Chapter 22: Project Permutations

A. INTRODUCTION

This chapter considers how the cumulative impacts of the proposed projects might change if one or more of the projects is delayed indefinitely or ultimately not pursued. The analysis is limited to evaluating specific locations or facilities for which impacts and mitigation needs have been identified under the cumulative impact analysis of all three projects.

The cumulative impact analysis of all three projects, presented in Chapters 2 through 20 of this EIS, identified the potential for significant adverse impacts in the following technical areas: community facilities (public elementary schools and publicly funded child care centers); open space; shadows; transportation; and construction. Those impacts are described below and the potential for changes in the cumulative impacts are analyzed.

The potential for impacts to historic and cultural resources was detailed in Chapter 7, "Historic and Cultural Resources." The identified potential historic and cultural resources impacts are not cumulative, but rather are specific to the construction of each individual project and would not change if one or more of the projects is delayed indefinitely or ultimately not pursued. Therefore, they are not considered in the analysis presented below.

PRINCIPAL CONCLUSIONS

Table 22-1 below summarizes the anticipated impacts of the proposed projects if one or more of the proposed projects is delayed indefinitely or ultimately not pursued.

Table 22-1
Project Permutations Impacts Summary

	Future with Proposed Projects—Site 5 and Site 6A Projects Only	Future with the Proposed Projects—Site 4 (4A/4B) and Site 6A Projects Only	Future with the Proposed Projects—Site 4 (4A/4B) and Site 5 Projects Only	Future with Site 4 (4A/4B) Project Only	Future with Site 5 Project Only	Future with Site 6A Project Only
Public Elementary Schools	No	No	No	No	No	No
Publicly Funded Child Care	~~No~~Yes	No	No	No	No	No
Open Space	Yes	No	Yes	No	No	No
Shadows—Cherry Clinton Playground December 21	Yes	Yes	No	No	No	Yes
Shadows—Lillian D Wald Playground March 21/September 21	Yes	No	No	No	No	No
Shadows—Cherry Clinton Playground March 21/September 21	Yes	Yes	No	No	No	Yes
Shadows—Cherry Clinton Playground May 6/August 6	No	No	No	No	No	No
Traffic	Yes, except at South Street/Pike Slip, Division/Pike Streets, and Worth/Centre Streets	Yes, except at South Street/Pike Slip, Division/Market Streets, Allen/Delancey Streets, Chatham Square/East Broadway, and Worth/Centre Streets	Yes, except at South Street/Pike Slip, Division/Pike Streets, and Worth/Centre Streets	Yes, except at South Street/Pike Slip, Madison/Pike Streets, East Broadway/Pike Street, Canal/Allen Streets, Division/Market Streets, Allen/Delancey Streets, Bowery/Division/Doyers Streets, Chatham Square/East Broadway, and Worth/Centre Streets	Yes, except at South Street/Pike Slip, Division/Market Streets, Allen/Delancey Streets, Chatham Square/East Broadway, and Worth/Centre Streets	Yes, except at South Street/Pike Slip, Madison/Pike Streets, East Broadway/Pike Street, Canal/Allen Streets, Division/Market Streets, Allen/Delancey Streets, Bowery/Division/Doyers Streets, Chatham Square/East Broadway, and Worth/Centre Streets
Subway Station	Yes	Yes	Yes	Yes	Yes	Yes
Pedestrians	Yes	Yes	Yes	Yes, except at Rutgers/Madison Street E crosswalk	Yes	Yes
Construction—Traffic	Yes, except at South Street/Pike Slip, Division/Pike Streets, and Worth/Centre Streets	Yes, except at South Street/Pike Slip, Division/Market Street, Allen/Delancey Streets, Chatham Square/East Broadway, and Worth/Centre Streets	Yes, except at South Street/Pike Slip, Division/Pike Streets, and Worth/Centre Streets	Yes, except at South Street/Pike Slip, Madison/Pike Streets, East Broadway/Pike Street, Canal/Allen Streets, Division/Market Streets, Allen/Delancey Streets, Bowery/Division/Doyers Streets, Chatham Square/East Broadway, and Worth/Centre Streets	Yes, except at South Street/Pike Slip, East Broadway/Market Street, Allen/Delancey Streets, and Worth/Centre Streets	Yes, except at South Street/Pike Slip, Madison/Pike Streets, Madison/Montgomery Streets, East Broadway/Pike Street, Canal/Allen Streets, Division/Market Streets, Allen/Delancey Streets, Bowery/Division/Doyers Streets, Chatham Square/East Broadway, and Worth/Centre Streets
~~**Construction—Pedestrians**~~	~~Yes~~	~~Yes~~	~~Yes~~	~~Yes, except at Rutgers/Madison Street E crosswalk~~	~~Yes~~	~~Yes~~

Table 22-1 (cont'd)
Project Permutations Impacts Summary

	Future with Proposed Projects—Site 5 and Site 6A Projects Only	Future with the Proposed Projects—Site 4 (4A/4B) and Site 6A Projects Only	Future with the Proposed Projects—Site 4 (4A/4B) and Site 5 Projects Only	Future with Site 4 (4A/4B) Project Only	Future with Site 5 Project Only	Future with Site 6A Project Only
Construction-Noise	Yes, at a portion of the northern façade and the eastern and western façades of 265 and 275 Cherry Street; the façades of the residences facing the project sites on Cherry Street; the residences immediately adjacent to Site 6A; and portions of the northern and western façades of 286 South Street	Yes, at the eastern, southern, and western façades of 64 Rutgers Street; 80 Rutgers Slip, the northern, eastern, and a portion of the southern façades of 82 Rutgers Slip; and the residential buildings west of Site 4 (4A/4B); and the façades of the residences facing the project sites on Cherry Street; the residential buildings immediately adjacent to Site 6A; and portions of the northern and western façades of 286 South Street	Yes, at the eastern, southern, and western façades of 64 Rutgers Street; 80 Rutgers Slip; the northern, eastern, and a portion of the southern façades of 82 Rutgers Slip; and portions of the northern and eastern façades of the residences west of Site 4 (4A/4B); the façades of the residences facing the project sites on Cherry Street; and a portion of the northern façade and the eastern and western façades of 265 and 275 Cherry Street	Yes, at the eastern, southern, and western façades of 64 Rutgers Street; 80 Rutgers Slip; the northern, eastern, and a portion of the southern façades of 82 Rutgers Slip; and portions of the northern and eastern façades of the residences west of Site 4 (4A/4B)	Yes, a portion of the northern façade and the eastern and western façades of 265 and 275 Cherry Street	Yes, at the façades of the residences facing the project sites on Cherry Street; the residences immediately adjacent to Site 6A; and the northern and western façades of 286 South Street

