5.1 INTRODUCTION

This Chapter describes the potential impacts of the Proposed Project on the transportation system, including automobile circulation and parking, public and private bus transportation, pedestrian circulation and subway operations. The Proposed Project would change the configuration of access to the station, including the widening and/or reconfiguration of three of the four existing street stair entrances at East 68th Street and the addition of street stairs at East 69th Street and midblock between East 68th Street and East 69th Street (together referred to as the "new stairs at East 69th Street"), and would modify the street geometry on East 69th Street.

The Proposed Project also includes ADA-compliant elevators providing access from the street to the platforms. However, most passengers are expected to use the stairs for subway access and, therefore, the new elevators are not expected to affect passenger circulation to a significant degree. As such, this analysis focuses on the performance of passenger access to the station, pedestrian circulation in the vicinity of the new and reconfigured street stairs, and traffic circulation in the vicinity of the new street stairs on East 69th Street. The assessment of transportation impacts during construction is provided in Chapter 13.

This chapter consists of the following sections:

- Traffic (Section 5.2)
- Transit (Section 5.3)
- Parking (Section 5.4), and
- Pedestrians (Section 5.5)

For each of these transportation elements, an element-specific study area is defined. Each section provides a discussion of the methodology for data collection and analysis and a discussion of impact criteria. In order to assess potential project-related impacts to the transportation system and determine appropriate mitigation measures, each section describes existing conditions and provides an analysis of conditions expected without the Proposed Project, conditions with the Proposed Project, and conditions under the Proposed Project *with Option E1*. The discussion in this chapter applies to both the Proposed Project and the Proposed Project *with Option E1*, unless otherwise indicated.

The Proposed Project is expected to be completed before 2020, and conditions with (Build) and without (No-Build) the Proposed Project were analyzed to assess impacts for 2020. The Second Avenue Subway, expected to be operational in 2017, would divert a portion of the riders using the IRT line (which serves the 68th Street/Hunter College Station) to the Second Avenue Subway, and this change in ridership was accounted for in the transportation projections.

The Proposed Project would not substantially change the number of passengers using the station or the ❻ Train, would not change traffic patterns in the area, would not influence population characteristics, and would not substantially change land use in the area. Specific study areas for the multiple transportation modes (e.g., transit, pedestrian, auto traffic) were established considering these project characteristics and are discussed in the appropriate sections below.

As per the 2012 CEQR Technical Manual, background growth in this study area would be 0.25 percent per year for the first five years (through 2016) and 0.125 percent per year for the next four years (through 2020), and the corner, sidewalk, crosswalk, subway stair, turnstile, and

traffic volumes were increased accordingly for the 2020 horizon year. In addition to the background growth, subway and street pedestrian volumes from the following proposed development projects that would affect transportation conditions in the area were considered for projecting the No-Build conditions for transit and auto trips in addition to the background growth rate:

- Hospital for Special Surgery Expansion
- Memorial Sloan Kettering Cancer Center – Phase II
- Memorial Hospital for Cancer and Allied Diseases

Detailed information regarding the additional pedestrian, subway transit and auto trips attributed to each of these developments is provided in Appendix C. In total, these developments would add approximately 181, 43, and 208 new subway trips to the 68th Street/Hunter College Station during the weekday AM, midday, and PM peak hours, respectively.

The No-Build Alternative does not include the proposed Memorial Sloan-Kettering Cancer Center Ambulatory Care Center and CUNY – Hunter College – Science and Health Professions Building ("new facility"). Subsequent to the evaluation of transportation resources for this EA, information regarding potential transportation effects of this new facility became available. This new facility would consist of more than 1.1 million square feet of medical treatment and research facilities to be located east of York Avenue at East 73rd Street. According to the Draft Environmental Impact Statement (DEIS) prepared for this new facility, the facility is expected to result in 786, 390, and 730 project-generated subway trips during the weekday morning, midday, and evening peak hours, respectively. According to the DEIS for the new facility, visitors traveling to and from the new facility via subway would be distributed among three subway stations: the 68th Street/Hunter College Station, the 77th Street Station (Lexington Avenue Line) and the planned 72nd Street subway station (Q line) along the future Second Avenue Subway.

According to the DEIS,[13] fewer than 200 passengers with a destination to or from the new facility would use the 68th Street/Hunter College Station during the peak hours (and therefore, did not cross the threshold for which a detailed station analysis is required for the DEIS). While these additional passengers using the 68th Street/Hunter College Station would contribute to further deterioration of this station's performance, additional analysis to account for them is not warranted for purposes of this EA; given the small number of additional passengers generated by the new facility that would use the 68th Street/Hunter College Station relative to the total number of passengers at this station during peak hour (approximately 7,200 exiting and 1,800 entering in the AM peak), the increase is accounted for in background growth and the results of the transportation analysis would not appreciably change. The additional passengers using the 68th Street/Hunter College Station associated with the new facility can be considered to be accounted for in the No-Build background growth and are thus not factored into the No Build and Build analyses or the tables and text of this EA.

5.2 TRAFFIC

The Proposed Project includes new sidewalk bulb-outs on the south side of East 69th Street west of Lexington Avenue to provide adequate room for subway entrances at this location. In addition, the Proposed Project *with Option E1* provides new sidewalk bulb-outs on the south side of East 69th Street east of Lexington Avenue to provide adequate room for subway entrances at this

[13] Memorial Sloan - Kettering Cancer Center Ambulatory Care Center and CUNY - Hunter College - Science and Health Professions Building, Draft Environmental Impact Statement (March 2013).

location. The new subway entrances could increase pedestrian activity at the intersection of Lexington Avenue and East 69th Street. Because traffic conditions could be affected by changes in pedestrian volumes and changes in roadway geometry, an analysis of traffic conditions during operation of the Proposed Project was conducted. A study area was established that encompasses the intersection at the location of the proposed station street entrances at or near East 69th Street. The additional subway access at East 69th Street would divert passengers from the street stairs at East 68th Street. As a result, fewer passengers would be using the East 68th Street/Lexington Avenue sidewalks and crosswalks. Therefore, traffic conditions at the East 68th Street/Lexington Avenue intersection were not analyzed.

Traffic conditions were also analyzed to identify potential traffic impacts that may occur during construction of the project (see Chapter 13 for impacts during construction).

5.2.1 METHODOLOGY

5.2.1.1 Data Collection

Traffic volumes for the Lexington Avenue/East 69th Street intersection were developed based on manual turning movement counts and Automatic Traffic Recorder (ATR) counts. Manual turning movement counts and pedestrian crosswalk counts were conducted on Wednesday, November 9, 2011 during the AM (7:30 to 9:30 AM), midday (12:00 to 2:00 PM), and PM (4:30 to 6:30 PM) peak periods. The peak hour factors (PHF) and heavy vehicle percentages for each of the intersection approaches were calculated for each weekday peak hour. ATR machines were placed on Lexington Avenue between East 69th Street and East 68th Street for a continuous period between Saturday, November 5, 2011 and Sunday, November 13, 2011. Based on the traffic data, the weekday peak hours were determined to be:

- Weekday AM Peak Hour: 8:00 – 9:00 AM
- Weekday Midday Peak Hour: 1:00 – 2:00 PM
- Weekday PM Peak Hour: 5:30 – 6:30 PM

A physical inventory and field reconnaissance survey of this intersection was conducted to establish the existing physical characteristics including traffic control devices (e.g., traffic signals, stop signs, yield signs), roadway and lane widths, the number of travel lanes, crosswalk widths, curb parking regulations, lane utilization (turn prohibitions), bus stop locations, and fire hydrant locations. Traffic signal timing was obtained from the New York City Department of Transportation (NYCDOT) and verified in the field.

5.2.1.2 Analysis Methodology

In accordance with the CEQR Technical Manual, the operations of the signalized intersections in the traffic study area were analyzed by applying the methodologies presented in the 2000 Highway Capacity Manual (HCM) using the Highway Capacity Software (HCS+ 5.5). The Level of Service (LOS) of a signalized intersection is defined in terms of control delay per vehicle (seconds per vehicle). Control delay is the portion of total delay experienced by a motorist that is attributable to the traffic signal. It is composed of initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Several factors contribute to the delay at a signalized intersection including cycle length, pedestrian crossing times, progression/signal coordination, and volume-to-capacity (v/c) ratios. For signalized intersections, LOS A describes operations with minimal delays (up to 10 seconds per vehicle), while LOS F describes operations with delays in excess of 80 seconds per vehicle. Under LOS F, excessive delays and longer queues are common as a result of over-saturated conditions (i.e., demand rates exceeding the capacity).

Delays experienced at LOS A, B, C or mid-D (less than 45 seconds per vehicle) are generally considered "acceptable" operating conditions according to the CEQR Technical Manual. Conversely, LOS E and F are generally considered "unacceptable" operating conditions.

5.2.1.3 Impact Criteria

The criteria for traffic impacts used in the traffic analyses are those contained in the CEQR Technical Manual for signalized intersections. The function of a transportation element, including automobile transportation elements, and pedestrian and subway transportation elements, can be quantified in terms of LOS, and LOS is used in the CEQR Technical Manual to identify impacts on transportation elements. In addition, projected LOS and clearance times for transportation elements can be used to evaluate and compare different approaches to improvements to a given element. As such, the LOS for transportation elements was established for the existing conditions and was projected to 2020 to identify impacts due to the Proposed Project.

For signalized intersections, increases in lane group delays of five seconds or more beyond the No-Build Alternative conditions at LOS D, five seconds or more beyond the No-Build Alternative conditions at LOS E, four seconds or more beyond the No-Build Alternative conditions at LOS F (less than 120 seconds of delay), or three seconds or more beyond the No-Build Alternative conditions at LOS F (at or exceeding 120 seconds of delay) are considered significant and require mitigation. Also, should a level of service deteriorate from acceptable LOS A, B, or C (No-Build Alternative conditions) to marginally unacceptable mid-LOS D or unacceptable LOS E or F (No-Build Alternative conditions), such changes are also considered significant (unless the Proposed Project generates fewer than five vehicles through the entire intersection).

5.2.2 EXISTING CONDITIONS

There are three roads located adjacent to the 68th Street/Hunter College Station including Lexington Avenue, East 68th Street, and East 69th Street. Lexington Avenue is a one-way five lane roadway that is composed of three southbound travel lanes with parking on each side of the street. During the AM peak period between 7:00 and 10:00 AM on weekdays (Monday through Friday), the western curb lane is used as an exclusive bus lane. East 68th Street traffic travels in the eastbound direction and East 69th Street traffic travels in the westbound direction. East 68th Street and East 69th Street accommodate one travel lane with parking lanes on both sides of the street.

