21.0 Mitigation

A. Introduction

In accordance with the 2021 *CEQR Technical Manual*, in cases where significant adverse impacts are identified, mitigation measures to reduce or eliminate the impacts to the fullest extent practicable are developed and evaluated.

B. Principal Conclusions

As presented in Chapters 2 through 19 of this Environmental Impact Statement (EIS), the Proposed Actions would result in significant adverse impacts in the following technical areas: Open Space (indirect and direct impacts from incremental shadows), Shadows, Historic and Cultural Resources, Transportation, Air Quality and Construction. Additionally, due to the non-site-specific nature of DCPs model for residential conversions as a result of the Proposed Actions, significant adverse Hazardous Materials, Air Quality, and Noise impacts cannot be precluded for the residential conversion area. Mitigation measures being proposed to address those impacts, where feasible and/or practical, are discussed below. If no feasible mitigation can be identified, an unavoidable significant adverse impact would result.

Open Space

As presented in Chapter 5, "Open Space," the Proposed Actions would result in indirect significant adverse impacts to total, active, and passive open space in the residential ½-mile study area, and direct significant adverse impacts attributed to incremental shadows on one open space resource. See the "Shadows" section below for further details on the direct open space impacts due to incremental shadows.

Possible measures that could mitigate the Proposed Actions' indirect significant adverse impact to open space in the residential Study Area may include: expanding existing parks, creating new open space on publicly owned land, encouraging owners of privately owned sites to create new open space as part of their redevelopment, making playgrounds accessible to the community after school hours through the Schoolyards to Playgrounds program, establishing new pedestrian plazas in streets through the City's Plaza program, and/or improving existing parks to allow for more diverse programming. These potential mitigation measures are currently being explored in coordination with the lead agency, DCP, and the New York City Department of Parks and Recreation and will be refined between the DEIS and FEIS.

As discussed in Chapter 25, "Conceptual Analysis," as part of the Proposed Actions, a zoning text amendment is proposed that would allow for all developments in the Rezoning Area to access the Zoning Resolution's existing special permit for a floor area bonus for covered pedestrian space (CPS) (ZR 74-87). Access to the bonus would encourage the creation of

spaces that reflect the mixed-use character of the area and serve an important function to provide public space for passive use.

Though these potential mitigation measures may increase publicly accessible passive open space in the residential ½-mile Study Area, opportunities to create new open space in sufficient amounts to fully mitigate an indirect impact to total open space (approximately seven acres) is limited. Therefore, the indirect significant adverse impact would not be fully mitigated, and an unavoidable significant adverse indirect open space impact would occur.

Shadows

As presented in Chapter 6, "Shadows," incremental shadow generated by the Proposed Actions would result in significant adverse impacts to five sunlight-sensitive resources (1185 Broadway POPS, Marble Collegiate Church, St. John the Baptist Roman Catholic Church, St. Francis of Assisi Roman Catholic Church, and Trinity Chapel Complex). The analysis determined that the POPS at 1185 Broadway would not receive adequate sunlight during the growing season (at least the six-to-eight-hour minimum specified in the *CEQR Technical Manual*) as a result of incremental shadow coverage, and vegetation and the public's enjoyment of this resource could be significantly impacted. Additionally, the analysis determined that incremental shadow coverage would result in a reduction in direct sunlight exposure for sunlight-sensitive features at Marble Collegiate Church, St. John the Baptist Roman Catholic Church, St. Francis of Assisi Roman Catholic Church, and Trinity Chapel Complex, which could affect the public's enjoyment or appreciation of those features.

According to the *CEQR Technical Manual*, possible measures that could mitigate significant adverse shadow impacts on open spaces may include relocating sunlight-sensitive features within an open space to avoid sunlight loss; relocating, replacing, or monitoring vegetation for a set period of time; undertaking additional maintenance to reduce the likelihood of species loss; replacing plantings in the affected area with similar but more shade-tolerant plantings; or providing for replacement facilities on another nearby site. Other potential mitigation strategies include the redesign or reorientation of the open space to provide for replacement facilities, vegetation, or other features. The *CEQR Technical Manual* guidance also discusses strategies to reduce or eliminate shadow impacts, including modifications to the height, shape, size, or orientation of a proposed development that creates the significant adverse shadow impact. Measures to reduce or eliminate the significant adverse shadow impact will be explored between the DEIS and FEIS. Absent the implementation of mitigation measures, the Proposed Actions would result in unmitigated significant adverse impacts on 1185 Broadway POPS, Marble Collegiate Church, St. John the Baptist Roman Catholic Church, St. Francis of Assisi Roman Catholic Church, and Trinity Chapel Complex.

Historic and Cultural Resources

As discussed in Chapter 7, "Historic and Cultural Resources," the Proposed Actions would result in significant adverse impacts to architectural resources.

Architectural Resources

The Proposed Actions would result in direct (demolition, shadows, and adjacent construction) and indirect (contextual) significant adverse impact to architectural resources.

Direct Impacts

The Proposed Actions would result in the redevelopment of 15 properties in the S/NR-Listed Garment Center Historic District. Twelve of these properties contain contributing resources that are S/NR-Listed that would be directly impacted by demolition and redevelopment under the Proposed Actions. This impact as a result of demolition would be unavoidable, as these 12 properties are privately owned and could be demolished to allow for development as-of-right under the Proposed Actions.