B. POTENTIAL FOR CHANGES TO IDENTIFIED IMPACTS IF PROJECTS ARE NOT PURSUED

PUBLIC ELEMENTARY SCHOOLS

In the With Action condition, in the scenario that conservatively assumes the 200 of the permanently affordable units[1] may not be developed exclusively for seniors, the proposed projects would result in an increase of more than five percentage points over the No Action condition and elementary school utilization would be just over 100 percent in Community School District (CSD) 1. Therefore, in this scenario, the proposed projects would result in a significant adverse impact on public elementary schools in CSD 1. In the scenario that assumes 200 of the permanently affordable units would be for senior housing, the proposed projects would result in an increase of more than five percentage points over the No Action condition, while elementary school utilization would remain just below 100 percent in CSD 1, and therefore would not result in a significant adverse impact.

If the Site 4 (4A/4B) project is delayed indefinitely or ultimately not pursued, the total development anticipated with the proposed projects would be reduced by 660 dwelling units (DUs), and thus the number of project-generated elementary school students would be reduced by approximately 79, based on the 2014 *City Environmental Quality Review (CEQR) Technical Manual* elementary school student multipliers.

If the Site 5 project is delayed indefinitely or ultimately not pursued, the total development anticipated with the proposed projects would be reduced by 1,350 DUs, and thus the number of elementary school students would be reduced by approximately 162.

If the Site 6A project is delayed indefinitely or ultimately not pursued, the total development anticipated with the proposed projects would be reduced by 765 DUs, and thus the number of project-generated elementary school students would be reduced by approximately 92.

The *CEQR Technical Manual* guidelines indicate a significant adverse impact on public schools could result when both of the following criteria are met: (1) A utilization rate in the study area that is equal to or greater than 100 percent in the With Action condition; and (2) An increase of five percentage points or more in the collective utilization rate between the No Action and With Action conditions. As detailed in **Table 22-2**, if any one of the three proposed projects does not move forward, elementary schools in the study area would operate under capacity and the increase in the utilization rate would be under five percentage points. This would be the case whether or not the two other projects contain senior units. Therefore, the proposed projects would not result in a significant adverse impact on elementary schools if any one of the three proposed projects is delayed or ultimately not pursued.

[1] A portion of the affordable units would be made permanently affordable pursuant to requirements of the "R10 Program," set forth in Zoning Resolution Sections 23-154(a) and 23-90. The remainder of the affordable units would be made permanently affordable pursuant to Regulatory Agreements with the New York City Department of Housing Preservation and Development (HPD) as established in consultation with the applicants. For purposes herein, permanent or permanently affordable housing shall refer to units made permanently affordable both through the R10 Program and the Regulatory Agreements.

Table 22-2
Estimated Elementary School Enrollment, Capacity, and Utilization with Project Permutations

	Enrollment	Capacity	Available Slots	Utilization Rate	Change in Utilization	Significant Adverse Impact
Future without Proposed Projects	5,718	6,036	318	94.7%	N/A	N/A
Future with Proposed Projects—Site 5 and Site 6A Projects Only	5,972	6,036	64	98.9%	4.21%	No
Future with the Proposed Projects—Site 4 (4A/4B) and Site 6A Projects Only	5,889	6,036	147	97.6%	2.83%	No
Future with the Proposed Projects—Site 4 (4A/4B) and Site 5 Projects Only	5,959	6,036	77	98.7%	4.0%	No

Sources: Enrollment Projections 2016–2025 New York City Public Schools by Statistical Forecasting; DOE Utilization Profiles: Enrollment/Capacity/Utilization 2016–2017 School Year; DOE 2015–2019 Proposed Five-Year Capital Plan, Amended November 2017; School Construction Authority.

PUBLICLY FUNDED CHILD CARE CENTERS

In the future with the proposed projects, in the scenario that conservatively assumes 200 of the permanently affordable units may not be developed exclusively for seniors, child care facilities in the study area would operate over capacity and the increase in the utilization rate would be over five percentage points. Therefore, in this scenario, the proposed projects would result in a significant adverse impact on child care facilities. In the scenario that assumes the 200 permanently affordable units would be for senior housing, the proposed projects would not result in a significant adverse impact on child care facilities.

If the Site 4 (4A/4B) project is delayed indefinitely or ultimately not pursued, the total development anticipated with the proposed projects would be reduced by up to 165 affordable DUs, and thus the number of project-generated children eligible for publicly funded child care programs would be reduced by approximately 19, based on the *CEQR Technical Manual* child care multipliers.

If the Site 5 project is delayed indefinitely or ultimately not pursued, the total development anticipated with the proposed projects would be reduced by up to 338 affordable units, and thus the number of project-generated children eligible for publicly funded child care programs would be reduced by approximately 39.

If the Site 6A project is delayed indefinitely or ultimately not pursued, the total development anticipated with the proposed projects would be reduced by up to 191 affordable units, and thus the number of project-generated children eligible for publicly funded child care programs would be reduced by approximately 22.