The Lexington Avenue at East 69th Street signalized intersection was analyzed for the weekday AM, midday, and PM peak hours using HCS+ (version 5.5). Based upon these results (Table 5-1), all movements operate at an LOS C or better during the three peak hours.

Table 5-1:
2011 Existing Conditions: Signalized Intersection Level of Service
Lexington Avenue at East 69th Street

Intersection	Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Lexington Avenue at East 69th Street												
Westbound	LT	0.50	24.1	C	LT	0.40	22.1	C	LT	0.45	22.9	C
Southbound	TR	0.57	16.9	B	TR	0.41	14.8	B	TR	0.58	17.0	B
Overall			18.3	B			16.3	B			18.0	B

Notes: L = Left Turn, T= Through, R = Right Turn, LOS = Level Of Service, Sec = Seconds.

Source: Sam Schwartz Engineering, DPC, 2015

5.2.3 2020 FUTURE NO BUILD CONDITIONS

Based on background growth rates identified in the CEQR Technical Manual, No-Build traffic conditions (conditions expected if the project were not to progress) at the Lexington Avenue/East 69th Street signalized intersection were projected for the three peak hours (weekday AM, midday, and PM peak hours) for the 2020 analysis year. The capacity analysis results for the Lexington Avenue/East 69th Street intersection are provided in Table 5-2 and show that there would be no change in LOS and minimal change in delay between the existing conditions and the 2020 No-Build Condition.

Table 5-2:
2020 No-Build Conditions: Signalized Intersection Level of Service
Lexington Avenue at East 69th Street

Intersection	Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Lexington Avenue at East 69th Street												
Westbound	LT	0.51	24.3	C	LT	0.41	22.2	C	LT	0.46	23.1	C
Southbound	TR	0.58	17.1	B	TR	0.42	14.9	B	TR	0.59	17.2	B
Overall			18.4	B			16.4	B			18.2	B

Notes: L = Left Turn, T= Through, R = Right Turn, LOS = Level Of Service, Sec = Seconds.

Source: Sam Schwartz Engineering, DPC, 2015

5.2.4 2020 BUILD CONDITIONS

Traffic conditions at the Lexington Avenue/East 69th Street signalized intersection were analyzed for the weekday AM, midday, and PM peak hours for the 2020 analysis year under the Build condition (Table 5-3). To determine the presence of potential significant traffic impacts resulting from the operation of the Proposed Project, the 2020 No-Build condition analysis results for the Lexington Avenue at East 69th Street intersection were compared to the 2020 Build condition for the weekday AM, midday, and PM peak hours. Traffic conditions for the 2020 Build condition would be almost identical to the 2020 No-Build condition, with all movements projected to operate at LOS C or better.

Table 5-3:
2020 Build Conditions: Signalized Intersection Level of Service
Lexington Avenue at East 69th Street

Intersection	Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Lexington Avenue at East 69th Street												
Westbound	LT	0.52	24.7	C	LT	0.40	22.0	C	LT	0.48	23.5	C
Southbound	TR	0.58	17.1	B	TR	0.41	14.8	B	TR	0.59	17.2	B
Overall			18.5	B			16.3	B			18.3	B

Notes: L = Left Turn, T= Through, R = Right Turn, LOS = Level Of Service, Sec = Seconds.

Source: Sam Schwartz Engineering, DPC, 2015

As a result of the Proposed Project, traffic under the 2020 Build and No-Build condition would remain virtually unchanged from the existing condition. The sidewalk bulb-outs and the additional number of passengers entering and exiting the proposed 69th Street stairs are not expected to impact traffic at the East 69th Street/Lexington Avenue intersection. Based on the intersection impact criteria identified in the CEQR Technical Manual, there would be no significant adverse traffic impacts as a result of the Proposed Project. Therefore, no mitigation measures would be warranted.

Under the Proposed Project *with Option E1*, vehicular traffic volumes and the analysis results for the 2020 Build Condition would be the same as for the Proposed Project. There would be no significant adverse traffic impacts as a result of the Proposed Project *with Option E1*. Therefore, no mitigation measures would be warranted.

5.3 SUBWAY TRANSIT

To ensure an accurate representation of future passenger demand at the 68th Street/Hunter College Station, the analysis of subway transit considered major destinations likely to be frequented by users of the station that may not be included in background growth, including hospitals and other medical facilities to the east and north of the station. This approach is consistent with similar transportation analyses for subway projects such as the Second Avenue Subway.

To evaluate potential impacts of the Proposed Project on transit, a transit study area has been defined as the area adjacent to and including the 68th Street/Hunter College Station and the proposed stairs at East 69th Street. The transit study area encompasses subway passenger activity at the four subway stairs connecting the station mezzanine to the street at East 68th Street, the mezzanine and control area (R-246), the platform stairs connecting the mezzanine to the platform, and the proposed street stairs, platform stairs and mezzanines for the new East 69th Street access points (see Figures S-3, S-4, and S-5).

In order to project the change in ridership in the transit study area, this analysis considered background growth figures derived from the CEQR Technical manual, and known development projects that could influence ridership at the 68th Street/Hunter College Station. As per the CEQR Technical Manual, background growth in the transit study area would be 0.25 percent per year for the first five years (through 2016) and 0.125 percent per year for the next four years (through 2020). Subway passenger volumes were increased accordingly for the 2020 analysis year.

5.3.1 METHODOLOGY

5.3.1.1 Data Collection

Pedestrian circulation at the eight 68th Street/Hunter College subway station stairs (four at street level and four at platform level) and turnstiles were analyzed during the peak 15-minute period on a weekday during the AM, midday, and PM peak hours. Street stair data were collected by MTA NYCT in April 2010 for the AM and PM peak periods and were collected for the midday peak period during a field visit on November 9, 2011. All of the count data were summarized into 15-minute intervals. The stair data were also used to calculate the entering and exiting turnstile data. These volumes were checked against the entering turnstile registration data provided by MTA NYCT. Measurements were taken of the total width at the four street stairs and the effective stairway widths were calculated by reducing the total width by six inches on either side of any obstructions (walls, handrails, etc.).

5.3.1.2 Analysis Methodology and Impact Criteria

Subway Stairs

The volume to capacity (v/c) ratio and LOS for stairways is based on the peak 15-minute passenger volume divided by the capacity. The MTA NYCT guideline capacity for stairs is 10 pedestrians per foot per minute (PFM), which is the rate based on the Volume/SVCD (service volume between LOS C and D) capacity ratio. The border between LOS C and LOS D at a v/c ratio of 1.00 has been established by MTA NYCT as the minimum acceptable standard for pedestrian conditions. Therefore, LOS C/D is used to determine the design capacity of the stairway locations in a station during each peak 15-minute period. Details of the subway stair LOS calculation procedure are provided in Appendix C.

Platform Stairs

The LOS calculation averages passenger volumes over a 15-minute time period and therefore does not always capture congested conditions during the short-term surges when trains arrive within the 15-minute time period. Such conditions can occur as a result of large volumes of passengers using the stairs immediately following a train arrival. To better account for the peaked nature of surged passenger flow, MTA NYCT also evaluates platform stair performance based on the number of seconds it takes for a detraining surge to move up the stair ("clearance time"). The 80th percentile surge (the surge volume that will meet or exceed 80 percent of all surges during the peak hour) is thus analyzed and crush capacity of the stair (after counter flow) is assumed for exit flow.

New York City Transit Operations Planning has established a Clearance Time guideline of 30 seconds for platform stairs to clear during crush conditions.[14] The goal is to have a vertical circulation element clear the 80th-percentile detraining surge (platooned group of pedestrians) within 30 seconds.

Control Areas

Station control areas separate the unpaid and paid areas of the station and are composed of turnstiles and service gates. The v/c ratios of these fare control elements providing access to the station are based on the peak 15-minute passenger volume divided by the 15-minute capacity.

[14] *Methodology for Surged Flow Analysis,* NYCT Division of Operations Planning/Station Planning, December 2012.

The MTA NYCT guideline capacities are 420 entries and 645 exits at turnstiles and 750 (combined entries and exits) at service gates. For these control area elements, overall capacity is measured by the number of elements, the MTA NYCT optimum capacity per element, surging factors, and friction factors. For regular turnstiles, if the No Build Condition v/c ratio is less than 1.00 but the Build Condition v/c ratio increases to 1.00 or greater, the impact is considered significant. If both the No Build and Build condition v/c ratios are 1.00 or greater, a 0.01 change in v/c ratio is considered significant. Details of the control area LOS calculation procedure are provided in Appendix C.

5.3.2 EXISTING CONDITIONS

The 68th Street/Hunter College Station is served by the MTA NYCT 6 Train on the Lexington Avenue IRT Line. The 4 Train also serves the station at night. The 6 Train operates between Pelham Bay Park in the Bronx and City Hall in Manhattan. The line serves all local stops throughout Manhattan but has both local and express service in the Bronx during specified periods of the day. All 6 Trains stop at the 68th Street/Hunter College Station.

The 68th Street/Hunter College Station is located under Lexington Avenue extending from between East 67th and East 68th Streets northward to between East 69th and East 70th Streets. There are stairs on all four corners of the East 68th Street and Lexington Avenue intersection that connect the mezzanine level of the station to the street. The array of stairs at East 68th Street is located towards the southern end of the station. There are no street stairs that provide access to the northern end of the station.

The current 68th Street Subway wall-to-wall stair widths at their narrowest points are:

- Southeast corner (O2/O4) = 60 inches
- Southwest corner (O1/O3) = 88 inches
- Northeast corner (S4) = 55 inches
- Northwest corner (S3) = 55 inches

All of the subway passengers are served by a single mezzanine area (control area R-246) that is currently composed of 14 turnstiles and two service gates. There is also a direct connection between the basement of the West Building of Hunter College and the west side of the station mezzanine. (The access point to Hunter College from the station is staffed with security and open only to Hunter College staff and students with a valid ID card. It is only open on school days between 7:00 AM and 6:00 PM.)

