960 FRANKLIN AVENUE REZONING EIS
Chapter 12: Solid Waste and Sanitation Services

A. INTRODUCTION

This chapter examines the Proposed Actions' effects on solid waste and sanitation services. According to the 2020 *City Environmental Quality Review* (CEQR) *Technical Manual*, a solid waste and sanitation services assessment is intended to determine whether a project has the potential to cause a substantial increase in solid waste production. Such an increase may overburden available waste management capacity or otherwise be inconsistent with the City's Solid Waste Management Plan (SWMP) or with state policy related to the City's integrated solid waste management system.

As described in **Chapter 1, "Project Description,"** the Proposed Actions comprise zoning map and text amendments that would affect a Brooklyn Block 1192, Lots 41 (130 Montgomery Street), 46, 63 (124 Montgomery Street), and 66 (972 Franklin Avenue) (the "Development Site"), and also includes Lot 40 (122A Montgomery Street) and parts of Lot 1 (a portion of the MTA's Franklin Avenue subway shuttle right-of-way), Lot 77 (1015 Washington Avenue) and Lot 85 (1035 Washington Avenue) ("the Project Area"). The Proposed Actions also include a Large Scale General Development (LSGD) special permit, and a special permit to waive parking, and may also involve the use of public financing for the development of permanently affordable housing from the New York City Department of Housing Preservation and Development (HPD), the New York City Housing Development Corporation (HDC), or other governmental or private sources. The Proposed Actions are anticipated to facilitate the development of new residential, local retail, and community facility uses on the 2.76-acre Development Site. In total, the Proposed Actions are expected to result in a net increase of 1,578 dwelling units (DUs), 21,183 square feet (sf) of commercial/retail space, and 9,678 sf of community facility space. This represents an incremental increase of 1,060 DUs, and an increase of 21,183 sf of commercial/retail space, and 9,678 sf of community facility space as compared to anticipated future No-Action conditions.

To assess the potential effects of the Proposed Actions on solid waste and sanitation services, the analysis in this chapter estimates the amount of solid waste currently generated on the projected development sites identified in the reasonable worst case development scenario (RWCDS), and provides a comparison of estimates under No-Action and With-Action conditions.

B. PRINCIPAL CONCLUSIONS

The Proposed Actions would not result in a significant adverse impact on solid waste and sanitation services. The Proposed Actions would generate an increment above the No-Action condition of approximately 24.4 tons per week of solid waste, but would not directly affect a solid waste management facility. Approximately 89.6 percent of the additional solid waste generated by the Proposed Actions would be handled by the New York City Department of Sanitation (DSNY), and 10.4 percent would be handled by private carters. Overall, the uses facilitated by the Proposed Actions would be expected to generate solid waste equivalent to approximately 1.75 DSNY truck loads per week and less than one commercial carter truck loads per week. Although this would be an increase compared with conditions in the future without the Proposed Actions, the additional solid waste resulting from the Proposed Actions would be a negligible increase relative to the approximately 9,000 tons of waste handled by commercial carters every day or the 12,260 tons per day handled by DSNY, and it would also represent approximately 0.01 percent of the City's anticipated future weekly commercial and DSNY-managed waste generation in 2025, as projected in the Solid Waste Management Plan (SWMP). As such, the Proposed Actions would not result in an increase in solid waste that would overburden available waste management capacity. The Proposed Actions would also not conflict with,

or require any amendments to, the City's solid waste management objectives as stated in the SWMP. Therefore, the Proposed Actions would not result in a significant adverse impact on solid waste and sanitation services.

The Proposed Actions are also not expected to directly affect operations at the DSNY garage. Under the Proposed Actions, it is anticipated that there would be no geometric changes nor operational changes (e.g., roadway closures, reversals, etc.) to the street network used by sanitation trucks to access the DSNY garage. In addition, there would be no changes to curbside parking regulations on block fronts along Winthrop Street, New York Avenue and Parkside Avenue currently used for garage operations. (Sidewalks and curbside space adjacent to the DSNY garage are routinely used for sanitation truck and employee auto parking as well as for the storage of snow plow blades and other equipment.)