As noted above, the *CEQR Technical Manual* guidelines indicate a significant adverse impact on publicly funded child care services could result when both of the following criteria are met: (1) a demand for slots greater than the remaining capacity of child care facilities; and (2) an increase in demand of five percentage points of the study area capacity. As detailed in **Table 22-3**, if any one of the three proposed projects does not move forward, child care facilities in the study area would operate over capacity, but the increase in the utilization rate would only exceed ~~be under~~ five percentage points if Site 5 and Site 6A are developed; development of Site 4 (4A/4B) in conjunction with either Site 5 or Site 6A would not result in a significant adverse impact. In the event that the Site 4 (4A/4B) project is delayed indefinitely or ultimately not pursued, ~~This would only be the case whether or not~~the development of Site 5 and Site 6A would only result in

significant adverse impacts to child care facilities if they ~~two other projects~~ do not contain senior units. In the scenario that assumes 200 of the permanently affordable units would be for senior housing~~Therefore~~, the proposed projects would not result in a significant adverse impact on child care facilities if any one of the three proposed projects is delayed or ultimately not pursued.

Table 22-3
Estimated Child Care Facility Enrollment, Capacity, and Utilization with Project Permutations

	Enrollment	Capacity	Available Slots	Utilization Rate	Change in Utilization	Significant Adverse Impact
Future without Proposed Projects	~~1,290~~1,254	~~1,228~~1,169	~~-62~~85	~~105.0~~107.27%	N/A	N/A
Future with Proposed Projects—Site 5 and Site 6A Projects Only	~~1,351~~1,315	1,~~169~~1,228	~~-123~~146	~~110.0~~112.5%	~~4.97~~5.20%	~~No~~Yes
Future with the Proposed Projects—Site 4 (4A/4B) and Site 6A Projects Only	~~1,331~~1,295	1,~~169~~1,228	~~-126~~103	~~108.4%~~110.8%	~~3.34~~3.50%	No
Future with the Proposed Projects—Site 4 (4A/4B) and Site 5 Projects Only	~~1,348~~1,312	1,~~169~~1,228	~~-120~~143	~~109.8~~112.2%	~~4.72%~~4.95%	No
Sources: New York City Administration for Children's Services (ACS), June 2017; AKRF, Inc.						

OPEN SPACE

The proposed projects would increase utilization of study area open space resources due to the introduction of a substantial new residential population. In the future with the proposed projects, the study area's total open space ratio would decrease by ~~7.36~~7.31 percent, the active open space ratio would decrease by ~~8.17~~8.06 percent, and the passive open space ratio would decrease by ~~6.45~~6.25 percent. According to the *CEQR Technical Manual*, an action may result in a significant adverse open space impact if it would reduce the open space ratio by more than five percent in areas that are currently below the City's median community district open space ratio of 1.5 acres per 1,000 residents. Therefore, the reductions in the total, active, and passive open space ratios with the proposed projects would result in a significant adverse open space impact based on quantitative analysis of indirect effects, as set forth in the *CEQR Technical Manual*.

If the Site 4 (4A/4B) project is delayed indefinitely or ultimately not pursued, the total development anticipated with the proposed projects would be reduced by approximately 660 DUs, and thus the project-generated population would be reduced by approximately 1,419 persons, based on *CEQR Technical Manual* methodology.

If the Site 5 project is delayed indefinitely or ultimately not pursued, the total development anticipated with the proposed projects would be reduced by approximately 1,350 units, and thus the project-generated population would be reduced by approximately 2,838 persons. The enlargement of the existing private Rutgers Slip Open Space from approximately 22,440 square feet (sf) to approximately 33,550 sf (approximately 0.77 acres) would not occur, and the Rutgers Slip Open Space would not be dedicated as publicly accessible open space. Therefore, the new proposed publicly accessible Rutgers Slip Open Space is not accounted for in the quantitative analysis if the Site 5 project is delayed indefinitely or ultimately not pursued.

If the Site 6A project is delayed indefinitely or ultimately not pursued, the total development anticipated with the proposed projects would be reduced by approximately 765 units, and thus the project-generated population would be reduced by approximately 1,580 persons. The approximately 3,200 sf of new private open space also would not be developed on that site; however, this open space is not accounted for in the quantitative analysis of potential open space impacts.

As noted above, the *CEQR Technical Manual* guidelines indicate that an action may result in a significant adverse open space impact if it would reduce the open space ratio by more than 5 percent in areas that are currently below the City's median community district open space ratio of 1.5 acres per 1,000 residents. The project area is currently below the City's median community district open space ratio. As detailed in **Table 22-4**, if the Site 5 project does not move forward, or if both the Site 4 (4A/4B) and Site 6A projects do not move forward, the project area's open space ratios would remain below the City's median community district open space ratio, but the proposed projects would not result in reductions to the open space ratios of more than 5 percent. Therefore, the proposed projects would not result in a significant adverse open space impact if the Site 5 project, or both the Site 4 (4A/4B) and Site 6A projects, are delayed or ultimately not pursued. If only the Site 4 (4A/4B) project or only the Site 6A project does not move forward, the proposed projects would result in a significant adverse open space impact.