General Station Observations

Heavy crowding was observed on the northbound (uptown) platform during the AM peak period as subway passengers attempted to exit the station using the two available platform stairs (P2 and P4). During periods when these stairs were crowded, it was difficult for passengers to access the northbound platform from the mezzanine to board a train. Also during this period and within the mezzanine, queues were observed to emanate from the crowded northeast (S4) and southeast (O2/O4) street stairs when passengers attempted to exit the station. At times during this period, these street stair queues interfered with the ability for passengers to move freely within the station mezzanine. Congestion was also observed at street level during the weekday AM and PM peak periods at the street stairs located on the northeast and northwest corners of East 68th Street since these stairs are located in close proximity to their respective street corners.

Street Stairs

Detailed stairway analyses were conducted for the four street stairs in the 68th Street/Hunter College Station. As illustrated in Table 5-4, both street stairs on the east side of Lexington Avenue operate at LOS F in the AM peak hour, and the street stair on the southeast corner of the intersection operates at LOS E during the PM peak. The street stair on the northwest corner of the intersection operates at LOS D in the AM peak, while the stair on the northeast corner operates at LOS D in the PM peak hour. Otherwise, the stairs operate at LOS C or better during the three peak hours.

Table 5-4:
2011 Existing Conditions: Subway Street Stair Level of Service
68th Street/Hunter College Station

Stair ID	Corner	Effective Width (feet)	Peak 15-Min Entry Volume			Peak 15-Min Exit Volume			v/c Ratio			LOS		
			AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
S4	NE	3.58	231	133	418	531	141	158	1.85	0.64	1.27	F	B	D
S3	NW	3.58	43	88	208	374	37	83	1.06	0.28	0.64	D	A	B
O2/O4	SE	4.00	138	233	464	708	226	221	1.89	0.95	1.37	F	C	E
O1/O3	SW	6.33	44	104	166	504	141	272	0.79	0.33	0.59	C	A	B

Source: Sam Schwartz Engineering, DPC, 2015

Subway Platform Stairs

Analyses were conducted for the subway platform stairs in the 68th Street/Hunter College Station. The results of the analysis, summarized in Table 5-5, indicate that the north stair on the northbound platform (P4) operates at LOS D/E during the AM peak hour. Except for stair P4 during the AM peak hour, all of the platform stairs operate at an LOS C or better during the weekday AM, midday, and PM peak hours.

The clearance times for the four platform stairs were also calculated. In the AM peak hour, the clearance times for platform stairs P1, P3, P2, and P4 are 18, 88, 59, and 134 seconds, respectively. In the midday peak hour, the clearance times for platform stairs P1, P3, P2, and P4 are 18, 4, 16, and 50 seconds, respectively. In the PM peak hour, the clearance times for platform stairs P1, P3, P2, and P4 are 6, 15, 43, and 78 seconds, respectively.

Table 5-5:
2011 Existing Conditions: Subway Platform Stairs Level of Service
68th Street/Hunter College Station

Stairway Location	ID	Peak 15-Min Entry Volumes			Peak 15-Min Exit Volumes			v/c Ratio			LOS		
		AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
South S/B Platform	P1	216	248	487	124	103	42	0.37	0.37	0.52	A	A	B
North S/B Platform	P3	210	314	575	502	22	117	0.87	0.34	0.72	C	A	C
South N/B Platform	P2	17	63	151	511	110	269	0.60	0.20	0.49	B	A	B
North N/B Platform	P4	13	84	179	1117	326	478	1.33	0.51	0.81	D/E	B	C

Source: New York City Transit, 2012

Turnstiles

Analyses were also conducted for control area R-246 in the 68th Street/Hunter College Station. The results of the analyses, summarized in Table 5-6, indicate that the control area operates at LOS B during the weekday AM and PM peak hours and at LOS A during the midday peak hour.

Table 5-6:
2011 Existing Conditions: Subway Control Area Level of Service
68th Street/Hunter College Station

Station Element	Qty	Peak 15 Minute Entering Volume			Peak 15 Minute Exiting Volume			15 Minute Capacity for Entries	15 Minute Capacity for Exits	v/c Ratio			LOS		
		AM	MD	PM	AM	MD	PM			AM	MD	PM	AM	MD	PM
Turnstile	14	456	709	1,393	2,254	562	906	5,292	6,502	0.58	0.27	0.49	B	A	B

Source: Sam Schwartz Engineering, DPC, 2015

Summary of Operations for Station Elements

During the morning peak period, the northbound platform stairs and adjacent landings experiences heavy crowding as pedestrians queue to exit at one of two stairs that connect to the mezzanine level. Almost every observed northbound detraining surge in the morning resulted in a large queue of passengers waiting to exit at stair P4. In addition, 11 of the 20 surges resulted in queuing at the bottom of stair P2. Although stairs P2 and P4 operate at LOS B and D/E, respectively, during the morning peak 15-minute period, their clearance times are well over the 30-second guideline during the morning peak period. The P2 stair takes 59 seconds to clear and the P4 stair takes 134 seconds to clear during the AM peak hour. On the southbound platform, the P1 stair takes 18 seconds to clear and the P3 stair takes 88 seconds to clear during the AM peak hour.

Within the 68th Street/Hunter College Station mezzanine, heavy crowding was observed at the bottom of the street stairs as pedestrians queued from street stair S4 located at the northeast corner of the Lexington Avenue and East 68th Street intersection and street stair O2/O4 located at the southeast corner of the intersection. During certain periods, the pedestrian queue emanating from these east side street stairs extended back to disrupt passenger movement through the mezzanine level. Heavy crowding was also observed at street level during the weekday AM and PM peak periods at street stairs S4 and S3 as entering/exiting subway passengers mixed with pedestrians traversing along the sidewalk at the corner. Congestion was also observed at street stair O2/O4 as entering and exiting passengers competed at street level for limited storage space as pedestrians queued waiting to enter the station.

5.3.3 2020 FUTURE NO BUILD

The Second Avenue Subway project is proposed to include a new two-track line operating below Second Avenue from 125th Street to the Financial District in Lower Manhattan. Phase One is currently under construction along a section of the line from 105th Street to 63rd Street with stations at 96th Street, 86th Street, 72nd Street, and a connection to the existing Lexington Avenue/63rd Street Station. This phase of construction is expected to be completed in 2017.

Many subway passengers currently using the ❻ Train to access the East Side are expected to switch to the Second Avenue Subway once it is operational. MTA NYCT has developed a set of reduction factors for subway riders at the 68th Street/Hunter College Station used in their preliminary analysis of the station. These factors account for passengers that would divert to the

Second Avenue Subway Line. These diversion factors, summarized in Table 5-7, are used to project 2020 future conditions for subway transit and pedestrian analyses in this EA.

Table 5-7:
Projected Diversion of Passengers from 68th Street/Hunter College Station to Second Avenue Subway

Peak Hour	Diversions	
	Entry	Exit
AM	58.0%	17.0%
Midday	37.5%	37.5%
PM	17.0%	58.0%

Source: Sam Schwartz Engineering, DPC, 2015

Street Stairs

Using CEQR methodology to determine future increases in passengers using the station, street stair performance characteristics were projected for the 2020 analysis year (see Table 5-8). Due to the diversions away from the 68th Street/Hunter College Station due to the Second Avenue Subway, the analysis revealed improvements in stair performance; however, the street stairs on the east side of Lexington Avenue would continue to operate at LOS D or worse during the AM and PM peak hours in 2020.

Table 5-8:
2020 No-Build Conditions: Subway Street Stairs Level of Service 68th Street/Hunter College Station

Stair ID	Location	2020 No-Build		
		Volume	v/c Ratio	LOS
AM Peak Hour				
S4	NE Corner	618	1.54	E
S3	NW Corner	333	0.85	C
O2/O4	SE Corner	727	1.65	E
O1/O3	SW Corner	442	0.58	B
Midday Peak Hour				
S4	NE Corner	187	0.44	A
S3	NW Corner	79	0.18	A
O2/O4	SE Corner	304	0.63	B
O1/O3	SW Corner	155	0.21	A
PM Peak Hour				
S4	NE Corner	496	1.06	D
S3	NW Corner	210	0.45	A
O2/O4	SE Corner	561	1.09	D
O1/O3	SW Corner	255	0.33	A

Source: Sam Schwartz Engineering, DPC, 2015

According to the CEQR Technical Manual, passengers using stairs operating at LOS D experience crowded conditions with reduced walking speeds. Passengers using stairs operating at LOS E experience congestion, shuffling and queuing, while passengers using stairs operating at LOS F experience severe congestion and queuing.

Platform Stairs

Analyses were conducted for the subway platform stairs for the three peak hours during the 2020 analysis year. All subway platform stairs are projected to operate at LOS C or better except for stair P4 during the AM peak hour which would operate at LOS D (Table 5-9).

The clearance times for the four platform stairs were also calculated for the 2020 No-Build condition during the AM and PM peak hours (Table 5-10). In the AM peak hour, the clearance times for platform stairs P1, P3, P2, and P4 are projected to be 15, 82, 53, and 121 seconds, respectively. In the midday peak hour, the clearance times for platform stairs P1, P3, P2, and P4 are projected to be 13, 3, 12, and 33 seconds, respectively. In the PM peak hour, the clearance times for platform stairs P1, P3, P2, and P4 are projected to be 4, 9, 20, and 34 seconds, respectively.

Table 5-9:
2020 No-Build Conditions: Subway Platform Stairs Level of Service
68th Street/Hunter College Station

Stair ID	Location	2020 No-Build		
		Volume	v/c Ratio	LOS
AM Peak Hour				
P1	South S/B Platform	207	0.23	A
P3	North S/B Platform	548	0.69	C
P2	South N/B Platform	468	0.53	B
P4	North N/B Platform	1012	1.20	D
Midday Peak Hour				
P1	South S/B Platform	228	0.24	A
P3	North S/B Platform	216	0.22	A
P2	South N/B Platform	115	0.13	A
P4	North N/B Platform	273	0.34	A
PM Peak Hour				
P1	South S/B Platform	471	0.46	B
P3	North S/B Platform	587	0.60	B
P2	South N/B Platform	266	0.29	A
P4	North N/B Platform	387	0.45	A/B

Source: New York City Transit, 2012

Table 5-10:
2020 No-Build Conditions
Platform Stairs Clearance Times (Seconds)

Stair ID	Station Element	Location	Clearance Time (Sec)
AM Peak Hour			
P1	Stairway	South S/B Platform	15
P3	Stairway	North S/B Platform	82
P2	Stairway	South N/B Platform	53
P4	Stairway	North N/B Platform	121
Midday Peak Hour			
P1	Stairway	South S/B Platform	13
P3	Stairway	North S/B Platform	3
P2	Stairway	South N/B Platform	12
P4	Stairway	North N/B Platform	33
PM Peak Hour			
P1	Stairway	South S/B Platform	4
P3	Stairway	North S/B Platform	9
P2	Stairway	South N/B Platform	20
P4	Stairway	North N/B Platform	34

Source: New York City Transit, 2012

Turnstiles

Using CEQR methodology to determine future increases in passengers using the station in 2020 and considering the operation of Second Avenue Subway for predicted passenger diversions, platform stair performance characteristics were projected for the 2020 analysis year (see Table 5-11). In the 2020 No-Build condition, the control area is projected to operate at LOS B or better for all three peak hours.