As described above, incremental shadow cast as a result of the Proposed Actions would reduce direct sunlight to sunlight-sensitive features (i.e., stained-glass windows) at Marble Collegiate Church, St. John the Baptist Roman Catholic Church, St. Francis of Assisi Roman Catholic Church, and the Trinity Chapel Complex. This incremental shadow may have the potential to affect the public's enjoyment of sunlight-sensitive features. Measures to reduce or eliminate the significant adverse shadow impact will be explored between the DEIS and FEIS.

Development at two potential and fifteen projected sites under the Proposed Actions could potentially result in construction-related impacts to 16 individual historic resources located within 90 feet of the projected/potential development sites. These 16 non-Designated (i.e., LPC-eligible and S/NR-eligible) resources would be afforded limited protection under DOB regulations applicable to all buildings located adjacent to construction sites; however, they are not afforded the added special protections under DOB's TPPN #10/88 because they are not S/NR-listed or NYCL-designated. Additional protective measures under DOB's TPPN #10/88 would only become applicable if the eligible resources are designated in the future prior to the initiation of construction. If the eligible resources listed above are not designated, however, they would not be subject to TPPN #10/88 and may therefore be adversely impacted by the adjacent developments resulting from the Proposed Actions. Since there would be no mechanism to require commitment to the CPP on sites within 90 feet of the eligible resources noted above, there would not be feasible strategies to fully mitigate the potential for significant adverse impacts, which may result in an unavoidable impact to architectural resources. Mitigation measures will continue to be explored by DCP and LPC between the DEIS and the FEIS.

Indirect Impacts

Development on projected development site 40 is anticipated to cause alterations to the setting and visual context of a historic resource, the Trinity Chapel Complex (NYCL, S/NR). Only projected development site 40 could eliminate or substantially obstruct significant public views of the Trinity Chapel Complex. As such, the Proposed Actions are expected to result in only one adverse indirect or contextual impact on a historic architectural resource.

Measures to reduce or eliminate the significant adverse impact will be explored between the DEIS and FEIS.

Hazardous Materials

As presented in Chapter 9, "Hazardous Materials", the Proposed Actions are anticipated to have no significant adverse impacts related to hazardous materials on projected and potential development sites. However, significant adverse hazardous materials impacts cannot be precluded for the 1,093,808 gsf area modeled for residential conversions.

In terms of hazardous materials, mitigation is the implementation of actions designed to eliminate, contain, or control sources of significant adverse impacts and eliminate exposure pathways. Remediation is the implementation of actions designed to remove or treat the sources of significant adverse impacts and eliminate and/or reduce concentrations of hazardous materials. Mitigation and remedial measures are determined based in part on the detailed findings of the Phase II Environmental Site Assessment (ESA). Typically, DEP and OER recommend a "risk-based" approach in determining the proper course of mitigation, which evaluates the exposure pathways associated with a development site. Implementation of mitigation and remedial action typically follows careful development of an appropriate Remedial Action Plan (RAP) and site-specific Construction Health and Safety Plan (CHASP). Potential mitigation measures that could be disclosed as part of the approved RAP and/or CHASP may include containment techniques (or the process of covering or enclosing hazardous materials) to minimize direct contact with or exposure of receptors; removal technologies to properly dispose of or beneficially reuse contaminated materials; and treatment technologies to either reduce the concentration of contaminants of concern or alter the characteristics of the contaminated materials. In addition, in certain instances, institutional controls – such as (E) Designations, MOUs (in the case of City-owned properties), recorded declaration of covenants and restrictions, land disposition agreements or mapping agreements – can be placed on or entered into with respect to the subject property to establish a review and approval framework.

For the area modeled for residential conversions, the extent of hazardous materials are unknown because of the non-site specific nature of DCP's conversion model and because it is not possible to determine exactly where and to what extent additional in-ground disturbance may occur for each residential conversion. Since there are no specific development sites among the 1,093,808 gsf RWCDS residential conversion area, the absence of hazardous materials cannot be definitively demonstrated and the possibility of impacts cannot be eliminated. To mitigate potential residential exposure to soil vapor intrusion, newly developed residential buildings would need soil vapor barriers installed on the ground and sub-ground levels. Since development resulting from the Proposed Actions would be as-of-right, there would only be a mechanism for the City to require a hazardous materials assessment, or to mandate the remediation of such materials, on select parcels among the modeled residential conversion area that have already been (E) designated because of prior zoning actions. For all other parcels within the residential conversion area, any such significant adverse hazardous materials impacts cannot be precluded and would be unmitigated.

Transportation

As described below, the Proposed Actions would result in significant adverse impacts to: a) vehicular traffic at 28 intersections and b) pedestrian elements at 19 sidewalks, three corners, and six crosswalks. Mitigation measures that could address the significant adverse impacts are discussed below.

Traffic

As described in greater detail in Chapter 13, "Transportation," the Proposed Actions would result in significant adverse traffic impacts at 28 study area intersections (all signalized) during one or more analyzed peak hours; specifically 15 lane groups at 14 intersections during the weekday AM peak hour, 12 lane groups at 11 intersections in the midday peak hour, 26 lane groups at 20 intersections in the PM peak hour, and 24 lane groups at 20 intersections during the Saturday peak hour. Implementation of traffic engineering improvements such as signal timing changes and modifications to curbside parking regulations are being proposed and would provide mitigation for many of the anticipated traffic impacts. These proposed traffic engineering improvements are subject to final review and approval by the New York City Department of Transportation (DOT). If DOT determines that an identified traffic engineering improvement is infeasible, and no alternative and equivalent measure is identified, then that impact would remain unmitigated and would constitute an unavoidable adverse impact.