C. METHODOLOGY

According to the *CEQR Technical Manual*, projects with a generation rate of less than 50 tons (100,000 pounds) of solid waste per week would not result in a significant adverse impact to the City's waste management capacity, and do not warrant detailed analysis. As described below, the Proposed Actions would not result in a net increase of more than 50 tons of solid waste per week.

As solid waste/sanitation services is a density-based technical analysis, the Proposed Development warrants an assessment of solid waste and sanitation services. To assess the Proposed Actions' potential impacts on solid waste and sanitation services, this chapter describes existing and future New York City solid waste disposal practices, including the collection system and disposal methods; estimates solid waste generation on the Development Site under existing conditions and in the No-Action condition (for the 2024 analysis year); forecasts solid waste generation by the Proposed Development induced by the Proposed Actions, using solid waste generation rates for typical land uses and activities provided in the *CEQR Technical Manual*; and assesses the effects of the Proposed Actions' incremental solid waste generation on municipal and private sanitation services.

D. EXISTING CONDITIONS

Description of Current Solid Waste Sanitation Services

The New York City Department of Sanitation (DSNY) is responsible for the collection and disposal of residential and institutional solid waste in the City, while private carters collect solid waste from commercial and manufacturing uses. In addition to collecting municipal solid waste, refuse, and designated recyclable materials generated by residential and institutional uses, including schools, some nonprofit institutions, and many City and State agencies, DSNY also collects waste from City litter baskets, conducts street-sweeping operations, and also conducts vacant lot cleaning activities. In total, the DSNY collection fleet is comprised of over 2,100 waste collection trucks, with the typical collection truck for refuse carrying approximately 12.5 tons of waste material and the typical recycling truck carrying about 11.5 tons of paper or approximately 10.0 tons of metal, glass, and plastic containers. In total, DSNY collects approximately 10,500 tons per day of residential and institutional refuse and approximately 1,760 tons per day of recyclables.[1]

DSNY operates 59 district garages, located all over the City, which store equipment and vehicles and house DSNY personnel. The nearest DSNY garage is DSNY Brooklyn Garage 9, which is located on New York Avenue between Winthrop Street and Parkside Avenue.

[1] *Inside DSNY*: http://www1.nyc.gov/assets/dsny/site/about, accessed February 2018.

Commercial establishments (e.g., restaurants, retail facilities, offices, and industries) in the City contract with private carters for collection and processing and/or disposal of various kinds of solid waste, including municipal solid waste, construction and demolition debris, non-hazardous industrial wastes, and recyclables. The City's Business Integrity Commission licenses over 4,000 private carting trucks to collect the City's commercial municipal solid waste and recyclables, and registers over 4,000 more trucks to haul private sector construction and demolition debris in the City (2013 figures), with more than 2,000 private carting businesses authorized to serve New York City. According to the *CEQR Technical Manual*, commercial carters typically carry between 12 and 15 tons of waste material per truck. The City's businesses, whose waste is collected by private carting companies, generate approximately 9,000 tons of refuse each day.

Under New York City's mandatory Recycling Law (Title 16 of the NYC Administrative Code, Chapter 3), DSNY has established and enforces rules requiring that certain designated recyclable materials be separated from household waste for separate collection. New York City residents are required to separate aluminum foil, glass, plastic, and metal containers, rigid plastics, and newspapers and other paper waste from household waste for separate collection. Commercial establishments are also subject to mandatory recycling requirements. Businesses must source-separate metal, glass, and plastic containers, certain types of paper waste, cardboard, metal components in bulk waste, bulk metal, aluminum foil products; and construction wastes (for businesses exclusively engaged in an activity that generates construction waste). Significant generators of yard waste or textile waste (at least ten percent of the business' waste in a month) must recycle that material.