Table 5-11:
2020 No-Build Conditions: Subway Control Area Level of Service
68th Street/Hunter College Station

Peak Hour	Station Element (Quantity)	2020 No-Build		
		Volume	v/c Ratio	LOS
AM	Turnstile (14)	2,234	0.48	B
Midday	Turnstile (14)	831	0.18	A
PM	Turnstile (14)	1,711	0.36	A

Source: Sam Schwartz Engineering, DPC, 2015

5.3.4 2020 FUTURE BUILD

Street Stairs

Subway stair analyses were conducted for the four stairs in the 68th Street/Hunter College Station and the proposed stairs at the East 69th Street entrances during the three peak hours in the 2020

Build condition (Table 5-12). The 68th Street/Hunter College Subway Station Improvement Project would greatly enhance pedestrian flow throughout all of the subway elements in comparison to the No-Build condition. All subway street stairs projected to operate at LOS D or worse in the No-Build condition would be improved by the Proposed Project to a LOS C or better.

For the Proposed Project *with Option E1*, the proposed east stair at East 69th Street would have the same volume as the Proposed Project, but the subway street stair would be 108 inches wide rather than 120 inches wide. Under the Proposed Project *with Option E1*, this stair would operate at LOS A during all three peak periods, which is the same LOS as for the Proposed Project.

Table 5-12:
2020 Build Conditions: Subway Street Stairs Level of Service
68th Street/Hunter College Station

Intersection	Stair ID	2020 Build					2020 Build with Option E1				
		Location	Volume	v/c Ratio	LOS	Impact?	Location	Volume	v/c Ratio	LOS	Impact?
AM Peak Hour											
Lexington Avenue at East 68th Street	S4	NE Corner	201	0.36	A	No	NE Corner	201	0.36	A	No
	S3	NW Corner	124	0.28	A	No	NW Corner	124	0.28	A	No
	O2/O4	SE Corner	727	0.76	C	No	SE Corner	727	0.76	C	No
	O1/O3	SW Corner	442	0.58	B	No	SW Corner	442	0.58	B	No
Lexington Avenue at East 69th Street	New	Midblock (East)	393	0.37	A	N/A	SE Corner	393	0.41	A	N/A
	New	SW Corner	232	0.25	A	N/A	SW Corner	232	0.25	A	N/A
Midday Peak Hour											
Lexington Avenue at East 68th Street	S4	NE Corner	63	0.10	A	No	NE Corner	63	0.10	A	No
	S3	NW Corner	29	0.06	A	No	NW Corner	29	0.06	A	No
	O2/O4	SE Corner	304	0.29	A	No	SE Corner	304	0.29	A	No
	O1/O3	SW Corner	155	0.21	A	No	SW Corner	155	0.21	A	No
Lexington Avenue & East 69th Street	New	Midblock (East)	84	0.08	A	N/A	SE Corner	84	0.09	A	N/A
	New	SW Corner	91	0.09	A	N/A	SW Corner	91	0.09	A	N/A
PM Peak Hour											
Lexington Avenue at East 68th Street	S4	NE Corner	186	0.28	A	No	NE Corner	186	0.28	A	No
	S3	NW Corner	75	0.16	A	No	NW Corner	75	0.16	A	No
	O2/O4	SE Corner	561	0.50	B	No	SE Corner	561	0.50	B	No
	O1/O3	SW Corner	255	0.33	A	No	SW Corner	255	0.33	A	No
Lexington Avenue at East 69th Street	New	Midblock (East)	148	0.14	A	N/A	SE Corner	148	0.15	A	N/A
	New	SW Corner	296	0.28	A	N/A	SW Corner	296	0.28	A	N/A

Source: Sam Schwartz Engineering, DPC, 2015

Platform Stairs

Analyses were conducted for the subway platform stairs in the 68th Street/Hunter College Station for the three peak hours for the 2020 Build condition (Table 5-13). The 68th Street/Hunter College Subway Station Improvement Project would also greatly enhance pedestrian flow at platform level in comparison to the No-Build Alternative. All subway platform stairs projected to operate at LOS D or worse in the No-Build Alternative would be improved by the Proposed Project to a LOS C or

better. The proposed platform stairs connected to the proposed fare control areas at East 69th Street are projected to operate at LOS A during all three peak hours.

Table 5-13:
2020 Build Conditions: Subway Platform Stairs Level of Service
68th Street/Hunter College Station

Station	Stair ID	Location	2020 Build			Impact?
			Volume	v/c Ratio	LOS	
AM Peak Hour						
East 68th Street	P1	South S/B Platform	141	0.16	A	No
	P3	North S/B Platform	382	0.48	B	No
	P2	South N/B Platform	342	0.39	A	No
	P4	North N/B Platform	743	0.88	C	No
East 69th Street	New	S/B Platform	232	0.27	A	N/A
	New	N/B Platform	393	0.44	A	N/A
Midday Peak Hour						
East 68th Street	P1	South S/B Platform	181	0.19	A	No
	P3	North S/B Platform	172	0.17	A	No
	P2	South N/B Platform	91	0.10	A	No
	P4	North N/B Platform	213	0.27	A	No
East 69th Street	New	S/B Platform	91	0.09	A	N/A
	New	N/B Platform	84	0.10	A	N/A
PM Peak Hour						
East 68th Street	P1	South S/B Platform	338	0.33	A	No
	P3	North S/B Platform	424	0.43	A	No
	P2	South N/B Platform	204	0.23	A	No
	P4	North N/B Platform	300	0.35	A	No
East 69th Street	New	S/B Platform	296	0.28	A	N/A
	New	N/B Platform	148	0.16	A	N/A

Note: The results in this table are exactly the same for the Proposed Project as for the Proposed Project with Option E-1.

Source: New York City Transit, 2012

The clearance times for the four platform stairs were also calculated for the 2020 Build condition during the AM, midday and PM peak hours (Table 5-14). In the AM peak hour, the clearance times for platform stairs P1, P3, P2, and P4 are projected to be 12, 48, 40, and 88 seconds, respectively. During the AM peak hour, the clearance time for the proposed East 69th Street platform stairs are projected to be 25 seconds for the southbound platform and 46 seconds for the northbound platform. In the midday peak hour, the clearance times for platform stairs P1, P3, P2, and P4 are projected to be 11, 2, 9, and 26 seconds, respectively. During the midday peak hour, the clearance time for the proposed East 69th Street platform stairs are projected to be 3 seconds for the southbound platform and 9 seconds for the northbound platform. In the PM peak hour, the clearance times for platform stairs P1, P3, P2, and P4 are projected to be 2, 6, 16, and 28 seconds, respectively. The clearance time for the proposed East 69th Street platform stairs is projected to be 2 seconds for the southbound platform and 8 seconds for the northbound platform during the PM peak hour.

As illustrated in Table 5-14, the clearance times for the platform stairs are all projected to improve (substantially in many cases) in comparison to the No-Build Alternative during all three peak hours as a result of the Proposed Project. However, some platform stairs are still not projected to meet the New York City Transit clearance guideline of 30 seconds.

For the Proposed Project *with Option E1*, the platform stair volumes and analysis results would be the same as for the Proposed Project.

Table 5-14:
2020 Build Conditions
Platform Stairs Clearance Times (Seconds)

Stair ID	Station Element	Location	Clearance Time (sec)
AM Peak Hour			
P1	Stairway	South S/B Platform	12
P3	Stairway	North S/B Platform	48
P2	Stairway	South N/B Platform	40
P4	Stairway	North N/B Platform	88
New	Stairway	S/B E 69th Street	25
New	Stairway	N/B E 69th Street	46
Midday Peak Hour			
P1	Stairway	South S/B Platform	11
P3	Stairway	North S/B Platform	2
P2	Stairway	South N/B Platform	9
P4	Stairway	North N/B Platform	26
New	Stairway	S/B E 69th Street	3
New	Stairway	N/B E 69th Street	9
PM Peak Hour			
P1	Stairway	South S/B Platform	2
P3	Stairway	North S/B Platform	6
P2	Stairway	South N/B Platform	16
P4	Stairway	North N/B Platform	28
New	Stairway	S/B E 69th Street	2
New	Stairway	N/B E 69th Street	8

Note: The results in this table are exactly the same for the Proposed Project as for the Proposed Project with Option E-1.

Source: New York City Transit, 2012

Turnstiles

Using CEQR methodology to determine future increases in passengers using the station in 2020, and considering the operation of Second Avenue Subway for predicted passenger diversions, control area performance characteristics were projected for the 2020 analysis year (see Table 5-15). Under the 2020 Build condition, the control area is projected to operate at LOS A for all three peak hours.

For the Proposed Project *with Option E1*, the turnstile volumes and analysis results would be the same as for the Proposed Project.

Table 5-15:
2020 Build Conditions: Subway Control Area Level of Service
68th Street/Hunter College Station

Control Area	Station Element (Quantity)	2020 Build			Impact?
		Volume	v/c Ratio	LOS	
AM Peak Hour					
East 68th Street	Turnstile (14)	1,609	0.34	A	No
East 69th Street (East Side)	Turnstile (5)	393	0.24	A	N/A
East 69th Street (West Side)	Turnstile (4)	232	0.17	A	N/A
Midday Peak Hour					
East 68th Street	Turnstile (14)	657	0.14	A	No
East 69th Street (East Side)	Turnstile (5)	84	0.05	A	N/A
East 69th Street (West Side)	Turnstile (4)	91	0.07	A	N/A
PM Peak Hour					
East 68th Street	Turnstile (14)	1,267	0.27	A	No
East 69th Street (East Side)	Turnstile (5)	148	0.09	A	N/A
East 69th Street (West Side)	Turnstile (4)	296	0.22	A	N/A

Note: The results in this table are exactly the same for the Proposed Project as for the Proposed Project with Option E-1.

