 pilot period. These relationships enabled the smooth roll-out of stationary on-street containers across MN09 and the uninterrupted delivery of essential city services. DSNY's collaboration with other city agencies includes, but is not limited to, the following:

NYC Department of Transportation (NYCDOT): At the outset of the MN09 pilot period, DSNY and DOT worked closely to site Empire Bins, with DSNY identifying viable locations for containers based on operational needs and DOT ensuring alignment with regulations pertaining to parking and curb use. On an ongoing basis, the agencies remain in contact to ensure that bins are moved to accommodate planned milling and paving and to provide same-day response for emergency utility work.

New York City Public Schools (NYCPS): At the outset of the MN09 pilot period, DSNY and NYCPS worked closely to site Empire Bins at school locations. Empire Bins must be located in positions that support efficient DSNY collection operations without compromising school safety, interfering with school access, or obstructing pedestrian zones used by students, families, and staff. On an ongoing basis, the agencies coordinated to provide special pickups and additional waste management support for schools upon request. DSNY worked to accommodate school waste collection around special events, holiday schedules, and summer session service needs.

NYC Department of Buildings (DOB): DSNY and DOB collaborated across the pilot period to adjust the location of Empire Bins around building construction needs. DSNY performed Empire Bin relocation and replacement as needed to accommodate construction sheds or changes to parking lanes.

e. District Cleanliness

311 complaints in MN09 provide valuable insights into resident experiences across the pilot period and offer a meaningful point of comparison from the year prior to the use of stationary on-street containers. A reduction in community-reported complaints in MN09 suggests a strong correlation between district-wide containerization, the use of Empire Bins, and neighborhood cleanliness when comparing year-over-year trends (from June 1, 2025 through May 31, 2026).

Comparing the pilot period to the prior year, the MN09 district saw a 23% reduction in 311-reported rat sightings, an 18% reduction in 311-reported dirty conditions, and a 12% reduction in illegal dumping complaints.



f. Community Response and Feedback

i. Outreach

DSNY performed extensive outreach related to the roll-out of Empire Bins in MN09. This outreach took the form of scheduled informational sessions, mailers, and districtwide canvassing across all phases of the pilot. The objective of this work was to ensure community awareness of the containerization program and its requirements, equip residents and waste management staff with the resources to adhere to program requirements, and gather feedback to inform program refinements. DSNY completed the following community outreach across the pilot period:



Informational Sessions

- Attended 15 general board and 1 district service cabinet meeting
- Hosted 12 virtual information sessions
- Held office hours at the Community Board office 3 days a week across installation to answer questions and distribute access cards
- Delivered 3 presentations to the 30th Precinct Community Council
- Assigned 1 field supervisor assigned daily to focus on community outreach and engagement



Mailers

- Sent 4 separate informational mailers
- Send 3,024 individual pieces of mail



Canvassing

- Conducted 3 rounds of canvassing to all properties in the original pilot
- Conducted 4 additional rounds of outreach to MN09 buildings with 10 or more units
- Conducted 1 additional round of canvassing to 1-9 units in the original pilot throughout expansion
- Made 4,919 attempts to reach residents
- Completed 2,069 total conversations with residents

ii. Community Reception

Empire Bins have been positively received in MN09 and beyond. Residents of the pilot district credit the program with a reduction in local rat sitings and an overall improvement in curbside cleanliness. Property waste management staff appreciate the flexibility the Empire Bin program affords to remove building waste at all hours of the day instead of only within designated waste setout times.



This could be one of the **best investments City Hall can make in a cleaner New York City**, and help spell the end of a decades-old rat crisis that long vexed residents, business owners and elected officials alike... **Containerization is our best bet at containing the problem.**




"In the past, we have to bring the garbage at night. With this thing, we can bring it out anytime and keep the building inside clean." - Building Super, Cesar Jimenez

NYC TRASH BIN PILOT PROGRAM



Shaun Abreu
@ShaunAbreu

Follow

Trash is now "100%" containerized in West Harlem and Morningside Heights!