DSNY delivers most of the refuse it collects to certain public or private solid waste management facilities known as transfer stations, for processing and transportation to out-of-City disposal facilities. The waste delivered to the transfer facilities is unloaded and, after sorting and compaction, is transported to landfills or waste-to-energy facilities. Similarly, commercial refuse and other solid waste that is not carted directly to disposal facilities is delivered to transfer stations for transport to disposal facilities. Non-putrescible waste such as construction and demolition debris typically is sorted at transfer stations, where clean fill materials, metal, and wood for recycling are removed, and the residue is sent to landfills for disposal.

As New York City has no public or private local disposal facilities, solid wastes that are not recycled, reused, or converted to a useful product locally must be exported from the City for disposal. Designated recyclable materials are delivered to privately-operated materials recovery facilities (MRFs) in the City and surrounding communities. Paper recyclables collected by DSNY in Manhattan, Staten Island, and parts of Brooklyn are not taken to a MRF but are transported directly to the Pratt Industries Paper Plant in Staten Island, which processes them for use in the production of liner board and similar products.

As required by New York State law, the City has adopted a comprehensive SWMP for the long-term management of solid waste generated within its borders. The current SWMP was adopted in 2006 and covers the period through 2025. The SWMP estimates public- and private-sector waste quantities that must be managed over the planning period and identifies processing, transfer, and disposal capacity that will be necessary for such waste. According to the SWMP, the City's commercial solid waste generation is projected to increase to approximately 74,000 tons per week by the year 2025.[2] The amount of DSNY-managed waste is projected to increase to approximately 115,830 tons per week.[3]

The SWMP takes into account the objectives of New York State's solid waste management policy with respect to the preferred hierarchy of waste management methods: first waste reduction, then recycling, composting, resource conservation and energy production, and, lastly, landfill disposal. The SWMP includes initiatives and programs for waste minimization, reuse, recycling, composting, siting a new waste conversion facility to derive energy from waste, waste transfer, transport, and out-of-City disposal at waste-to-energy facilities and landfills. Under the SWMP,

[2] Comprehensive Solid Waste Management Plan, September 2006; Attachment IV, Table IV 2-2.
[3] Comprehensive Solid Waste Management Plan, September 2006; Attachment II, Table II 2-6.

residential refuse collected by DSNY from Brooklyn Community District 9 is driven to the Hamilton Avenue Converted Marine Transfer Station (MTS).

With respect to commercial waste, the SWMP provides the capacity for barge export of certain amounts of commercial refuse from four converted DSNY marine transfer stations (MTS); provides for barge export of construction and demolition waste from the existing DSNY MTS at West 59th Street; and requires rail export of commercial refuse from the three private transfer stations that also contract to handle DSNY refuse. The SWMP also includes more stringent restrictions on the siting and operation of commercial solid waste transfer stations.

DSNY's voluntary organics collection and composting program provides curbside collection or convenient neighborhood drop-off locations. The program decreases the City's reliance on landfills, which release methane—a powerful greenhouse gas (GHG)—from the decompostion of organic waste, reduces air emissions from City refuse sent to waste-to-energy plants and from long-distance waste transport, and reduces related fossil fuel use.

In addition, pursuant to Local Law 146 of 2013 DSNY enforces commercial food waste composting rules for larger food waste generators such as food manufacturers or wholesalers, larger hotels with food service establishments, arenas, food service establishments larger than 15,000 sf; chain food service establishments with at least 100 locations in New York City; and retail food stores larger than 25,000 sf. Covered businesses must keep their organic waste (generally from kitchens, spoilage and surplus food—not post-consumer waste) separate from other waste and arrange to have it converted to useful products such as compost or biogas rather than landfilled or incinerated. This can be done either via collection by private carters or self-transport for off-site conversion, or by managing the conversion on-site using in-vessel composting or aerobic or anaerobic digestion.