Source: Sam Schwartz Engineering, DPC, 2015

5.4 BUS TRANSIT

This section describes current bus operations near the project site and assesses if the Proposed Project or the Proposed Project *with Option E1* would result in any significant adverse impacts to bus transit. A detailed transit analysis is not warranted because the Proposed Project and the Proposed Project *with Option E1* would not require the relocation of bus routes or bus stop locations, and the Proposed Project and the Proposed Project *with Option E1* would not significantly change bus ridership in 2020.

5.4.1 EXISTING CONDITIONS

A total of six bus routes (BXM1, M66, M98, M101, M102, and M103) operated by MTA NYCT provide local and limited-stop bus service serving the 68th Street/Hunter College Station. In addition, private carrier service to Long Island, operated by Hampton Jitney, serves the study area. A total of four bus stops are provided adjacent to the station. This includes a stop on the south side of East 68th Street on the east side of Lexington Avenue, which accommodates a high number of subway-to-bus transfers especially during the AM peak period. The remaining three bus stops are located along the west side of Lexington Avenue at the south side of East 70th Street, the south side of East 69th Street (Hampton Jitney), and the south side of East 68th Street. A description of each local bus route and the frequency of service (according to the Manhattan Bus Service Guide) during the weekday AM, midday, and PM peak periods are provided below.

M66 Bus

The M66 bus route provides local cross town bus service between the Upper East and Upper West sides of Manhattan. The M66 bus route operates on East 67th Street in the westbound direction and on East 68th Streets in the eastbound direction. On average, the M66 local bus route operates every 5 minutes during the weekday AM peak period, every 9 minutes during the midday peak period, and every 5 minutes during the PM peak period.

M98 Bus

The M98 bus route provides limited-stop service on weekdays between Washington Heights and the Upper East Side in Manhattan. On average, the M98 limited-stop bus route operates every 8 minutes during the weekday AM peak period and every 15 minutes during the PM peak period. The M98 bus route does not operate during the weekday midday period or on weekends. The M98 bus route operates on Lexington Avenue in the southbound direction through the study area and on Third Avenue in the northbound direction.

M101 Bus

The M101 bus route provides limited-stop service during the peak hours (approximately 6:00 AM to 8:00 PM) and local bus service during the off-peak hours between Washington Heights and the East Village in Manhattan. The M101 bus route operates on Lexington Avenue in the southbound direction through the study area and on Third Avenue in the northbound direction. On average, the M101 limited-stop bus route operates every 8 minutes during the weekday AM peak period, every 8 minutes during the midday peak period, and every 7 minutes during the PM peak period.

M102 Bus

The M102 bus route operates on Lexington Avenue in the southbound direction through the study area and on Third Avenue in the northbound direction. The M102 bus route provides local bus service between Harlem and the East Village in Manhattan operating every 10 minutes during the weekday AM peak period, every 12 minutes during the midday peak period, and every 11 minutes during the PM peak period.

M103 Bus

The M103 bus route provides local bus service between East Harlem and City Hall in Manhattan operating every 12 minutes during the weekday AM peak period, every 12 minutes during the midday peak period, and every 12 minutes during the PM peak period. The M102 bus route operates on Lexington Avenue in the southbound direction through the study area and on Third Avenue in the northbound direction.

5.4.2 2020 FUTURE NO-BUILD

Bus ridership was not projected to 2020 because a detailed bus transit analysis is not warranted. However, it is likely that the opening of the Second Avenue Subway would in fact reduce transit trips at the bus stops closest to project site with riders being diverted away from the Lexington Avenue line, and no significant adverse impacts to bus operations and bus ridership are expected in 2020 under the No-Build condition.

5.4.3 2020 FUTURE BUILD

As the Proposed Project would not require the relocation of bus routes or bus stop locations, the Project would not significantly change bus ridership when compared to the 2020 No Build

condition. Therefore, there would be no significant adverse impacts to bus operations as a result of the Proposed Project.

5.5 PARKING

The Proposed Project would include a sidewalk bulb-out and would thus eliminate some parking spaces. As such, parking conditions were evaluated to determine if the Proposed Project would generate significant impacts to this resource. Operation of the Second Avenue Subway is not expected to have an effect on parking and was not considered in the parking analysis. The on-street parking study area centers around the intersection of Lexington Avenue and East 68th Street, which is where the proposed parking elimination would occur and is where the reduction in parking capacity would be most critical. The study area includes Lexington Avenue between East 68th and East 70th Streets as well as East 69th Street for approximately 150 feet east and west of Lexington Avenue.

5.5.1 METHODOLOGY

5.5.1.1 Data Collection

Existing on-street parking conditions were evaluated based upon a field inventory of parking regulations and utilization in the parking study area. No parking is permitted along the west side curb of Lexington Avenue during the AM peak period (between 7:00 and 10:00 AM) because it is used as an exclusive bus lane. During the field inventory, the approximately three spaces located on the south curb of East 69th Street to the west of Lexington Avenue were occupied with construction equipment and materials associated with ongoing construction activity.

5.5.1.2 Analysis Methodology

The parking analysis identifies the extent to which on-street and off-street parking is available and utilized under Existing, No Build, and Build conditions. Typically, this analysis encompasses a study area within ¼-mile of the project site. However, the study area selected for the Proposed Project was selected to be significantly smaller (approximately one block in each direction) to be conservative. If the analysis produces a shortfall in parking in the study area, the study area could be extended to identify additional parking supply. The analysis, which takes into consideration anticipated changes in area parking supply, provides a comparison of parking needs versus availability to determine if a parking shortfall is likely to result from additional demand generated by the Proposed Project.

5.5.1.3 Impact Criteria

According to the CEQR Technical Manual, if the Proposed Project generates more parking demand than it supplies, this shortfall may be considered significant. However, for projects in Manhattan (and other locations as identified in CEQR), the inability of the Proposed Project or the surrounding area to accommodate a project's future parking demands is considered a parking shortfall, but is generally not considered significant due to the magnitude of available alternative modes of transportation.

5.5.1.4 Existing Conditions

Available on-street parking conditions are illustrated in Table 5-16 and Table 5-17.

Table 5-16:
2011 Existing Conditions: On-Street Parking Capacity
Lexington Avenue at East 69th Street

Time Period	Parking Space Capacity								
	Lexington Avenue (between E 69th and E 70th Streets)		Lexington Avenue (between E 68th and E 69th Streets)		East 69th Street (west of Lexington Avenue)		East 69th Street (east of Lexington Avenue)		
	East	West	East	West	North	South	North	South	Total
AM	9	0	9	0	3	0	6	5	32
Midday	9	5	9	6	3	0	6	5	43
PM	9	5	9	6	3	0	6	5	43

Source: Sam Schwartz Engineering, DPC, 2015

Table 5-17:
2011 Existing Conditions: On-Street Parking Spaces Occupied
Lexington Avenue at East 69th Street

Time Period	Capacity	Occupied Spaces	Percent Spaces Occupied
AM	32	20	63%
Midday	43	36	84%
PM	43	33	77%

Source: Sam Schwartz Engineering, DPC, 2015

5.5.2 2020 FUTURE NO-BUILD

The existing on-street parking volumes were increased using the general annual background growth of 0.25 percent through 2016 and 0.125 percent through 2020 per the CEQR Technical Manual. As such, the number of occupied spaces is projected to increase by one vehicle as a result of the background growth rate. On-street parking in the study area was analyzed for the three peak hours, and no on-street parking shortfall was identified for the 2020 No-Build condition. Table 5-18 shows the available parking under the 2020 No-Build condition, while Table 5-19 shows the percentages of occupied spaces during all three peak hours.

Table 5-18:
2020 No-Build Condition: On-Street Parking Capacity
Lexington Avenue at East 69th Street

Time Period	Parking Space Capacity								
	Lexington Avenue (between E 69th and E 70th Streets)		Lexington Avenue (between E 68th and E 69th Streets)		East 69th Street (west of Lexington Avenue)		East 69th Street (east of Lexington Avenue)		
	East	West	East	West	North	South	North	South	Total
AM	9	0	9	0	3	0	6	5	32
Midday	9	5	9	6	3	0	6	5	43
PM	9	5	9	6	3	0	6	5	43

Source: Sam Schwartz Engineering, DPC, 2015

Table 5-19:
2020 No-Build Condition: On-Street Parking Spaces Occupied
Lexington Avenue at East 69th Street

Time Period	Capacity	Occupied Spaces	Percent Spaces Occupied
AM	32	21	66%
Midday	43	37	86%
PM	43	34	79%

Source: Sam Schwartz Engineering, DPC, 2015

5.5.3 2020 FUTURE BUILD

The Proposed Project would eliminate four parking spaces on the south side of East 69th Street to the west of Lexington Avenue because of the proposed bulb-outs to accommodate the new street subway stairs.

The Proposed Project and the Proposed Project *with Option E1* would not lead to an increase in demand for parking. The maximum number of available spaces within the parking study area would still be greater than the projected number of occupied spaces. On-street parking capacity within the parking study area would therefore be adequate to accommodate the projected demand through 2020 during all three peak hours. Table 5-20 shows the available parking under the 2020 Build condition, while Table 5-21 shows the percentages of occupied spaces during all three peak hours.

For the Proposed Project *with Option E1*, there would be an additional bulb-out on the south side of East 69th Street to the east of Lexington Avenue to accommodate the new street subway stair, which would result in a loss of three parking spaces on the south side of East 69th Street. On-street parking capacity within the parking study area would still be able to accommodate the projected demand through 2020 during all three peak hours.

Table 5-20:
2020 Proposed Project Condition: On-Street Parking Capacity
Lexington Avenue at East 69th Street

	Time Period	Parking Space Capacity								
		Lexington Avenue (between E 69th and E 70th Streets)		Lexington Avenue (between E 68th and E 69th Streets)		East 69th Street (west of Lexington Avenue)		East 69th Street (east of Lexington Avenue)		
		East	West	East	West	North	South	North	South	Total
2020 Build	AM	9	0	9	0	0	0	6	5	29
	Midday	9	5	9	6	0	0	6	5	40
	PM	9	5	9	6	0	0	6	5	40
2020 Build with Option E1	AM	9	0	9	0	0	0	6	2	26
	Midday	9	5	9	6	0	0	6	2	37
	PM	9	5	9	6	0	0	6	2	37

Source: Sam Schwartz Engineering, DPC, 2015

Table 5-21:
2020 Proposed Project Condition: On-Street Parking Spaces Occupied
Lexington Avenue at East 69th Street

	Time Period	Capacity	Occupied Spaces	Percent Spaces Occupied
2020 Build	AM	29	21	72%
	Midday	40	37	93%
	PM	40	34	85%
2020 Build with Option E1	AM	26	21	81%
	Midday	37	37	100%
	PM	37	34	92%

Source: Sam Schwartz Engineering, DPC, 2015

5.6 PEDESTRIAN

Pedestrian elements in the immediate vicinity of the Proposed Project, including sidewalks, corner reservoirs, and crosswalks could be affected by the diversion of passengers from the subway entrances on East 68th Street to the new entrances on East 69th Street. However, because the project would not increase the number of pedestrians in the area, it would not affect pedestrian circulation at more distant intersections. As such, the study area for pedestrian analyses encompasses the two intersections along Lexington Avenue (East 68th Street and East 69th Street). The pedestrian elements represent locations that would most likely be affected by the Proposed Project.