Table 22-4
Open Space Ratios Summary with Project Permutations

	Total Open Space	Percent Change	Active Open Space	Percent Change	Passive Open Space	Percent Change	Significant Adverse Impact
Future without the Proposed Projects	~~0.897~~ 0.889	N/A	~~0.526~~ 0.521	N/A	~~0.372~~ 0.368	N/A	N/A
Future with the Proposed Projects—Site 5 and Site 6A Projects Only	~~0.849~~ 0.841	~~-5.35%~~ -5.40%	~~0.494~~ 0.489	~~-6.08%~~ -6.14%	~~0.355~~ 0.352	~~-4.57 %~~ -4.35%	Yes
Future with the Proposed Projects—Site 4 (4A/4B) and Site 6A Projects Only	~~0.856~~ 0.848	~~-4.57%~~ -4.61%	~~0.501~~ 0.497	~~-4.75%~~ 4.61%	~~0.355~~ 0.351	~~-4.57%~~ -4.62%	No
Future with the Proposed Projects—Site 4 (4A/4B) and Site 5 Projects Only	~~0.851~~ 0.844	~~-5.13%~~ -5.06%	~~0.495~~ 0.490	~~-5.85%~~ -5.95%	~~0.356~~ 0.353	~~-4.30%~~ -4.08%	Yes
Future with the Proposed Projects—Site 5 Project Only	~~0.870~~ 0.862	~~-3.01%~~ -3.04%	~~0.506~~ 0.501	~~-3.80%~~ -3.84%	~~0.364~~ 0.361	~~-2.15%~~ -1.90%	No

SHADOWS

The proposed projects' buildings would cast new shadows on ~~34~~ 35 different sunlight-sensitive resources in the longest shadow study area. The majority of these new shadows would be limited in extent and duration, and would typically occur in some seasons but not others. However, in two cases, project-generated shadow would be substantial enough in extent and/or duration to significantly affect the use or vegetation of the resource: the Cherry Clinton Playground on the December 21 analysis day (use, but not vegetation), March 21/September 21 analysis day (use and vegetation) and on the May 6/August 6 analysis day (use only); and the Lillian D. Wald Playground on the March 21/September 21 analysis day (use only).

The project-generated shadow on the Lillian D. Wald Playground on the March 21/September 21 analysis day—the analysis day for which a significant adverse shadows impact was identified—comes from the proposed Site 6A building from 2:15 to 3:05 PM, from the proposed Site 5 building and the proposed Site 6A building from 3:05 PM until 3:50 PM, and from the proposed Site 5 building from 3:50 PM until 4:10 PM. Project-generated shadow from the proposed Site 4 (4A/4B) building would not reach this resource on this analysis day, and that proposed building does not contribute to the identified shadow impact on this resource. Thus, if the Site 4 (4A/4B) project is delayed or ultimately not pursued, the proposed projects would still have a significant adverse impact on this resource. If the proposed Site 5 project does not move forward, the

amount of project-generated shadow on this resource would be reduced to approximately an hour and 35 minutes on this analysis day. If the proposed Site 6A project does not move forward, the amount of project-generated shadow on this resource would be reduced to approximately an hour and five minutes on this analysis day. In either of these scenarios, the project-generated shadow on this resource on this analysis day would not be identified as a significant adverse impact, due to the reduced duration of incremental shadow and the larger remaining areas of sunlight on the playground during the period when incremental shadow would occur.

The project-generated shadow on the Cherry Clinton Playground on the December 21 analysis day comes from the proposed Site 6A building from approximately 12:40 PM to 2:53 PM. Project-generated shadow from the proposed Site 4 (4A/4B) building and the proposed Site 5 building would not reach this resource on this analysis day, and those proposed buildings do not contribute to the identified shadow impact on this resource on this analysis day. Thus, if the Site 4 (4A/4B) project is delayed or ultimately not pursued, the proposed projects would still have a significant adverse impact on this resource on December 21. If the proposed Site 5 project does not move forward, the proposed projects would still have a significant adverse impact on this resource on December 21. If the proposed Site 6A project does not move forward, there would be no incremental shadow on this analysis day, and a significant adverse impact would not occur.

The project-generated shadow on the Cherry Clinton Playground on the March 21/September 21 analysis day comes from the proposed Site 6A building from approximately 12:40 PM to 2:40 PM; from the proposed Site 5 building and the proposed Site 6A building from approximately 2:40 PM to 4:00 PM; and from the proposed Site 5 building from approximately 4:00 PM to 4:29 PM. Project-generated shadow from the proposed Site 4 (4A/4B) building would not reach this resource on this analysis day, and that proposed building does not contribute to the identified shadow impact on this resource. Thus, if the Site 4 (4A/4B) project is delayed or ultimately not pursued, the proposed projects would still have a significant adverse impact on this resource. If the proposed Site 5 project does not move forward, the amount of project-generated shadow on this resource would be reduced to a total of three hours 20 minutes on this analysis day, and the project-generated shadow would still be identified as a significant adverse impact. If the proposed Site 6A project does not move forward, the amount of project-generated shadow on this resource would be reduced to approximately an hour and 49 minutes on this analysis day, and the project-generated shadow would not be identified as a significant adverse impact.

The project-generated shadow on the Cherry Clinton Playground on the May 6/August 6 analysis day comes from the proposed Site 6A building from approximately 12:20 PM to 2:00 PM; from the proposed Site 6A building and the proposed Site 5 building from approximately 2:00 PM to 2:55 PM; from the proposed Site 5 building from approximately 2:55 PM to 3:05 PM; and from the proposed Site 4 (4A/4B) building from approximately 3:20 PM to 4:15 PM. If the Site 4 (4A/4B) project is delayed or ultimately not pursued, the amount of project-generated shadow on this resource would be reduced to approximately two hours 45 minutes on this analysis day. If the proposed Site 5 project does not move forward, the amount of project-generated shadow on this resource would be reduced to approximately three hours 30 minutes on this analysis day. If the proposed Site 6A project does not move forward, the amount of project-generated shadow on this resource would be reduced to approximately an hour and 40 minutes on this analysis day. In any of these scenarios, the project-generated shadow on the Cherry Clinton Playground on this analysis day would not be identified as a significant adverse impact, because in each scenario incremental shadow would be more limited in duration and would

never eliminate the remaining areas of sunlight. See **Table 22-5** for a summary of shadow impacts with these project permutations.