Solid Waste Generation on the Development Site

The Development Site is currently occupied by approximately 414,607 sf of spice storage/wholesale/warehousing uses. Based on the citywide average rates for solid waste generation used in the SWMP (and provided in Table 14-1 of the *CEQR Technical Manual*), the existing use on the Development Site generates a total of approximately 1 ton of solid waste per week. As shown in **Table 12-1**, all of the existing solid waste generated by the Development Site is handled by private carters.

TABLE 12-1
Existing Solid Waste Generation on the Development Site

Use	Floor Area (sf)	Population		Solid Waste Generation Rate (lbs/wk)		Solid Waste Generation	
						(lbs/wk)	(tons/wk)
Residential	0	0	households	41	per household	0	0.0
Retail	0	0	employees	79	per employee	0	0.0
Storage/Wholesale/Warehousing	414,607	29	employees	66	per employee	1,914	1.0
Community Facility (non-school)	0	0	students	0.03	per sf	0	0.0
Total Solid Waste Generation						**1,914**	**1.0**
Solid Waste Handled by DSNY (includes residential and all CF uses)						***0***	***0.0***
Solid Waste Handled by Private Carters						***1,914***	***1.0***

Notes:

Solid waste generation is based on citywide average waste generation rates presented in Table 14-1 of the *CEQR Technical Manual* , and estimates of workers by use, as follows:
Residential use: 41 lbs/wk per dwelling unit.
General retail: 79 lbs/wk per employee; assume 3 employees per 1,000 sf.
Storage/wholesale/warehousing use: use wholesale rate - 66 lbs/wk per employee; employee data from Golombeck.
All community facility uses (excluding schools): 0.03 lbs/wk. per sf.

E. THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION)

As described in **Chapter 1, "Project Description,"** the total No-Action development on the Development Site under the RWCDS would comprise 518 market-rate residential units. Overall, as discussed below, solid waste generated by the Development Site will increase under the No-Action condition.

Under the No-Action condition, approximately 10.6 tons of solid waste per week would be generated, compared to 1 ton per week under existing conditions. As shown in **Table 12-2**, the amount of solid waste handled by DSNY weekly would increase to 10.6 tons from 0 tons under existing conditions. The amount of solid waste handled by private carters per week is expected to decrease to 0 tons from 1 ton under existing conditions.

TABLE 12-2
No-Action Solid Waste Generation on Projected Development Sites

Use	Floor Area (sf)	Population		Solid Waste Generation Rate (lbs/wk)		Solid Waste Generation	
						(lbs/wk)	(tons/wk)
Residential	518 units	518	households	41	per household	21,238	10.6
Retail	0	0	employees	79	per employee	0	0.0
Storage/Wholesale/Warehousing	0	0	employees	66	per employee	0	0.0
Community Facility (non-school)	0	0	students	0.03	per sf	0	0.0
Total Solid Waste Generation						**21,239**	**10.6**
Solid Waste Handled by DSNY (includes residential and all CF uses)						***21,238***	***10.6***
Solid Waste Handled by Private Carters						***0***	***0.0***

Notes:
Solid waste generation is based on citywide average waste generation rates presented in Table 14-1 of the *CEQR Technical Manual* , and estimates of workers by use, as follows:
Residential use: 41 lbs/wk per dwelling unit.
General retail: 79 lbs/wk per employee; assume 3 employees per 1,000 sf.
Storage/wholesale/warehousing use: use wholesale rate - 66 lbs/wk per employee; assume 1 employee per 1,000 sf.
All community facility uses (excluding schools): 0.03 lbs/wk. per sf.

F. THE FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION)

Under the RWCDS in the With-Action condition, the Development Site is expected to accommodate 1,578 residential units, 21,183 sf of local retail uses, and 9,678 sf of community facility uses (for conservative analysis purposes the community facility is assumed to be medical offices; however, it is anticipated that the community facility space would be a daycare facility). The Proposed Actions would result in an overall increase in solid waste generation, as discussed below.