5.6.1 DATA COLLECTION

All crosswalk, corner, and sidewalk locations at the Lexington Avenue intersections with East 68th Street and East 69th Street were analyzed during the peak 15-minutes of the weekday AM, midday and PM peak hours. Counts at all of these pedestrian elements were conducted during these peak periods on November 9, 2011. The 15-minute peak period was identified separately for each pedestrian element (crosswalk, corner, and sidewalk) during the three peak hours. Measurements of each pedestrian element were taken in the field.

5.6.2 ANALYSIS METHODOLOGY

Crosswalk/Corner

Crosswalk and corner analyses are conducted at signalized intersections using the analytical procedures described in the 2000 Highway Capacity Manual (HCM). The capacity of crosswalks and corners are evaluated on the basis of pedestrian space measured in terms of square feet per pedestrian. In order to calculate pedestrian space, effective crosswalk widths and corner areas, peak 15-minute pedestrian volumes (crosswalk, corner, and sidewalk), conflicting peak 15-minute turning vehicles, average walking speed (3.5 feet/second or 3.0 feet/second if 20 percent of pedestrians are seniors and/or school children, or if the intersection is in a Senior Pedestrian Focus Area), and signal timing are required.

Sidewalk

As identified in the HCM 2000, pedestrian unit flow rate is the primary performance measure used to evaluate sidewalks. This measure is based on pedestrians per foot per minute (PFM), which is

calculated by dividing the average per minute two-way pedestrian volume (during the peak 15-minute period) by the effective sidewalk width in feet (taking into account a buffer between walls, curbs, and obstructions). To accurately calculate sidewalk LOS, it is important to determine if the pedestrian flow is generally "platoon" or "non-platoon." Platoon flow occurs when pedestrian volumes vary significantly within the peak period because of surges from a bus stop, subway station, or a crosswalk. Non-platoon flow occurs when pedestrian volumes within the peak period being analyzed are relatively uniform. Accounting for platoon flows in the analysis generally results in a poorer LOS.

5.6.3 IMPACT CRITERIA

The CEQR Technical Manual provides guidance on the impact criteria for pedestrian facilities based on the general comfort and convenience levels of pedestrians, according to the location of the pedestrian study area. Pedestrians in central business district (CBD) areas have become accustomed to higher pedestrian volumes and generally are more tolerant of restricted LOS conditions that might not be acceptable in other less congested (non-CBD) locations. An acceptable LOS for CBD areas is generally a mid-LOS D or better while an acceptable LOS for non-CBD areas is generally the upper limit of LOS C or better. The methodology for determining impacts when LOS is D or worse is based on the change in average pedestrian space between the No Build and Build conditions and is detailed in full in Appendix C.

5.6.4 EXISTING CONDITIONS

Crosswalks

The four crosswalk locations at the Lexington Avenue intersections with East 68th Street and East 69th Street were analyzed using the pedestrian data within the pedestrian study area. All eight crosswalk locations operate at an LOS C or better during the three peak hours, except the west crosswalk at East 69th Street during the PM peak hour which operates at LOS D (see Table 5-22). LOS D represents conditions where pedestrians are crowded and walking speed is restricted.

Table 5-22:
2011 Existing Conditions: Crosswalk Level of Service
Lexington Avenue at East 68th Street and East 69th Street

Intersection	Crosswalk	Crosswalk Length	Crosswalk Width	Available Crosswalk Circulation Space (ft^2/p)			Crosswalk Circulation LOS		
				AM	MD	PM	AM	MD	PM
Lexington Avenue at East 68th Street	North	50.3	13.5	41	81	109	B	A	A
	South	51.5	14.0	34	37	52	C	C	B
	East	28.7	15.3	101	55	59	A	B	B
	West	29.8	18.0	57	58	29	B	B	C
Lexington Avenue at East 69th Street	North	50.0	13.0	127	174	223	A	A	A
	South	50.0	13.0	68	60	106	A	B	A
	East	29.1	13.5	26	46	35	C	B	C
	West	29.0	12.5	47	41	16	B	B	D

Source: Sam Schwartz Engineering, DPC, 2015

Corners

The four corner reservoir locations at the Lexington Avenue intersections with East 68th Street and East 69th Street were analyzed using the pedestrian data within the pedestrian study area. All eight corner locations operate at an LOS C or better during the three peak hours with the exception of one: the northwest corner of the Lexington Avenue and East 68th Street intersection operates at LOS D during the AM and PM peak hours (see Table 5-23). Under existing conditions, the intersection corners at Lexington Avenue at East 69th Street have higher pedestrian volumes than the corners at Lexington Avenue at East 68th Street.

Table 5-23:
2011 Existing Conditions: Corner Level of Service
Lexington Avenue at East 68th Street and East 69th Street

Intersection	Corner	Required Corner Circulation Space (ft^2/s)			Corner Circulation LOS		
		AM	MD	PM	AM	MD	PM
Lexington Avenue at East 68th Street	Northeast	36	65	46	C	A	B
	Northwest	22	36	21	D	C	D
	Southeast	66	59	70	A	B	A
	Southwest	51	50	44	B	B	B
Lexington Avenue at East 69th Street	Northeast	64	102	84	A	A	A
	Northwest	96	90	46	A	A	B
	Southeast	73	137	108	A	A	A
	Southwest	97	94	60	A	A	A

Source: Sam Schwartz Engineering, DPC, 2015

Sidewalks

The 16 sidewalk locations at the Lexington Avenue intersections with East 68th Street and East 69th Street were analyzed using the pedestrian data within the pedestrian study area. All 16 sidewalk locations operate at an LOS C or better for the non-platoon and platoon conditions during the three peak hours with the exception of two: the west sidewalk of Lexington Avenue north of East 68th Street and the west sidewalk of Lexington Avenue north of East 69th Street, both of which operate at LOS D during the PM peak hour under platoon conditions (see Table 5-24).

Table 5-24:
2011 Existing Conditions: Sidewalk Level of Service
Lexington Avenue at East 68th Street and East 69th Street

Intersection	Approach	Sidewalk	Effective Width (feet)	Peak 15-Min Volumes			Flow Rate (pfm)			Non-Platoon LOS			Platoon LOS		
				AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
Lexington Avenue at East 68th Street	Lexington Avenue South of E 68th Street	East	5.3	241	191	205	3.01	2.39	2.56	A	A	A	C	B	B
		West	6.0	281	171	230	3.12	1.90	2.56	A	A	A	C	B	B
	Lexington Avenue North of E 68th Street	East	9.0	750	262	547	5.56	1.94	4.05	B	A	A	C	B	C
		West	5.5	364	268	605	4.41	3.25	7.33	A	A	C	C	C	D
	E 68th Street West of Lexington Ave	North	7.7	191	219	184	1.66	1.90	1.60	A	A	A	B	B	B
		South	7.0	239	250	474	2.28	2.38	4.51	A	A	A	B	B	C
	E 68th Street East of Lexington Ave	North	8.7	379	156	338	2.92	1.20	2.60	A	A	A	B	B	B
		South	10.6	237	63	206	1.49	0.40	1.30	A	A	A	B	A	B
Lexington Avenue at East 69th Street	Lexington Avenue South of E 69th Street	East	10.5	586	262	547	3.72	1.66	3.47	A	A	A	C	B	C
		West	8.1	364	268	605	3.00	2.21	4.99	A	A	A	C	B	C
	Lexington Avenue North of E 69th Street	East	7.0	484	238	370	4.61	2.27	3.52	A	A	A	C	B	C
		West	5.3	351	250	544	4.39	3.13	6.80	A	A	B	C	C	D
	E 69th Street West of Lexington Ave	North	7.0	37	81	65	0.35	0.77	0.62	A	A	A	A	B	B
		South	14.3	77	115	103	0.36	0.53	0.48	A	A	A	A	B	A
	E 69th Street East of Lexington Ave	North	8.0	56	36	92	0.47	0.30	0.77	A	A	A	A	A	B
		South	8.0	304	135	179	2.53	1.13	1.49	A	A	A	B	B	B

Source: Sam Schwartz Engineering, DPC, 2015

5.6.5 2020 FUTURE NO-BUILD CONDITION

The crosswalk, corner, and sidewalk locations at the Lexington Avenue intersections with East 68th Street and East 69th Street were analyzed for the three peak hours for the 2020 analysis year under the No-Build condition.

Crosswalks

As illustrated in Table 5-25, all crosswalks in the pedestrian study area would operate at LOS C or better in the 2020 No Build condition except for the west crosswalk at the intersection of Lexington Avenue and East 69th Street, which would operate at LOS D in the PM peak hour.

Table 5-25:
2020 No-Build Conditions: Crosswalk Level of Service
Lexington Avenue at East 68th Street and East 69th Street

Intersection	Crosswalk	2020 No-Build	
		Circulation Area Per Pedestrian (ft^2/p)	LOS
AM Peak Hour			
Lexington Avenue at East 68th Street	North	42	B
	South	34	C
	East	111	A
	West	57	B
Lexington Avenue at East 69th Street	North	124	A
	South	66	A
	East	25	C
	West	46	B
Midday Peak Hour			
Lexington Avenue at East 68th Street	North	82	A
	South	38	C
	East	57	B
	West	57	B
Lexington Avenue at East 69th Street	North	171	A
	South	58	B
	East	45	B
	West	40	B
PM Peak Hour			
Lexington Avenue at East 68th Street	North	116	A
	South	60	A
	East	61	A
	West	29	C
Lexington Avenue at East 69th Street	North	223	A
	South	103	A
	East	34	C
	West	15	D

Source: Sam Schwartz Engineering, DPC, 2015

Corners

In the 2020 No-Build condition, all corners would operate at LOS C or better except the northwest corner, which would operate at LOS D in the PM peak hour (Table 5-26).