Table 22-5
Shadows Impacts with Project Permutations Summary

	Cherry Clinton Playground December 21 Impact	Lillian D Wald Playground March 21/September 21 Impact	Cherry Clinton Playground March 21/September 21 Impact	Cherry Clinton Playground May 6/August 6 Impact
Future with Proposed Projects—Site 5 and Site 6A Projects Only	Yes	Yes	Yes	No
Future with the Proposed Projects—Site 4 (4A/4B) and Site 6A Projects Only	Yes	No	Yes	No
Future with the Proposed Projects—Site 4 (4A/4B) and Site 5 Projects Only	No	No	No	No

TRANSPORTATION

As detailed in Chapter 14, "Transportation," the proposed projects, analyzed cumulatively, would be expected to result in significant adverse traffic, transit (subway station), and pedestrian impacts. Mitigation measures, as described in Chapter 21, "Mitigation," have been recommended to address these impacts to the extent practicable. If one of the three proposed projects is delayed indefinitely or not pursued, the cumulative impacts of the two remaining projects may be less intensive than those projected for all three projects in combination, and in some cases certain impacts may not materialize at all. Correspondingly, some of the mitigation measures identified may not be warranted or they may be reduced to address impacts of smaller magnitudes. Since transportation-related impacts are largely driven by how conditions are expected to deteriorate due to incremental trips added to the transportation system, an assessment of potential impact findings and mitigation needs, under the premises of one of the three projects possibly delayed indefinitely or not moving forward entirely, would rely on the relative trip-making between these scenarios and the three-project cumulative scenario that has been analyzed fully. **Table 22-6a** provides a comparison of the vehicular, subway, and overall person trips estimated for the various scenarios.

Table 22-6a
Comparison of Trip Generation of the Proposed Projects with Project Permutations

Analysis Scenarios		Total Vehicle Trips			Total Person Trips			Total Subway Trips		
		AM	Midday	PM	AM	Midday	PM	AM	Midday	PM
Future with the Proposed Projects (Sites 4 [4A/4B], 5, and 6A)	Trips	435	214	424	2,475	1,442	2,815	1,017	514	1,121
Scenario 1: Future with the Proposed Projects— Site 5 and Site 6A Projects Only	Trips	341	160	329	1,932	1,082	2,183	783	390	861
	% Total	*78%*	*75%*	*78%*	*78%*	*75%*	*78%*	*77%*	*76%*	*77%*
Scenario 2: Future with the Proposed Projects—Site 4 (4A/4B) and Site 6A Projects Only	Trips	209	114	205	1,172	740	1,348	506	264	561
	% Total	*48%*	*53%*	*48%*	*47%*	*51%*	*48%*	*50%*	*51%*	*50%*
Scenario 3: Future with the Proposed Projects—Site 4 (4A/4B) and Site 5 Projects Only	Trips	320	154	314	1,846	1,062	2,099	745	374	820
	% Total	*74%*	*72%*	*74%*	*75%*	*74%*	*75%*	*73%*	*73%*	*73%*

Note: % Total = ratio of trips projected for permutation scenario to all three projects in combination

Since the projected trips for Scenario 1 (Future with Proposed Projects without Site 4 [4A/4B] Project) and for Scenario 3 (Future with Proposed Projects without Site 6A Project) are relatively similar as compared to the future with all three projects cumulatively, one set of assessment was made to characterize the anticipated impacts and required mitigation measures for these two scenarios, while another was made specifically for Scenario 2 (Future with Proposed Projects without Site 5 Project). For reference, the projected trips for each individual project in comparison to the cumulated trips estimated for the three proposed projects in combination are presented in **Table 22-6b**.

Table 22-6b
Comparison of Trip Generation of the Proposed Projects with Each Individual Project

Analysis Scenarios		Total Vehicle Trips			Total Person Trips			Total Subway Trips		
		AM	Midday	PM	AM	Midday	PM	AM	Midday	PM
Future with the Proposed Projects (Sites 4 [4A/4B], 5, and 6A)	Trips	435	214	424	2,475	1,442	2,815	1,017	514	1,121
Site 4 (4A/4B) Project	Trips	94	54	95	543	360	632	234	124	260
	% Total	*22%*	*25%*	*22%*	*22%*	*25%*	*23%*	*23%*	*24%*	*23%*
Site 5 Project	Trips	226	100	219	1,303	702	1,467	511	250	560
	% Total	*52%*	*47%*	*52%*	*53%*	*49%*	*52%*	*50%*	*49%*	*50%*
Site 6A Project	Trips	115	60	110	629	380	716	272	140	301
	% Total	*26%*	*28%*	*26%*	*25%*	*26%*	*25%*	*27%*	*27%*	*27%*

Note: % Total = ratio of trips projected for each individual project to all three projects in combination

TRAFFIC

As detailed in Chapter 14, "Transportation," significant adverse traffic impacts were identified at 13 of the study area intersections. Signal timing changes and lane restriping were proposed to mitigate the projected impacts at these intersections; see Chapter 21, "Mitigation." All impacts, except those identified for the South Street and Montgomery Street, and at the Chatham Square and Worth Street/Oliver Street intersections, were determined to be mitigatable. **Table 22-7** presents a summary of the impacted locations and whether measures were identified to mitigate the projected impacts.