Based on the citywide average rates for solid waste generation, the total solid waste generation due to the Proposed Actions would be approximately 35.0 tons per week, which represents a 24.4-ton increment in weekly waste generation relative to the No-Action condition. Given that approximately 151,560 tons of public and private sector solid waste is generated in the City per week under existing conditions, the incremental increase of 24.4 tons per week would represent approximately 0.02 percent of the City's current solid waste generation. It would also represent approximately 0.01 percent of the City's anticipated future weekly commercial and DSNY-managed waste generation in 2025 (estimated at 189,830 tons per week), as projected in the SWMP.

Residential and community facility uses would generate 32.5 tons of solid waste per week under the With-Action condition (refer to **Table 12-3**). Solid waste generated by residential and community facility uses would be collected by DSNY trucks and would be served by existing DSNY collection routes. As a general practice, DSNY adjusts its operations to service the community. Residents will be required to participate in the City's recycling program for paper, metals, and certain types of plastics and glass.

TABLE 12-3
With-Action Solid Waste Generation on Projected Development Sites

Use	Floor Area (sf)	Population		Solid Waste Generation Rate (lbs/wk)		Solid Waste Generation	
						(lbs/wk)	(tons/wk)
Residential	1,578 DU	1,578	households	41	per household	64,698	32.3
Retail	21,183	64	employees	79	per employee	5,056	2.5
Storage/Wholesale/Warehousing	0	0	employees	66	per employee	0	0.0
Community Facility (non-school)	9,678	-	-	0.03	per sf	290	0.1
Total Solid Waste Generation						**70,044**	**35.0**
Solid Waste Handled by DSNY (includes residential and all CF uses)						***64,988***	***32.5***
Solid Waste Handled by Private Carters						***5,056***	***2.5***

Notes:
Solid waste generation is based on citywide average waste generation rates presented in Table 14-1 of the *CEQR Technical Manual* , and estimates of workers by use, as follows:
Residential use: 41 lbs/wk per dwelling unit.
General retail: 79 lbs/wk per employee; assume 3 employees per 1,000 sf.
Storage/wholesale/warehousing use: use wholesale rate - 66 lbs/wk per employee; assume 1 employee per 1,000 sf.
All community facility uses (excluding schools): 0.03 lbs/wk. per sf.

As shown in **Table 12-4**, compared to the No-Action condition, the Proposed Actions would result in an approximately 21.9-ton increase in weekly solid waste handled by DSNY. This would represent approximately 0.08 percent of the City's anticipated future waste generation handled by DSNY (estimated at 115,830 tons per week), as projected in the SWMP. Based on the typical DSNY collection truck capacity of approximately 12.5 tons, the new residential and community facility uses introduced by the Proposed Actions would be expected to generate solid waste equivalent to approximately 1.75 truckloads per week. This increase represents less than 0.08 percent of DSNY's fleet of 2,100 waste collection trucks, and is therefore not expected to overburden the DSNY's solid waste handling services.

This location receives DSNY residential collection three times per week, recycling (metal, glass, plastic, paper) once per week, with a separate weekly collection also for organics.

TABLE 12-4
Comparison of Weekly Solid Waste Generation on Projected Development Sites
(Existing, No-Action, With-Action Conditions)

	Existing Condition	No-Action Condition	With-Action Condition	Increment (No- Action to With-Action)
Total Solid-Waste Generation (tons/wk)	1.0	10.6	35.0	24.4
Solid Waste Handled by DSNY (tons/wk)	0.0	10.6	32.5	21.9
Solid Waste Handled by Private Carters (tons/wk)	1.0	0.0	2.5	2.5

As also shown in **Table 12-4**, compared to the No-Action condition, the Proposed Actions would result in an approximately 2.5-ton increase in weekly solid waste handled by private carters. This would represent less than approximately 0.01 percent of the City's anticipated future commercial waste generation (estimated at 74,000 tons per week), as projected in the SWMP. Based on the typical commercial carter capacity of between 12 and 15 tons of waste material per truck, the Proposed Actions would require one additional collection truck per week compared to the No-Action condition. There are more than 2,000 private carting businesses authorized to serve New York City, and it is expected that their collection fleet of over 4,000 private carting trucks would be sufficiently flexible to accommodate this increased demand for solid waste collection. The net increment in commercial solid waste handled by private carters represents less than 0.03 percent of the over 4,000 licensed private carting trucks in the City, and would therefore not overburden the City's waste management system.