Table 5-26:
2020 No-Build Conditions: Corner Level of Service
Lexington Avenue at East 68th Street and East 69th Street

Intersection	Corner	2020 No-Build	
		Circulation Area Per Pedestrian (ft^2/p)	LOS
AM Peak Hour			
Lexington Avenue at East 68th Street	Northeast	38	C
	Northwest	24	C
	Southeast	68	A
	Southwest	51	B
Lexington Avenue at East 69th Street	Northeast	62	A
	Northwest	94	A
	Southeast	72	A
	Southwest	95	A
Midday Peak Hour			
Lexington Avenue at East 68th Street	Northeast	73	A
	Northwest	38	C
	Southeast	61	A
	Southwest	50	B
Lexington Avenue at East 69th Street	Northeast	100	A
	Northwest	88	A
	Southeast	134	A
	Southwest	93	A
PM Peak Hour			
Lexington Avenue at East 68th Street	Northeast	45	B
	Northwest	23	D
	Southeast	76	A
	Southwest	45	B
Lexington Avenue at East 69th Street	Northeast	82	A
	Northwest	45	B
	Southeast	106	A
	Southwest	59	B

Source: Sam Schwartz Engineering, DPC, 2015

Sidewalks

In the 2020 No-Build condition, all sidewalks in the pedestrian study area would operate at LOS C or better with two exceptions: in the PM peak hour, the west sidewalk of Lexington Avenue north of East 68th Street and the west sidewalk of Lexington Avenue north of East 69th Street would operate at LOS D (Table 5-27).

Table 5-27:
2020 No-Build Conditions: Sidewalk Level of Service
Lexington Avenue at East 68th Street and East 69th Street

Intersection	Approach	Sidewalk	2020 No-Build		
			Flow Rate (pfm)	Non-Platoon LOS	Platoon LOS
AM Peak Hour					
E 68th Street & Lexington Avenue	Lexington Ave South of E 68th St	East	2.90	A	B
		West	3.16	A	C
	Lexington Ave North of E 68th St	East	4.75	A	C
		West	3.90	A	C
	E 68th St West of Lexington Ave	North	1.36	A	B
		South	2.30	A	B
	E 68th St East of Lexington Ave	North	2.63	A	B
		South	2.07	A	B
E 69th Street & Lexington Avenue	Lexington Ave South of E 69th St	East	3.78	A	C
		West	3.05	A	C
	Lexington Ave North of E 69th St	East	4.70	A	C
		West	4.46	A	C
	E 69th St West of Lexington Ave	North	0.36	A	A
		South	0.36	A	A
	E 69th St East of Lexington Ave	North	0.48	A	A
		South	2.58	A	B
Midday Peak Hour					
E 68th Street & Lexington Avenue	Lexington Ave South of E 68th St	East	2.29	A	B
		West	1.90	A	B
	Lexington Ave North of E 68th St	East	1.47	A	B
		West	2.99	A	B
	E 68th St West of Lexington Ave	North	1.78	A	B
		South	2.32	A	B
	E 68th St East of Lexington Ave	North	1.00	A	B
		South	0.47	A	A
E 69th Street & Lexington Avenue	Lexington Ave South of E 69th St	East	1.70	A	B
		West	2.25	A	B
	Lexington Ave North of E 69th St	East	2.30	A	B
		West	3.18	A	C
	E 69th St West of Lexington Ave	North	0.78	A	B
		South	0.54	A	B
	E 69th St East of Lexington Ave	North	0.31	A	A
		South	1.14	A	B
PM Peak Hour					
E 68th Street & Lexington Avenue	Lexington Ave South of E 68th St	East	2.46	A	B
		West	2.54	A	B
	Lexington Ave North of E 68th St	East	3.34	A	C
		West	7.00	B	D
	E 68th St West of Lexington Ave	North	1.29	A	B
		South	4.36	A	C
	E 68th St East of Lexington Ave	North	2.71	A	B
		South	1.82	A	B
E 69th Street & Lexington Avenue	Lexington Ave South of E 69th St	East	3.54	A	C
		West	5.08	B	C
	Lexington Ave North of E 69th St	East	3.59	A	C
		West	6.93	B	D
	E 69th St West of Lexington Ave	North	0.63	A	B
		South	0.49	A	A
	E 69th St East of Lexington Ave	North	0.78	A	B
		South	1.52	A	B

Source: Sam Schwartz Engineering, DPC, 2015

5.6.6 2020 FUTURE BUILD CONDITION

The crosswalk, corner, and sidewalk locations at the Lexington Avenue intersections with East 68th Street and East 69th Street were analyzed for the three peak hours for the 2020 Build condition. Existing pedestrians originating from or destined for the subway were assigned in the analysis to the East 69th Street stairs based on the assumptions previously cited (Table 5-7).

For the Proposed Project *with Option E1*, subway ridership would be the same as for the Proposed Project; therefore, all pedestrian and transit volumes would be the same except at a few locations. These differences exist because under Option E1, the east side street stair at East 69th Street would be located east of the southeast corner of the Lexington Avenue and East 69th Street intersection, rather than mid-block on the east side of Lexington Avenue. Specifically, the following six pedestrian elements would have different pedestrian volumes under the Proposed Project *with Option E1* compared to the Proposed Project:

- Lexington Avenue east sidewalk, south of East 69th Street (lower volumes under Option E1)
- East 69th Street south sidewalk, east of Lexington Avenue (higher volumes under Option E1)
- East 69th Street north sidewalk, east of Lexington Avenue (lower volumes under Option E1)
- East crosswalk at Lexington Avenue and East 69th Street intersection (lower volumes under Option E1)
- Southeast corner at Lexington Avenue and East 69th Street intersection (lower volumes under Option E1)
- Northeast corner at Lexington Avenue and East 69th Street intersection (lower volumes under Option E1)

Crosswalks

Because pedestrian flows are anticipated to shift from the street subway stairs at East 68th Street to East 69th Street with the implementation of the Proposed Project, some crosswalk pedestrian flows at the Lexington Avenue and East 69th Street intersection are projected to increase. As part of the design of the Proposed Project, two crosswalks at the Lexington Avenue at East 69th Street intersection would be widened. The width of the west crosswalk would be widened by one foot to 13 feet-6 inches and the width of the south crosswalk would be widened by one foot to 14 feet.

The crosswalk analysis results for the 2020 Build condition were compared with the 2020 No-Build condition for the AM, midday, and PM peak hours. As presented in Table 5-28, all four crosswalk locations at the intersection of Lexington Avenue with East 68th Street are projected to operate at an LOS C or better during the three peak hours. At the intersection of Lexington Avenue with East 69th Street, all four crosswalks would continue to operate at an LOS C or better during the AM and midday peak hours in 2020 except for the East crosswalk, which is projected to operate at LOS D during the AM peak hour. During the PM peak hour, all crosswalks would continue to operate at an LOS C or better except for the west crosswalk, which is projected to operate at LOS D with the Proposed Project.

For the Proposed Project *with Option E1*, pedestrian volumes would be different for the east crosswalk at the Lexington Avenue and East 69th Street intersection. This crosswalk would operate at LOS C during the AM peak hour (compared to LOS D for the Proposed Project), LOS

A during the midday peak hour (same as Proposed Project), and at LOS B during the PM peak hour (same as Proposed Project).

Table 5-28:
2020 No-Build and Build Condition: Crosswalk Level of Service
Lexington Avenue at East 68th Street and East 69th Street

Intersection	Crosswalk	2020 No-Build		2020 Build			2020 Build with Option E1		
		Circulation Area Per Pedestrian (ft^2/p)	LOS	Circulation Area Per Pedestrian (ft^2/p)	LOS	Impact?	Circulation Area Per Pedestrian (ft^2/p)	LOS	Impact?
AM Peak Hour									
Lexington Avenue at East 68th Street	North	42	B	42	B	No	42	B	No
	South	34	C	31	C	No	31	C	No
	East	111	A	92	A	No	92	A	No
	West	57	B	54	B	No	54	B	No
Lexington Avenue at East 69th Street	North	124	A	62	A	No	62	A	No
	South	66	A	31	C	No	31	C	No
	East	25	C	23	D	No	29	C	No
	West	46	B	62	A	No	62	A	No
Midday Peak Hour									
Lexington Avenue at East 68th Street	North	82	A	82	A	No	82	A	No
	South	38	C	37	C	No	37	C	No
	East	57	B	56	B	No	56	B	No
	West	57	B	57	B	No	57	B	No
Lexington Avenue at East 69th Street	North	171	A	129	A	No	129	A	No
	South	58	B	48	B	No	48	B	No
	East	45	B	63	A	No	68	A	No
	West	40	B	46	B	No	44	B	No
PM Peak Hour									
Lexington Avenue at East 68th Street	North	116	A	116	A	No	116	A	No
	South	60	A	58	B	No	58	B	No
	East	61	A	59	B	No	59	B	No
	West	29	C	29	C	No	29	C	No
Lexington Avenue at East 69th Street	North	223	A	82	A	No	82	A	No
	South	103	A	41	B	No	41	B	No
	East	34	C	47	B	No	53	B	No
	West	15	D	16	D	No	15	D	No

Source: Sam Schwartz Engineering, DPC, 2015

Corners

The eight corner reservoir locations at the Lexington Avenue intersections with East 68th Street and East 69th Street were analyzed for the 2020 Build condition. All eight corner locations are projected to operate at an LOS C or better during the three peak hours as indicated in Table 5-29.

For the Proposed Project *with Option E1*, pedestrian volumes would be different for the southeast and northeast corners at the Lexington Avenue and East 69th Street intersection; however, these corners would operate at the same LOS as for the Proposed Project.