Assuming all the proposed mitigation measures are implemented, **Table 21-1** shows that significant adverse impacts would be fully mitigated at 11 lane groups in the weekday AM peak hour, 9 lane groups in the midday peak hour, 16 lane groups in the weekday PM peak hour, and 16 lane groups in the Saturday peak hour. Intersections where these impacts would be fully mitigated would total 10, 8, 13, and 13 during these same periods, respectively. **Table 21-2** provides a more detailed summary of the intersections and lane groups that would have unmitigated significant adverse traffic impacts. In total, impacts to one or more lane groups would remain unmitigated in one or more peak hours at 11 intersections.

Table 21-1: Summary of Lane Groups/Intersections with Significant Adverse Traffic Impacts

Peak Hour	Lane Groups/ Intersections Analyzed	Lane Groups/ Intersections With No Significant Impacts	Lane Groups/ Intersections With Significant Impacts	Mitigated Lane Groups/ Intersections	Unmitigated Lane Groups/ Intersections
Weekday AM	109/37	94/23	15/14	11/10	4/4
Weekday Midday	107/37	95/26	12/11	9/8	3/3
Weekday PM	111/37	85/17	26/20	16/13	10/7
Saturday	108/37	84/17	24/20	16/13	8/7

Table 21-2: Lane Groups With Unmitigated Significant Adverse Traffic Impacts

	Peak Hour			
	Weekday AM	Weekday Midday	Weekday PM	Saturday
Madison Ave & E 29th St				WB-TR
5th Ave & W 30th St			SB-R	
Broadway & W 29th St			WB-LT	WB-LT
6th Ave & W 30th St		EB-LT		
6th Ave & W 29th St	NB-L		WB-T, NB-L	WB-T, NB-L
6th Ave & W 26th St			EB-LT	
6th Ave & W 23rd St	NB-R			
7th Ave & W 30th St		SB-L	EB-R, SB-L	EB-R
7th Ave & W 29th St			WB-T, SB-R	WB-T
8th Ave & W 29th St	WB-TR	WB-TR	WB-TR	WB-TR
9th Ave & W 29th St	WB-T			WB-T

Notes: NB-northbound, SB-southbound, EB-eastbound, WB-westbound L-left-turn, T-through, R-right-turn

Pedestrians

Incremental demand from the Proposed Actions would significantly adversely impact 19 sidewalks, six crosswalks, and three corners in one or more analyzed peak hours. Recommended mitigation measures consisting of the relocation/removal of impediments to sidewalk and corner flow and the widening of crosswalks would fully mitigate the impacts to eight sidewalks, six crosswalks, and one corner. **Table 21-3** shows a summary of fully mitigated and unmitigated significant adverse impacts. Implementation of the proposed mitigation measures would be subject to final review and approval by DOT. If DOT determines that an identified pedestrian improvement is infeasible, alternative and equivalent measures will be explored. Absent the identification and implementation of additional feasible mitigation measures that would mitigate the pedestrian impacts to the greatest extent practicable, the Proposed Actions would result in unmitigated significant adverse pedestrian impacts.

Table 21-3: Summary of significant pedestrian impacts

Peak Hour	Sidewalks/ Crosswalks/ Corners Analyzed	Sidewalks/ Crosswalks/ Corners with No Significant Impacts	Sidewalks/ Crosswalks/ Corners with Significant Impacts	Mitigated Sidewalks/ Crosswalks/ Corners	Unmitigated Sidewalks/ Crosswalks/ Corners
Weekday AM	63/41/116	55/40/116	8/1/0	3/1/0	5/0/0
Weekday Midday	63/41/116	58/39/116	5/1/0	2/1/0	3/0/0
Weekday PM	63/41/116	47/36/114	16/5/2	7/5/1	9/0/1
Saturday	63/41/116	50/38/115	13/3/1	6/3/0	7/0/1

Air Quality

As presented in Chapter 14, "Air Quality," air quality impact of exceedance of NAAQS 1-hour NO_2 at Projected Development Site 17 and Potential Development Site G would be mitigated by the requirement of inoperable windows at certain heights of the buildings. Site G would also experience ambient Cadmium concentration higher than NYSDEC DAR-1 annual guideline concentration (AGC). Inoperable window requirement would be mapped to Site G to prevent excessive cancer risk (equivalent to 10 times of AGC) caused by Cadmium. On the other hand, this measure may not eliminate exposure of Cadmium concentrations higher than its AGC, and this is considered a significant adverse air quality impact.

Between the DEIS and FEIS, further investigation will be conducted to quantify the emission rate of Cadmium from Ben-Amun Co Inc. Revision to the air quality impact analysis will be conducted if the investigation indicates different Cadmium emission rate compared to what is in the facility's current permit. Based on the analysis of this DEIS, exceedance of AGC for Cadmium at Site G would be an unmitigated impact.

For the area modeled for residential conversions, Because of the non-site specific nature of the conversion model, no specific development sites have been identified among the 1,093,808 gsf RWCDS residential conversion area. Since the air quality analysis has indicated exceedance of NAAQS 1-hour NO_2 and exceedance of NYSDEC DAR-1 annual guideline concentration (AGC) for Cadmium, the possibility of similar air quality impacts to the conversion sites cannot be eliminated.