Our sidewalks are cleaner, rat sightings are down 60%, and nobody is dodging bags of leaky garbage on their way to school or work.

We can absolutely do this everywhere.



Mayor Adams Unveils Empire Bins In West Harlem, Marking A Milestone In NYC's Trash Revolution... residents have welcomed the cleaner sidewalks and noticeable reduction in vermin.



"Everyone said, 'Well, it can never happen.' And here we are today. **It's happening. It's here. And I'm so happy. It's fantastic.**" - **Community Member, Andres Orejuela**



columbiafacilities

36 2 5

columbiafacilities Sorry for the trashy post, but we wanted to tell you about the new Empire Bin pilot program from @nycsanitation

You may see these on-street garbage containers around our Morningside campus. They are now being used by some of Columbia Residential's properties and are eliminating the unsightly, smelly, and rodent-attracting black garbage bags set directly on the sidewalk.




FOX 5 NYC ROLLS OUT NEW GARBAGE BINS AND TRUCKS

"Ever since they put these bins here, we don't have the rats running back and forth. Before they did, we had rats the size of cats."

Figure 15: Community members react to Empire Bins in MN09

C. TAKEAWAYS AND NEXT STEPS

The implementation of Empire Bins across Manhattan Community District 9 has yielded significant, measurable benefits. The transition from piling large black plastic bags curbside to storing trash in a sealed, on-street container has markedly improved conditions in MN09. Sidewalks and building frontages remain consistently cleaner, with the elimination of loose refuse reducing odors, leakage, and visual blight.

Year-long data shows measured reductions in rat sightings. Rat activity has declined steadily following containerization, reflecting the effectiveness of sealed bins in removing food sources and shelter opportunities for rodents. This reduction aligns with broader citywide goals for pest control and sanitation modernization.

Operationally, Empire Bins enable a safer mode of collection. Automated side loading collection reduces manual handling, improves route flexibility, and allows buildings to deposit refuse at any time without contributing to sidewalk clutter. Collectively, these outcomes reflect a substantial enhancement in quality of life for residents, workers, and visitors in MN09. The district's experience provides a compelling model for future expansion of containerization across New York City.

Based on learnings from the MN09 Pilot Program and the completion of an environmental review, the Department aims to roll out the program citywide by 2032. DSNY issued the Draft Environmental Impact Statement on July 1, 2026, and plans to issue the Final Environmental Impact Statement in October of 2026. DSNY is currently engaged in planning for containerization of Brooklyn Community District 2 (BK02), which will begin implementation in the fall of 2026. Phased implementation will continue on an ongoing basis, with nine additional districts planned for containerization by the end of 2027.

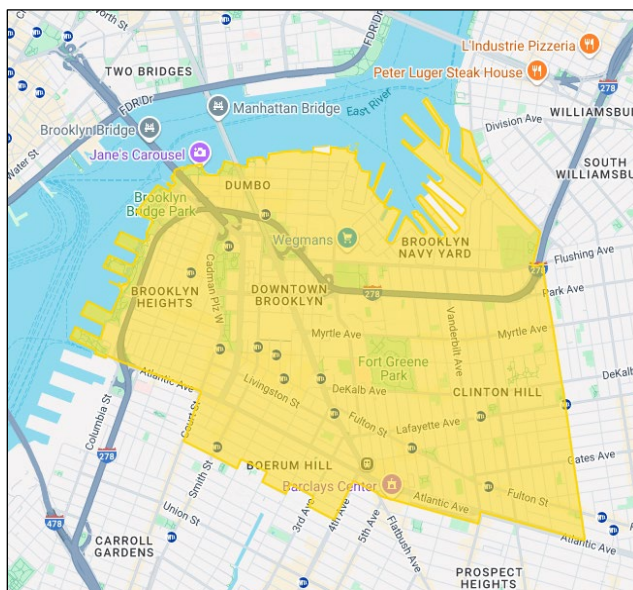


Figure 16: Map of BK02, the next district for containerization in Fall 2026