Table 22-7
Summary of Significant Adverse Traffic Impacts and Mitigation Findings

Intersection		Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Mitigated
EB/WB Street	NB/SB Street				
South Street	Pike Slip			SB-L	Yes
South Street	Clinton Street			EB-LT	Yes
South Street (North)	Montgomery Street	SB-TR		WB-LTR NB-LT	No
South Street (South)		SB-LT		SB-LT	
Madison Street	Pike Street (East)	EB-LT		EB-LT	Yes
Madison Street	Montgomery Street			NB-LTR	Yes
East Broadway	Pike Street (East)	NB-L	NB-L	EB-L NB-L	Yes
	Pike Street (West)	EB-TR	EB-TR	EB-TR	
Division Street	Market Street		NB-L		Yes
Canal Street	Allen Street			EB-LTR	
Delancey Street	Allen Street		WB-L	WB-L	Yes
Division Street	The Bowery	WB-L			Yes
East Broadway	Chatham Square		SB-L	NB-R SB-L	Yes
Worth Street/Oliver Street	Chatham Square	EB-L (Worth Street) EB-LTR (Worth Street) SB-TR	EB-L (Worth Street) EB-LTR (Worth Street) SB-TR	EB-L (Worth Street) EB-LTR (Worth Street) WB-R SB-TR	No
Worth Street	Centre Street	WB-T			Yes
Total Impacted Intersections/Lane Groups		6/10	5/8	10/18	

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, EB = Eastbound, WB = Westbound, NB = Northbound, SB = Southbound

Scenario 1 (Site 5 and Site 6A Projects Only) and Scenario 3 (Site 4 [4A/4B] and Site 5 Projects Only)

With approximately 70 to 80 percent of the total vehicle trips projected for the three proposed projects in combination, these permutation scenarios are expected to yield the same impact and mitigation findings as those described in Chapters 14 and 22, except for the following:

- South Street and Pike Slip—The southbound left-turn impact identified for the PM peak hour is not expected to occur with these permutation scenarios. Accordingly, the proposed mitigation (1 second of signal retiming) would also not be necessary.
- Division Street and Market Street—The northbound left-turn impact identified for the midday peak hour is not expected to occur with these permutation scenarios. Accordingly, the proposed mitigation (1 second of signal retiming) would also not be necessary.
- Worth Street and Centre Street—The westbound through impact identified for the AM peak hour is not expected to occur with these permutation scenarios. Accordingly, the proposed mitigation (1 second of signal retiming) would also not be necessary.

Scenario 2 (Site 4 [4A/4B] and Site 6A Projects Only)

With approximately 50 percent of the total vehicle trips projected for the three proposed projects in combination, this permutation scenario is expected to yield the same impact and mitigation findings as those described in Chapters 14 and 22, except for the following:

- South Street and Pike Slip—The southbound left-turn impact identified for the PM peak hour is not expected to occur with this permutation scenario. Accordingly, the proposed mitigation (1 second of signal retiming) would also not be necessary.

- Division Street and Market Street—The northbound left-turn impact identified for the midday peak hour is not expected to occur with this permutation scenario. Accordingly, the proposed mitigation (1 second of signal retiming) would also not be necessary.
- Allen Street and Delancey Street—The westbound left-turn impacts identified for the midday and PM peak hours are not expected to occur with this permutation scenario. Accordingly, the proposed mitigation (1 second of signal retiming) would also not be necessary.
- Chatham Square and East Broadway—The southbound left-turn impact identified for the midday peak hour is not expected to occur with this permutation scenario. Accordingly, the proposed mitigation (1 second of signal retiming) would also not be necessary.
- Worth Street and Centre Street—The westbound through impact identified for the AM peak hour is not expected to occur with this permutation scenario. Accordingly, the proposed mitigation (1 second of signal retiming) would also not be necessary.

Since the three permutation scenarios would all still result in the potential for significant adverse traffic impacts, <u>two</u>~~one~~ of which could not be mitigated with standard traffic engineering measures, an assessment of anticipated impacts for each individual project was prepared.

Site 4 (4A/B) Only/Site 6A Only

With approximately 25 percent of the total vehicle trips projected for the three proposed projects in combination, if only the Site 4 (4A/B) project or the Site 6A project were to move forward, it would be expected to yield the same impact and mitigation findings as those described in Chapters 14 and 22, except for the following:

- South Street and Pike Slip—The southbound left-turn impact identified for the PM peak hour would not be expected to occur with this scenario. Accordingly, the proposed mitigation (1 second of signal retiming) would not be necessary.
- Madison Street and Pike Street—The eastbound left-turn impact on the east portion of the intersection identified for the AM and PM peak hours would not be expected to occur with this scenario. Accordingly, the proposed mitigation (1 second of signal retiming) would not be necessary.
- East Broadway and Pike Street—The northbound left-turn impact on the east portion of the intersection and the eastbound through-right impact on the west portion of the intersection identified for the midday peak hour would not be expected to occur with this scenario. Accordingly, although the lane restriping for the eastbound approach would still be applicable for this peak hour to mitigate the impacts identified for the AM and PM peak hours, the proposed 1 second of signal retiming for the northbound left-turn would not be necessary.
- Canal Street and Allen Street—The eastbound approach impact identified for the PM peak hour would not be expected to occur with this scenario. Accordingly, the proposed mitigation (1 second of signal retiming) would not be necessary.
- Division Street and Market Street—The northbound left-turn impact identified for the midday peak hour would not be expected to occur with this scenario. Accordingly, the proposed mitigation (1 second of signal retiming) would not be necessary.
- Allen Street and Delancey Street—The westbound left-turn impacts identified for the midday and PM peak hours would not be expected to occur with this scenario. Accordingly, the proposed mitigation (1 second of signal retiming) would not be necessary.

- The Bowery and Division Street/Doyers Street—The westbound left-turn impact identified for the AM peak hour would not be expected to occur with this scenario. Accordingly, the proposed mitigation (1 second of signal retiming) would not be necessary.
- Chatham Square and East Broadway—The southbound left-turn impact identified for the midday peak hour is not expected to occur with this scenario. Accordingly, the proposed mitigation (1 second of signal retiming) would also not be necessary.
- Worth Street and Centre Street—The westbound through impact identified for the AM peak hour would not be expected to occur with this scenario. Accordingly, the proposed mitigation (1 second of signal retiming) would not be necessary.

Site 5 Only

With approximately 50 percent of the total vehicle trips projected for the three proposed projects in combination, if only the Site 5 project was to move forward, it would be expected to yield similar results as those described above for permutation Scenario 2 (Site 4 [4A/4B] and Site 6A projects only). Impacts identified at five intersections for the three proposed projects in combination would likely not materialize if only the Site 5 project was to move forward.