Construction

Transportation

As presented in Chapter 19, "Construction", it is expected that potential significant adverse traffic and pedestrian impacts could occur during construction and that these impacts would be within the range of impacts identified Chapter 13, "Transportation" for the 2034 With-Action conditions. The mitigation measures identified below**,** for 2034 operational traffic and pedestrian impacts would likely be similarly effective at mitigating any potential construction traffic and pedestrian impacts.

Air Quality

As presented in Chapter 19, "Construction," $PM_{2.5}$ would be below its NAAQS for both evaluated scenarios (cumulative impacts from projected development sites 46 & 49 and 51 & 52) but it would exceed the annual and 24-hour *de minimis* threshold. The exceedance of the de minimis threshold would be considered a significant adverse construction air quality impact. Between the DEIS and FEIS, additional review and evaluation will be performed to determine whether the identified impacts related to Annual PM2.5 increments will be avoided. This may include use of more refined assumptions in terms of construction equipment usage, and the use of newer construction equipment with lower particulate emissions, as applicable.

At this time, no practicable mitigation measures have been identified. Between the DEIS and FEIS, mitigation measures will be explored. In the event practicable mitigation measure are not identified, this would be an unmitigated impact.

Noise

The analysis in Chapter 19, "Construction," was based on a conceptual construction schedule. The conceptual construction schedule conservatively accounts for overlapping construction activities at development sites. The noise analysis results show that the predicted noise levels could exceed the construction noise impact criteria throughout the Affected Area. It is possible that the actual construction may be of less magnitude, or that construction on multiple projected development sites may not overlap, in which case construction noise would be less intense than the analysis predicts.

Proposed mitigation could include a variety of source and path controls. Between publication of the DEIS and FEIS, all possible mitigation measures to address the identified construction noise impacts will be explored. In the event no additional practicable or feasible mitigation measures are determined, the significant adverse construction noise impacts would be unavoidable.

C. Open Space

As presented in Chapter 5, "Open Space," approval of the Proposed Actions would result in total, active, and passive open space ratios in the residential ½-mile study area below the City's guideline ratios. The total residential study area open space ratio would decline by 8.19 percent to 0.355 acres per 1,000 residents; the active residential study area open space ratio would decline by 8.19 percent to 0.063 acres per 1,000 residents; and the passive residential study area open space ratio would decrease 8.19 percentto 0.292 acres per 1,000 residents, as referenced in Table 5-8 of Chapter 5, "Open Space". As these decreases would exceed the CEQR impact thresholds, the Proposed Actions would result in a significant adverse indirect impact on total, passive, and active open space in the residential study area.

Possible measures that could mitigate the Proposed Actions' indirect significant adverse impact to open space in the resident study area may include: expanding existing parks, creating new open space on publicly owned land, encourage owners of privately-owned sites to create new open space as part of their redevelopment, making playgrounds accessible to the community after school hours through the Schoolyards to Playgrounds program, establishing new pedestrian plazas in streets through the City's Plaza program, and/or improving existing parks to allow for more diverse programming. These potential mitigation measures are currently being explored in coordination with the lead agency, DCP, in consultation with NYC Parks and will be refined between the DEIS and FEIS.

As discussed in Chapter 25, "Conceptual Analysis," as part of the Proposed Actions, a zoning text amendment is proposed that would allow for all developments in the Rezoning Area to access the Zoning Resolution's existing special permit for a floor area bonus for covered pedestrian space (CPS) (ZR 74-87). Access to the bonus would encourage the creation of

spaces that reflect the mixed-use character of the area and serve an important function to provide public space for passive use.

Though these potential mitigation measures may increase publicly accessible passive open space in the residential ½-mile Study Area, opportunities to create new open space in sufficient amounts to fully mitigate an indirect impact to total open space (approximately seven acres) is limited. Therefore, the indirect significant adverse impact would not be fully mitigated, and an unavoidable significant adverse indirect open space impact would occur.

D. Shadows

As presented in Chapter 6, "Shadows," incremental shadow generated by the Proposed Actions would result in significant adverse impacts to five sunlight-sensitive resources (1185 Broadway POPS, Marble Collegiate Church, St. John the Baptist Roman Catholic Church, St. Francis of Assisi Roman Catholic Church, and Trinity Chapel Complex). The analysis determined that the POPS at 1185 Broadway would not receive adequate sunlight during the growing season (at least the six-to-eight-hour minimum specified in the *CEQR Technical Manual*) as a result of incremental shadow coverage, and vegetation at this resource could be significantly impacted. Additionally, the analysis determined that incremental shadow coverage would result in a reduction in direct sunlight exposure for sunlight-sensitive features at Marble Collegiate Church, St. John the Baptist Roman Catholic Church, St. Francis of Assisi Roman Catholic Church, and the Trinity Chapel Complex, which could affect the public's enjoyment or appreciation of those features.