Overall, the uses facilitated by the Proposed Actions would be expected to generate solid waste equivalent to approximately 1.75 DSNY truck loads per week and one commercial carter truck loads per week. This increase would represent less than 0.08 percent of DSNY's collection fleet and less than 0.03 percent of the private carting fleet, and would therefore not overburden existing DSNY or commercial solid waste handling services. Therefore, the Proposed Actions would not overburden the City's solid waste management capacity and would not have significant adverse impacts on solid waste and sanitation services. Furthermore, the Proposed Actions would not conflict with the SWMP or have a direct effect on a solid waste management facility. As a result, no significant adverse impact on the City's solid waste and sanitation services would occur.

Under the Proposed Actions, it is anticipated that there would be no geometric changes nor operational changes (e.g., roadway closures, reversals, etc.) to the street network used by sanitation trucks to access the garage located on the block bounded by Nostrand Avenue, Winthrop Street, New York Avenue and Parkside Avenue. In addition, there would be no changes to curbside parking regulations on block fronts along Winthrop Street, New York Avenue and Parkside Avenue which are currently used for garage access and operations. (Sidewalks and curbside space adjacent to the DSNY garage are routinely used for sanitation truck and employee auto parking as well as for the storage of snow plow blades and other equipment.) Therefore, the Proposed Actions are not expected to directly affect operations at the DSNY garage.

On-Site Solid Waste Handling and Storage

Solid waste and recycling would be separated by tenants. A refuse chute would be provided at each building core, two for each building, which would connect to trash compactors at the ground floor. Two trash compactors would be provided in each of the proposed buildings. Trash would be compacted into bags and relocated to a refrigerated refuse storage room, one for each building, which would be located at the perimeter of each building. Adjacent to each floor's refuse chute, a recyclable's closet would be provided for the tenants to leave their recyclables for building porter pickup on a daily basis to be moved to the refuse storage room through the service elevator in off-peak hours.

Refuse storage rooms would be located on the building perimeter and provided with small roll down doors to allow for refuse to be removed from the building and placed on the sidewalk on Franklin Avenue (the Phase I building) and Montgomery Street (the Phase II building) for DSNY pickup. It is anticipated that the refuse pile on Franklin Avenue adjacent to the Phase I building would have a footprint of approximately 255 sf (3.5 feet wide and 72.9 feet long) with a volume of approximately 893 cubic feet. The refuse pile on Montgomery Street adjacent to the Phase II building also would have a footprint of approximately 255 sf with a volume of approximately 893 cubic feet. Refuse bags would be placed on the sidewalk in the evening on the day prior to collection (for a period of about 12 hours). DSNY collection normally occurs in the 6:30 AM to 11:00 AM period. Recyclables would occupy an area of about 270 cubic feet to the left or right side of the area designated for residential waste collection if the collection of waste and recycling would occur on the same day.

The commercial waste from the site's 22,518 gsf of retail space and the 9,678 sf of community facility space would be put at the curb at the earliest an hour or two before closing and would remain on the curb until collection, which is typically before 7AM the following day.

The refuse and recycling set out for collection would be carefully managed to minimize effects upon pedestrian and vehicular traffic. Refuse movement and cleanup post-DSNY pick-up would be carefully managed by the building management to ensure that there is no mess on the sidewalk once the refuse and recycling is removed. With these solid waste management measures in place, it is anticipated that the solid waste generated by the Proposed Development would not have negative effects on the public health and community character of the neighborhood.