SUBWAY STATION

As detailed in Chapter 14, "Transportation," significant adverse subway station impacts were identified for the S1 street-level stairway, located on the northwest corner of Madison Street and Rutgers Street, during the AM and PM peak periods and the P3 platform stairway during the AM peak period. Constructing a new street-level stairway (S2) across the street from the existing S1 stairway, coupled with an extension of the adjacent sidewalk, and widening the P3 platform stairway were proposed to mitigate the identified impacts. Additionally, in compliance with the Americans with Disabilities Act (ADA), two elevators, one between street-level and mezzanine-level and one between mezzanine-level and platform-level would need to accompany these stairway improvements.

Similar to what was described above for traffic, incremental subway trips associated with Scenario 1 (Site 5 and Site 6A projects only) and Scenario 3 (Site 4 [4A/4B] and Site 5 projects only) would be approximately 75 percent of the total subway trips projected for the three proposed projects in combination, while those for Scenario 2 (Site 4 [4A/4B] and Site 6A projects only) would be approximately half of that same total. Because stairway S1 already operates at congested levels under existing conditions, with a volume-to-capacity (v/c) ratio of up to 1.15 during peak periods and is projected to worsen to a peak period v/c ratio of up to 1.44 under No Action condition, any notable increase in additional subway ridership generated by any of the proposed projects is expected to yield a significant adverse impact at this stairway. Similarly, because the P3 platform stairway will operate at capacity during the AM peak period under No Action condition, it is also susceptible to be significantly impacted with any notable increases in subway ridership. Although the extent of the mitigation could vary (i.e., slightly narrower new and/or widened stairways) and would be determined in coordination with New York City Transit (NYCT), the projected impact and required mitigation would largely be the same under any permutation scenario, or with any one of the three proposed projects individually.

PEDESTRIANS

As detailed in Chapter 14, "Transportation," significant adverse pedestrian impacts were identified for one sidewalk and three crosswalks near the project sites. A sidewalk extension (in

conjunction with a new street-level stairway), crosswalk widening, and adjustment to signal timings were proposed to mitigate the projected impacts at these locations; see Chapter 21, "Mitigation." With these mitigation measures in place, all projected impacts would be fully mitigated. **Table 22-8** presents a summary of the impacted locations and whether measures were identified to mitigate the projected impacts.

Table 22-8
Summary of Significant Adverse Pedestrian Impacts

Pedestrian Element	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Mitigated
North Sidewalk of Madison Street between Rutgers Street and Pike Street	Impacted	—	Impacted	Yes
Rutgers Street and Madison Street North Crosswalk	Impacted	—	—	Yes
Rutgers Street and Madison Street West Crosswalk	Impacted	—	Impacted	Yes
Rutgers Street and Cherry Street South Crosswalk	—	Impacted	Impacted	Yes

Similar to what was described above for traffic and subway, pedestrian trip increments under Scenario 1 (Site 5 and Site 6A projects only) and Scenario 3 (Site 4 [4A/4B] and Site 5 projects only) would be approximately 75 percent of the total increments projected for the three proposed projects in combination, while those for Scenario 2 (Site 4 [4A/4B] and Site 6A projects only) would be approximately half of that same total. In consideration of the severity of the impacts identified for each of these locations, it is expected that any of the permutation scenarios would yield the same or similar impacts that would require the same or similar mitigation measures. If only the Site 5 project was to move forward, because projected trips for this proposed project would be comparable to Scenario 2 (Site 4 [4A/4B] and Site 6A projects only), the conclusions drawn above for that permutation scenario would apply. If only the Site 4 (4A/B) or Site 6A projects were to move forward, the resulting trip generation would be only approximately 25 percent of the total person trips projected for the three proposed projects in combination. Under this scenario, the crosswalk impact identified for the proposed projects at the north crosswalk of Rutgers Street and Madison Street during the AM peak hour would not be expected to occur.

As described in Chapter 21, "Mitigation," because the proposed new street-level stairway would divert existing subway riders away from the west side of Rutgers Street, the pedestrian impacts identified at the Madison Street and Rutgers Street intersection under the With Action condition (i.e., north sidewalk between Pike and Rutgers Streets and the intersection's north and west crosswalks) would also be mitigated. However, the shift in pedestrian flow would result in a new significant adverse impact at the intersection's east crosswalk, which could be mitigated with striping a wider crosswalk and adjusting the intersection's signal timing. These measures are expected to be required for all of the permutation scenarios, except for the development of only Site 4 (4A/B). Because Site 4 (4A/B) is located on the west side of Rutgers Slip/Street, it would not add a notable number of pedestrian trips on the east side of Rutgers Street and hence would not contribute to this east crosswalk impact.

IMPLEMENTATION OF MITIGATION MEASURES

The proposed projects are expected to be developed along similar timeframes, with completion currently expected in 2021. Should any project(s) be completed more than two years before either or both of the others, (i.e., temporary certificates of occupancy are issued for any building(s) before the remaining project(s) have received new building permits), a memorandum

would be provided to DOT confirming the need to implement the pedestrian and traffic mitigation measures upon occupancy of such initial building(s). This review of the traffic and pedestrian impacts and the associated mitigation measures would be undertaken prior to occupancy of such building(s). The review (i) would be conducted using the same baseline information presented in the FEIS, and (ii) only provide confirmation with respect to those locations that have been identified in the FEIS to incur impacts upon the full build-out of the three projects.

CONSTRUCTION

As detailed in Chapter 19, "Construction," the proposed projects, analyzed cumulatively, would be expected to result in significant adverse construction-period transportation and noise impacts. Where practicable and feasible, mitigation measures have been recommended to address these impacts. If one or more of the three proposed projects is delayed indefinitely or not pursued, the cumulative construction impacts of the one or two remaining projects may be less intensive than those projected for all three projects in combination, and in some cases certain impacts may not materialize at all. Correspondingly, some of the mitigation measures identified may not be warranted or they may be reduced to address impacts of smaller magnitudes. The potential for changes in the cumulative construction transportation and noise impacts are summarized below.