As presented in **Table 6-4** of Chapter 6, "Shadows," the POPS at 1185 Broadway would experience incremental shadow on three of the four analysis days (March 21/September 21, May 6/August 6, and June 21). Incremental shadow duration would range between three hours 40 minutes on the June 21 analysis day and four hours and 35 minutes on the May 6/August 6 analysis day. Incremental shadow from projected development site 42 would nearly eliminate direct sunlight to the 1185 Broadway POPS during the afternoon hours on three analysis days. Vegetation within the POPS would not receive adequate sunlight during the growing season (at least six to eight hours as specified in the *CEQR Technical Manual*). The lack of direct sunlight during the late morning and early afternoon hours may affect the public's use and enjoyment of this resource. Therefore, the Proposed Actions are expected to result in a significant adverse impact to the 1185 Broadway POPS.

Marble Collegiate Church, an LPC-Designated and S/NR-Listed building at the northwest corner of West 29th Street and Fifth Avenue would receive incremental shadows on each of the four representative analysis days. According to the LPC 1967 designation report, the church resembles a New England wooden church but has a façade made of marble. The church is Romanesque in style but uses Gothic forms in details of the building. The buildings southern façade includes stained glass windows. Incremental shadow would be cast on this sunlight-sensitive historic resource ranging from 52 minutes (2:01 p.m. to 2:53 p.m.) on the December 21 analysis day and three hours and 58 minutes (12:47 p.m. to 4:45 p.m.) on the May 6/August 6 analysis day. Incremental shadow would be cast on each of the four analysis

days. Incremental shadow would be on portions of the southern façade for two to three hours on the May 6/August 6 and June 21 analysis days. As these incremental shadows may have the potential to affect the public's enjoyment of this resource's sunlight-sensitive features, this is being considered a significant adverse shadow impact.

St. John the Baptist Roman Catholic Church, an LPC-Eligible and S/NR-Eligible church at 213 West 30th Street would receive incremental shadow on each of the four representative analysis days. Incremental shadow would range in duration from three hours and 11 minutes (10:21 a.m. to 12:04 p.m. and 1:24 p.m. to 2:52 p.m.) on the December 21 analysis day and four hours 50 minutes (10:12 a.m. to 12:30 p.m. and 1:57 to 4:29 p.m.) on the March 21/September 21 analysis day. Stained glass windows are located on the western, eastern, and southern facades of the building. There is a building adjacent to the east of the church. Incremental shadow would be on portions of the western and southern façade during the afternoon hours on the March 21/September 21, May 6/August 6, and June 21 analysis days. As these incremental shadows may have the potential to affect the public's enjoyment of this resource's sunlight-sensitive features, this is being considered a significant adverse shadow impact.

St. Francis of Assisi Roman Catholic Church, an LPC-Eligible and S/NR-Eligible building at 129 West 31st Street would be cast in incremental shadow on each of the four representative analysis days, ranging in duration between one hour and four minutes (10:21 a.m. to 10:58 a.m. and 11:41 a.m. to 12:08 p.m.) on the December 21 analysis day and five hours 25 minutes (10:19 a.m. to 12:11 p.m. and 12:23 p.m. to 3:56 p.m.) on the March 21/September 21 analysis day. Stained glass windows are located on the western, southern, and eastern facades of the building. Incremental shadow would be cast on each of the four analysis days and would be cast on the southern façade during three of the four analysis days. As buildings are located on the western and eastern sides of this building, the southern façade receives the most direct sunlight through the building's stained-glass windows. As these incremental shadows may have the potential to affect the public's enjoyment of this resource's sunlight-sensitive features, this is being considered a significant adverse shadow impact.

The western façade of the Trinity Chapel Complex, an LPC-Designated and S/NR-Listed building at 15 West 25th Street would be cast in incremental shadow on three of the four representative analysis days, ranging in duration from one hour 44 minutes (1:42 – 3:26 p.m.) on the March 21/September 21 analysis day to five hours and 12 minutes (12:49 – 6:01 p.m.) on the June 21 analysis day. Stained glass windows are located on the western, southern, and eastern facades of the building. Incremental shadow would be cast on the western façade on three analysis days. A building is located directly east of the sunlight-sensitive resource. Under the With-Action condition, projected development site 40 would be constructed directly west of Trinity Chapel Complex. As these incremental shadows may have the potential to affect the public's enjoyment of this resource's sunlight-sensitive features, this is being considered a significant adverse shadow impact.

According to the *CEQR Technical Manua*l, possible measures that could mitigate significant adverse shadow impacts on open spaces may include relocating sunlight-sensitive features within an open space to avoid sunlight loss; relocating, replacing, or monitoring vegetation for a set period of time; undertaking additional maintenance to reduce the likelihood of species loss; or providing for replacement facilities on another nearby site. Other potential mitigation strategies include the redesign or reorientation of the open space to provide for replacement facilities, vegetation, or other features. The *CEQR Technical Manual* guidance also discusses strategies to reduce or eliminate shadow impacts, including modifications to the height, shape, size, or orientation of a proposed development that creates the significant adverse shadow impact. Measures to reduce or eliminate the significant adverse shadow impact will be explored between the DEIS and FEIS. Absent the implementation of mitigation measures, the Proposed Actions would result in unmitigated significant adverse impacts on 1185 Broadway POPS, Marble Collegiate Church, St. John the Baptist Roman Catholic Church, St. Francis of Assisi Roman Catholic Church, and Trinity Chapel Complex.

E. Historic Resources

As discussed in Chapter 7, “Historic and Cultural Resources,” the Proposed Actions would result in significant adverse impacts to architectural resources.

Architectural Resources

The Proposed Actions would result in direct (demolition, shadows, and adjacent construction) and indirect (contextual) significant adverse impact to architectural resources.