Table 5-29:
2020 No-Build and Build Conditions: Corner Level of Service
Lexington Avenue at East 68th Street and East 69th Street

Intersection	Corner	2020 No-Build		2020 Build			2020 Build with Option E1		
		Circulation Area Per Pedestrian (ft^2/p)	LOS	Circulation Area Per Pedestrian (ft^2/p)	LOS	Impact?	Circulation Area Per Pedestrian (ft^2/p)	LOS	Impact?
AM Peak Hour									
Lexington Avenue at East 68th Street	Northeast	38	C	80	A	No	80	A	No
	Northwest	24	C	32	C	No	32	C	No
	Southeast	68	A	61	A	No	61	A	No
	Southwest	51	B	48	B	No	48	B	No
Lexington Avenue at East 69th Street	Northeast	62	A	51	B	No	58	B	No
	Northwest	94	A	82	A	No	82	A	No
	Southeast	72	A	64	A	No	108	A	No
	Southwest	95	A	105	A	No	105	A	No
Midday Peak Hour									
Lexington Avenue at East 68th Street	Northeast	73	A	112	A	No	112	A	No
	Northwest	38	C	42	B	No	42	B	No
	Southeast	61	A	60	A	No	60	A	No
	Southwest	50	B	50	B	No	50	B	No
Lexington Avenue at East 69th Street	Northeast	100	A	117	A	No	124	A	No
	Northwest	88	A	84	A	No	84	A	No
	Southeast	134	A	146	A	No	215	A	No
	Southwest	93	A	123	A	No	123	A	No
PM Peak Hour									
Lexington Avenue at East 68th Street	Northeast	45	B	93	A	No	93	A	No
	Northwest	23	D	28	C	No	28	C	No
	Southeast	76	A	73	A	No	73	A	No
	Southwest	45	B	44	B	No	44	B	No
Lexington Avenue at East 69th Street	Northeast	82	A	81	A	No	88	A	No
	Northwest	45	B	37	C	No	37	C	No
	Southeast	106	A	104	A	No	158	A	No
	Southwest	59	B	67	A	No	67	A	No

Source: Sam Schwartz Engineering, DPC, 2015

Sidewalks

The 16 sidewalk locations at the Lexington Avenue intersections with East 68th Street and East 69th Street were analyzed for the 2020 Build condition. As presented in Table 5-30, the 16 sidewalk locations are projected to operate at an LOS C or better for the non-platoon conditions during the three peak hours.

For platoon conditions, the west sidewalk of Lexington Avenue north of East 69th Street is projected to operate at LOS D during the PM peak hour. Otherwise, all sidewalks would operate at LOS C or better under platoon conditions for all three peak hours. Therefore, no sidewalk locations at either intersection are projected to be affected by the Proposed Project in either platoon or non-platoon conditions in 2020.

For the Proposed Project *with Option E1*, pedestrian volumes would be different for three sidewalks at the Lexington Avenue and East 69th Street intersection. All three of these sidewalks (east side of Lexington Avenue south of East 69th Street, south side of East 69th Street east of Lexington Avenue, and the north side of East 69th Street east of Lexington Avenue) would operate at LOS C or better for both platoon and non-platoon conditions. Therefore, no sidewalk locations at either intersection are projected to be affected by the Proposed Project in either platoon or non-platoon conditions in 2020.

Table 5-30:
2020 No Build and Build Conditions: Sidewalk Level of Service
Lexington Avenue at East 68th Street and East 69th Street

Intersection	Approach	Sidewalk	2020 No-Build			2020 Build				2020 Build with Option E1			
			Flow Rate (pfm)	Non-Platoon LOS	Platoon LOS	Flow Rate (pfm)	Non-Platoon LOS	Platoon LOS	Impact ?	Flow Rate (pfm)	Non-Platoon LOS	Platoon LOS	Impact ?
AM Peak Hour													
East 68th Street & Lexington Avenue	Lexington Ave South of E 68th St	East	2.90	A	B	2.98	A	B	No	2.98	A	B	No
		West	3.16	A	C	3.46	A	C	No	3.46	A	C	No
	Lexington Ave North of E 68th St	East	4.75	A	C	2.80	A	B	No	2.80	A	B	No
		West	3.90	A	C	2.29	A	B	No	2.29	A	B	No
	E 68th St West of Lexington Ave	North	1.36	A	B	0.79	A	B	No	0.79	A	B	No
		South	2.30	A	B	2.30	A	B	No	2.30	A	B	No
	E 68th St East of Lexington Ave	North	2.63	A	B	1.64	A	B	No	1.64	A	B	No
		South	2.07	A	B	2.07	A	B	No	2.07	A	B	No
East 69th Street & Lexington Avenue	Lexington Ave South of E 69th St	East	3.78	A	C	3.56	A	C	No	1.31	A	B	No
		West	3.05	A	C	1.57	A	B	No	1.57	A	B	No
	Lexington Ave North of E 69th St	East	4.70	A	C	4.29	A	C	No	4.29	A	C	No
		West	4.46	A	C	3.54	A	C	No	3.54	A	C	No
	E 69th St West of Lexington Ave	North	0.36	A	A	0.55	A	B	No	0.55	A	B	No
		South	0.36	A	A	1.04	A	B	No	1.04	A	B	No
	E 69th St East of Lexington Ave	North	0.48	A	A	1.27	A	B	No	0.68	A	B	No
		South	2.58	A	B	2.23	A	B	No	3.43	A	C	No
MD Peak Hour													
East 68th Street & Lexington Avenue	Lexington Ave South of E 68th St	East	2.29	A	B	2.34	A	B	No	2.34	A	B	No
		West	1.90	A	B	1.93	A	B	No	1.93	A	B	No
	Lexington Ave North of E 68th St	East	1.47	A	B	0.88	A	B	No	0.88	A	B	No
		West	2.99	A	B	2.56	A	B	No	2.56	A	B	No
	E 68th St West of Lexington Ave	North	1.78	A	B	1.66	A	B	No	1.66	A	B	No
		South	2.32	A	B	2.32	A	B	No	2.32	A	B	No
	E 68th St East of Lexington Ave	North	1.00	A	B	0.70	A	B	No	0.70	A	B	No
		South	0.47	A	A	0.47	A	A	No	0.47	A	A	No
East 69th Street & Lexington Avenue	Lexington Ave South of E 69th St	East	1.70	A	B	1.23	A	B	No	0.75	A	B	No
		West	2.25	A	B	1.76	A	B	No	1.76	A	B	No
	Lexington Ave North of E 69th St	East	2.30	A	B	1.64	A	B	No	1.64	A	B	No
		West	3.18	A	C	3.05	A	C	No	3.05	A	C	No
	E 69th St West of Lexington Ave	North	0.78	A	B	0.78	A	B	No	0.78	A	B	No
		South	0.54	A	B	1.13	A	B	No	1.13	A	B	No
	E 69th St East of Lexington Ave	North	0.31	A	A	0.44	A	A	No	0.33	A	A	No
		South	1.14	A	B	1.19	A	B	No	1.57	A	B	No
PM Peak Hour													
East 68th Street & Lexington Avenue	Lexington Ave South of E 68th St	East	2.46	A	B	2.50	A	B	No	2.50	A	B	No
		West	2.54	A	B	2.59	A	B	No	2.59	A	B	No
	Lexington Ave North of E 68th St	East	3.34	A	C	2.22	A	B	No	2.22	A	B	No
		West	7.00	B	D	5.90	B	C	No	5.90	B	C	No
	E 68th St West of Lexington Ave	North	1.29	A	B	0.92	A	B	No	0.92	A	B	No
		South	4.36	A	C	4.36	A	C	No	4.36	A	C	No
	E 68th St East of Lexington Ave	North	2.71	A	B	1.55	A	B	No	1.55	A	B	No
		South	1.82	A	B	1.82	A	B	No	1.82	A	B	No
East 69th Street & Lexington Avenue	Lexington Ave South of E 69th St	East	3.54	A	C	2.76	A	B	No	1.90	A	B	No
		West	5.08	B	C	4.12	A	C	No	4.12	A	C	No
	Lexington Ave North of E 69th St	East	3.59	A	C	2.90	A	B	No	2.90	A	B	No
		West	6.93	B	D	6.75	B	D	No	6.75	B	D	No
	E 69th St West of Lexington Ave	North	0.63	A	B	0.70	A	B	No	0.70	A	B	No
		South	0.49	A	A	1.18	A	B	No	1.18	A	B	No
	E 69th St East of Lexington Ave	North	0.78	A	B	1.17	A	B	No	0.94	A	B	No
		South	1.52	A	B	1.79	A	B	No	2.30	A	B	No

Source: Sam Schwartz Engineering, DPC, 2015

5.7 CONCLUSION

Currently, the 68th Street/Hunter College Station exhibits several deficiencies, including absence of ADA-compliant access and passenger circulation constraints. In particular, during the peak hours, the platform stairs and street stairs (and the levels approaching these stairs) were observed to be heavily congested. Additionally, several sidewalk elements above ground, including crosswalks and corners, were observed to be overcrowded.

To improve the overall operations at this station, the Proposed Project addresses each of the problems identified. In addition to providing ADA-compliant access between all three levels, the station would be reconfigured. A new street stair, platform stair, and mezzanine on the south sidewalk of 69th Street west of Lexington Avenue and a new street stair, platform stair, and mezzanine in the retail space at 931 Lexington Avenue on the east side of the avenue are proposed to be installed. In addition, three of the four existing stairs at the 68th Street would be reconstructed. The analysis presented in this chapter examined the potential traffic, transit, parking, and pedestrian impacts of the Proposed Project.

Traffic

The Proposed Project would not affect lane geometry or introduce additional vehicle trips within the study area. Therefore, the Project would have no significant adverse impact on the surrounding traffic network in the 2020 Build condition.

Subway Transit

The main control area on the mezzanine level at the 68th Street end of the station would improve with the Proposed Project as some customers would now use the proposed 69th Street access in the 2020 Build condition.

Similarly, platform stair clearance times in the 2020 Build condition would decrease as some customers would be diverted and use the platform stairs at the northern end of the station.

The existing street stairs at 68th Street would also improve due to both the proposed rehabilitation of these stairs as well as the reduction in overall volumes as some customers would be diverted to the proposed 69th Street access.

Bus Transit

The Proposed Project would not require the relocation of bus routes or bus stop locations. Therefore, the Project would have no significant adverse impacts to bus operations.

Parking

The Proposed Project includes the installation of a sidewalk bulb-out which would eliminate a few curbside parking spaces. However, there would be sufficient on-street parking capacity to accommodate the future parking demand, even with the projected loss of spaces.

Pedestrian

Overall, pedestrian elements (sidewalk, corner, and crosswalk) at 68th Street and Lexington Avenue would operate at the same or better LOS due to the diversion of customers to the new 69th Street access point. Diverting these pedestrians to 69th Street and Lexington Avenue would increase pedestrian volumes at that intersection and cause some pedestrian elements to operate at a slightly worse LOS; however, all of these elements would still operate at LOS D or better, and there would be no significant adverse impacts as a result of the project.