TRANSPORTATION

It was concluded in Chapter 19, "Construction," that since the projected construction-related trip-makingtraffic would be less than the trip-making uponthat from the full build-out of the proposed projects (the future With Action condition). However, temporary any potential transportation-related impacts during peak construction would be within the envelope of significant adverse impacts would still be expected at a subset of intersections that have been identified to incur impacts with for the future With Action condition (full build-out of the proposed projects). During the early morning and mid-afternoon construction peak hours, significant adverse construction traffic impacts were identified for two and five study area intersections, respectively. Standard traffic engineering measures, akin to those recommended to address the anticipated operational impacts, would be sufficient to fully mitigate most of these temporary construction impacts. As described abovewith the full build-out of the proposed projects, significant adverse traffic impacts were identified at 13 study area intersections, all but one of which could be fully mitigated with standard traffic engineering improvement measures. Only those identified for the mid-afternoon construction peak hour at the intersections of South Street and Montgomery Street the and Chatham Square and Worth Street/Oliver Street intersection cwould not be fully remain unmitigated.

If one or more of the three proposed projects is delayed indefinitely or not pursued, trip-making during peak construction is expected to be less than what has been depicted in Chapter 19, "Construction." As such, there would likely be fewer traffic impacts during construction, or the impacts would be of relatively lower magnitudes, consistent with the findings presented above under "Transportation."

Because parking utilization within ½-mile from the project sites is already projected to exceed capacity during the weekday midday period under the future No Action condition, if any one of the three proposed projects is delayed indefinitely or ultimately not pursued, the reduced number of construction worker vehicle demand would still result in a parking shortfall, albeit at a lesser magnitude than the 938 spaces described in Chapter 19, "Construction." As stated in the *CEQR Technical Manual*, a parking shortfall resulting from a project located in Manhattan does not

constitute a significant adverse parking impact, due to the magnitude of available alternative modes of transportation.

Although a significant adverse subway stairway impact was identified for the commuter peak periods for the With Action condition, construction worker trips would be made outside of these peak periods when subway ridership would be relatively lower. Similar conclusions also were made for bus ridership. Since no significant adverse transit impacts were predicted for construction of the proposed projects, there would also not be the potential for any significant adverse transit impacts if one or more of the three proposed projects is delayed indefinitely or ultimately not pursued.

For pedestrians, although significant adverse impacts were identified for a sidewalk and three crosswalk locations during peak periods for the With Action condition, construction worker trips would be made outside of these peak periods when background pedestrian levels would be relatively lower. Since no significant adverse pedestrian impacts were predicted for construction of the proposed projects, there would also not be the potential for any significant adverse pedestrian impacts~~Further,~~ if one or more of the three proposed projects is delayed indefinitely or ultimately not pursued~~., trip-making during peak construction is expected to be less than what has been depicted in Chapter 19, "Construction." As such, there would likely be fewer pedestrian impacts during construction, or the impacts would be of relatively lower magnitudes, consistent with the findings presented above under "Transportation."~~

NOISE

As described in Chapter 19, "Construction," the proposed projects are anticipated to result in construction-period noise impacts at several locations surrounding the project sites, including the façades of residences facing the project sites on Cherry Street; the eastern, southern, and western façades of 64 Rutgers Street; 80 Rutgers Slip; the northern, eastern, and a portion of the southern façades of 82 Rutgers Slip; a portion of the northern façade and the eastern and western façades of 265 and 275 Cherry Street near Site 5; residences immediately adjacent to Site 6A; and residential buildings on Cherry Street between Rutgers and Clinton Streets and 250 Clinton Street, the residential buildings immediately adjacent to Site 6A, and portions of the northern and western façades of 286 South Street near Site 6A; and portions of the northern and eastern façades of the residences west of Site 4 (4A/4B). These identified construction-period noise impacts are attributable primarily to the construction of each individual project, rather than to the cumulative noise levels of the proposed projects at certain periods of construction.

Therefore, if the Site 4 (4A/4B) project is delayed, the construction-period noise impacts predicted at 64 Rutgers Street, 80 Rutgers Slip, 82 Rutgers Slip, and the residences west of Site 4 (4A/4B) would not occur until such time that construction of Site 4 (4A/4B) occurs. If the Site 4 (4A/4B) project is indefinitely delayed or ultimately not pursued, the construction-period noise impacts predicted at 64 Rutgers Street, 80 Rutgers Slip, 82 Rutgers Slip, or the residences west of Site 4 (4A/4B) would not occur.

If the Site 5 project is delayed, the construction-period noise impacts predicted at 265 and 275 Cherry Street would not occur until such time that construction of Site 5 occurs. If the Site 5 project is indefinitely delayed or ultimately not pursued, the construction-period noise impacts predicted at 265 and 275 Cherry Street would not occur.

If the Site 6A project is delayed, the construction-period noise impacts predicted at residences facing the project site on Cherry Street; the residences immediately adjacent to Site 6A, and 286 South Street would not occur until such time that construction of Site 6A occurs. If the Site 6A

project is indefinitely delayed or ultimately not pursued, the construction-period noise impacts predicted at residences facing the project site on Cherry Street, the residences immediately adjacent to Site 6A, and 286 South Street would not occur.

Based on the predicted construction-period noise levels and the extent of the construction noise impacts identified in Chapter 19, "Construction," if the construction of one or more of the projects is delayed such that one or more of the proposed buildings would be completed and occupied while construction is ongoing at other project site(s), no additional construction-period noise impacts would be identified, beyond those presented in Chapter 19, "Construction." ✷