Direct Impacts

The Proposed Actions would result in the redevelopment of 15 properties in the S/NR-Listed Garment Center Historic District. Twelve of these properties contain contributing resources that are S/NR-Listed that would be directly impacted by demolition and redevelopment under the Proposed Actions. This impact as a result of demolition would be unavoidable, as these 12 properties are privately owned and could be demolished to allow for development as-of-right under the Proposed Actions

As described above, incremental shadow cast as a result of the Proposed Actions would reduce direct sunlight to sunlight-sensitive features (i.e., stained-glass windows) at Marble Collegiate Church, St. John the Baptist Roman Catholic Church, St. Francis of Assisi Roman Catholic Church, and the Trinity Chapel Complex. This incremental shadow may have the potential to affect the public’s enjoyment of sunlight-sensitive features. Measures to reduce or eliminate the significant adverse shadow impact will be explored between the DEIS and FEIS.

Development at two potential and fifteen projected sites under the Proposed Actions could potentially result in construction-related impacts to 16 individual historic resources (i.e., LPC-eligible and S/NR-eligible resources) located within 90 feet of the projected/potential development sites. These 16 non-Designated resources would be afforded limited protection under DOB regulations applicable to all buildings located adjacent to construction sites;

however, they are not afforded the added special protections under DOB's TPPN #10/88 because they are not S/NR-listed or NYCL-designated. Additional protective measures under DOB's TPPN #10/88 would only become applicable if the eligible resources are designated in the future prior to the initiation of construction. If the eligible resources listed above are not designated, however, they would not be subject to TPPN #10/88 and may therefore be adversely impacted by the adjacent developments resulting from the Proposed Actions. Since there would be no mechanism to require commitment to the CPP on sites within 90 feet of the eligible resources noted above, there would not be feasible strategies to fully mitigate the potential for significant adverse impacts, which may result in an unavoidable impact to architectural resources. Mitigation measures will continue to be explored by DCP and LPC between the DEIS and the FEIS.

Indirect Impacts

Development on one projected development site is anticipated to cause alterations to the setting and visual context of a historic resource, the Trinity Chapel Complex (NYCL, S/NR). Only projected development site 40 could eliminate or substantially obstruct significant public views of the Trinity Chapel Complex. As such, the Proposed Actions are expected to result in only one adverse indirect or contextual impact on a historic architectural resource. Measures to reduce or eliminate the significant adverse impact will be explored between the DEIS and FEIS.

F. Hazardous Materials

As presented in Chapter 9, "Hazardous Materials", the Proposed Actions are anticipated to have no significant adverse impacts related to hazardous materials on projected and potential development sites. However, significant adverse hazardous materials impacts cannot be precluded for the 1,093,808 gsf area modeled for residential conversions.

In terms of hazardous materials, mitigation is the implementation of actions designed to eliminate, contain, or control sources of significant adverse impacts and eliminate exposure pathways. Remediation is the implementation of actions designed to remove or treat the sources of significant adverse impacts and eliminate and/or reduce concentrations of hazardous materials. Mitigation and remedial measures are determined based in part on the detailed findings of the Phase II Environmental Site Assessment (ESA). Typically, DEP and OER recommend a "risk-based" approach in determining the proper course of mitigation, which evaluates the exposure pathways associated with a development site. Implementation of mitigation and remedial action typically follows careful development of an appropriate Remedial Action Plan (RAP) and site-specific Construction Health and Safety Plan (CHASP). Potential mitigation measures that could be disclosed as part of the approved RAP and/or CHASP may include containment techniques (or the process of covering or enclosing hazardous materials) to minimize direct contact with or exposure of receptors; removal technologies to properly dispose of or beneficially reuse contaminated materials; and treatment technologies to either reduce the concentration of contaminants of concern or alter the characteristics of the contaminated materials. In addition, in certain instances, institutional controls – such as (E) Designations, MOUs (in the case of City-owned

properties), recorded declaration of covenants and restrictions, land disposition agreements or mapping agreements – can be placed on or entered into with respect to the subject property to establish a review and approval framework.

For the area modeled for residential conversions, the extent of hazardous materials are unknown because of the non-site specific nature of DCP's conversion model and because it is not possible to determine exactly where and to what extent additional in-ground disturbance may occur for each residential conversion. Since there are no specific development sites among the 1,093,808 gsf RWCDS assumed residential conversions, the absence of hazardous materials cannot be definitively demonstrated and the possibility of impacts cannot be eliminated. To mitigate potential residential exposure to soil vapor intrusion, newly developed residential buildings would need soil vapor barriers installed on the ground and sub-ground levels. Since development resulting from the Proposed Actions would be as-of-right, there would only be a mechanism for the City to require a hazardous materials assessment, or to mandate the remediation of such materials, on select parcels among the modeled residential conversion area that have already been (E) designated because of prior zoning actions. For all other parcels within the residential conversion area, any such significant adverse hazardous materials impacts cannot be precluded and the impact would remain unmitigated.

G. Transportation

The Proposed Actions would result in significant adverse impacts to: a) vehicular traffic at 28 intersections and b) pedestrian elements at 19 sidewalks, three corners, and six crosswalks. Mitigation measures that could address the significant adverse impacts are discussed below.

Traffic

As described in Chapter 13, "Transportation," the Proposed Actions would result in significant adverse traffic impacts at 28 study area intersections (all signalized) during one or more analyzed peak hours; specifically, 15 lane groups at 14 intersections during the weekday AM peak hour, 12 lane groups at 11 intersections in the midday peak hour, 26 lane groups at 20 intersections in the PM peak hour, and 24 lane groups at 20 intersections during the Saturday peak hour.

As demonstrated below, many of these impacts could be mitigated through the implementation of traffic engineering improvements, including:

- Modification of existing traffic signal phasing and/or timing and
- Elimination of on-street parking.

The types of mitigation measures proposed herein are standard measures that are routinely identified by the City and considered feasible for implementation. **Table 21-4** summarizes the recommended mitigation measures for each of the intersections with significant adverse traffic impacts during the weekday AM, midday, PM, and Saturday peak hours. Implementation of the recommended traffic engineering improvements is subject to review

and approval by DOT. If DOT determines that an identified traffic engineering improvement is infeasible, alternative and equivalent measures will be explored. Absent the identification and implementation of additional feasible mitigation measures that would mitigate the traffic impacts to the greatest extent practicable, the Proposed Actions would result in unmitigated significant adverse impacts. **Tables 20-5** through **20-8** show the v/c ratios, delays, and levels of service (LOS) for impacted lane groups at each intersection with implementation of the recommended mitigation measures and compares them to No Action and With Action conditions for the weekday AM, midday, PM, and Saturday peak hours, respectively. According to *CEQR Technical Manual* criteria, an impact is considered fully mitigated when the resulting LOS degradation under the Action-with-Mitigation Condition compared with the No Action Condition is no longer deemed significant following the impact criteria described in Chapter 13, "Transportation." **Tables 20-5** through **20-8** show that significant adverse impacts would be fully mitigated at 11 lane groups in the weekday AM peak hour, 9 lane groups in the midday, 16 lane groups in the PM, and 16 lane groups in the Saturday peak hour. Intersections where these impacts would be fully mitigated would total 10, 8, 13, and 13 during these same periods, respectively. In total, impacts to one or more lane group(s) would remain unmitigated in one or more peak hours at 11 intersections. Consequently, these impacts would constitute unavoidable significant adverse traffic impacts as a result of the Proposed Actions (see also Chapter 22, "Unavoidable Adverse Impacts").

Effects of Pedestrian Mitigation on Traffic Conditions

Proposed pedestrian mitigation measures would not affect traffic conditions at any analyzed intersection in any peak hour.

Table 21-4: Proposed Traffic Mitigation Measures

	Intersection	Signal Phase	No-Action/With Action Signal Timing (Seconds) (1)				Proposed Signal Timing (Seconds) (1)				Recommended Mitigation
			AM	MD	PM	SATMD	AM	MD	PM	SATMD	
1	Madison Ave & E 29th St	NB LPI WB	55 7 43	55 10 40	55 7 43	55 10 40	55 7 43	55 10 40	52 7 46	52 10 43	Transfer 3s of green time from NB to WB in PM/SAT.
2	5th Ave & W 30th St	SB LPI EB	50 7 33	50 7 33	50 7 33	50 7 33	46 7 37	48 7 35	47 7 36	47 7 36	Transfer 4s of green time from SB to EB in AM. Transfer 2s of green time from SB to EB in MD. Transfer 3s of green time from SB to EB in PM/SAT.
3	5th Ave & W 29th St	SB LPI WB	50 7 33	50 7 33	50 7 33	50 7 33	50 7 33	50 7 33	53 7 30	50 7 33	Transfer 3s of green time from WB to SB in PM.
4	Broadway & W 30th St	SB/Bike EB LPI/Bike	40 40 10	40 40 10	40 40 10	40 40 10	39 41 10	40 40 10	40 40 10	40 40 10	Transfer 1s of green time from SB to EB in AM.
5	Broadway & W 29th St	SB/Bike LPI WB	50 7 33	48 10 21	50 7 33	48 10 32	50 7 33	48 10 21	47 7 36	45 10 35	Transfer 3s of green time from SB to WB in PM/SAT.
6	6th Ave & 37th St	NB LPI WB	47 7 36	44 10 36	47 7 36	44 10 36	47 7 36	43 10 37	46 7 37	44 10 36	Transfer 1s of green time from NB to WB in MD/PM.
7	6th Ave & 36th St	NB EBT EB	43 26 21	43 26 21	43 26 21	43 26 21	44 25 21	43 26 21	43 26 21	43 26 21	Transfer 1s of green time from EBT to NB in AM.
9	6th Ave & W 30th St	NB LPI EB	50 7 33	47 10 33	50 7 33	47 10 33	48 7 35	47 10 33	48 7 35	43 10 37	Transfer 2s of green time from NB to EB in AM/PM. Transfer 4s of green time from NB to EB in SAT.
10	6th Ave & W 29th St	NB LPI WB	50 7 33	47 10 33	50 7 33	47 10 33	52 7 31	50 10 30	50 7 33	47 10 33	Transfer 2s of green time from WB to NB in AM Transfer 3s of green time from NB to WB in MD. Unmitigable in PM/SAT.
11	6th Ave & W 28th Ave	NB LPI EB	50 7 33	47 10 33	50 7 33	47 10 33	49 7 34	47 10 33	48 7 35	45 10 35	Transfer 1s of green time from NB to EB in AM. Transfer 2s of green time from NB to EB in PM/SAT.
13	6th Ave & W 26th St	NB LPI EB	48 10 32	47 10 33	48 10 32	47 10 33	47 10 33	46 10 34	48 10 32	46 10 34	Transfer 1s of green time from NB to EB in AM/MD/SAT.
14	6th Ave & W 25th St	NB LPI WB	50 7 33	47 10 33	50 7 33	47 10 33	50 7 33	47 10 33	48 7 35	47 10 33	Transfer 2s of green time from NB to EB in PM.
15	6th Ave & W 23th Ave	NB EB/WB NBT/LPI	43 40 7	40 40 10	43 40 7	40 40 10	43 40 7	41 39 10	44 39 7	42 38 10	Transfer 1s of green time from EB/WB to NB in MD/PM. Transfer 2s of green time from EB/WB to NB in SAT.
16	7th Ave & W 38th St	SB LPI EB	47 10 33	47 10 33	47 10 33	47 10 33	47 10 33	47 10 33	47 10 33	45 10 35	Transfer 2s of green time from SB to EB in SAT.
17	7th Ave & W 37th St	SB LPI WB	50 7 33	50 7 33	50 7 33	50 7 33	49 7 33	50 7 33	50 7 33	49 7 34	Transfer 1s of green time from SB to WB in SAT.
18	7th Ave & W 36th St	SB LPI EB	50 7 33	50 7 33	50 7 33	50 7 33	49 7 34	48 7 35	48 7 35	48 7 35	Transfer 1s of green time from SB to EB in AM. Transfer 2s of green time from SB to EB in MD/PM/SAT.

Notes :

(1) Signal timings shown indicate green plus yellow (including all red) for each phase.

Table 21-4 (cont'd): Proposed Traffic Mitigation Measures

	Intersection	Signal Phase	No-Action/With Action Signal Timing (Seconds) (1)				Proposed Signal Timing (Seconds) (1)				Recommended Mitigation
			AM	MD	PM	SATMD	AM	MD	PM	SATMD	
19	7th Ave & W 35th St	SB	50	50	50	50	50	49	50	50	Transfer 1s of green time from SB to WB in MD.
		LPI	7	7	7	7	7	7	7	7	
		WB	33	33	33	33	33	34	33	33	
23	7th Ave & W 30th St	SB	46	46	46	46	49	49	46	46	Transfer 3s of green time from SB to WB in AM/MD.
		LPI	7	7	7	7	7	7	7	7	
		EB	37	37	37	37	34	34	37	37	
24	7th Ave & W 29th St	SB	46	46	46	46	46	46	46	43	Transfer 3s of green time from SB to WB in SAT.
		LPI	7	7	7	7	7	7	7	7	
		EB	37	37	37	37	37	37	37	40	
25	7th Ave & W 28th Ave	SB	51	51	51	51	50	51	51	50	Transfer 1 s from SB to EB in AM and SAT.
		LPI	7	7	7	7	7	7	7	7	
		EB	32	32	32	32	33	32	32	33	
26	7th Ave & W 27th St	SB	51	51	51	51	51	51	49	51	Transfer 2s of green time from SB to EB in PM.
		LPI	7	7	7	7	7	7	7	7	
		WB	32	32	32	32	32	32	34	32	
28	7th Ave & W 25th St	SB	49	49	49	49	49	49	47	49	Transfer 2s from SB to WB in PM.
		LPI	7	7	7	7	7	7	7	7	
		WB	34	34	34	34	34	34	36	34	
29	7th Ave & W 24th St	EB	46	46	46	46	46	46	46	48	Transfer 2s from EB to SB in SAT.
		LPI	7	7	7	7	7	7	7	7	
		SB	37	37	37	37	37	37	37	35	
30	8th Ave & W 38th St	NB	36	33	36	33	36	33	37	36	Transfer 1s and 3s from EBT to NB in PM and SAT.
		EBT	27	27	27	27	27	27	26	24	
		EB	20	20	20	20	20	20	20	20	
		NBT/LPI	7	10	7	10	7	10	7	10	
31	8th Ave & W 37th St	NB	22	22	22	22	22	22	22	22	Transfer 1s from NBT to WB in MD/SAT.
		WBT/LPI	7	10	7	10	7	10	7	10	
		WB	34	31	34	31	34	32	34	32	
		NBT	27	27	27	27	27	26	27	26	
33	8th Ave & W 30th St	NB	45	45	45	45	44	44	43	42	Transfer 1s from NB to EB in AM/MD, 2s in PM, and 3s in SAT.
		EBT/LPI	10	10	10	10	10	10	10	10	
		EB	35	35	35	35	36	36	37	38	
34	8th Ave & W 29th St	NB	39	39	39	39	37	37	38	38	Ban parking on west curb of the NB approach.
		WB	41	41	41	41	43	43	42	42	Tranfer 2s from NB to WB in AM/MD, 1s in PM/SAT.
		NBT/LPI	10	10	10	10	10	10	10	10	
37	9th Ave & W 29th St	SB	45	43	45	43	43	43	43	43	Transfer 2s from NB/SB to WB in AM/PM, 3s in SAT.
		LPI	7	10	7	10	7	10	7	10	
		WB	38	37	38	37	40	37	40	37	

Notes :

(1) Signal timings shown indicate green plus yellow (including all red) for each phase.

Table 21-5: Action-With-Mitigation Conditions at Impacts Lane Groups - AM

				No-Action Weekday AM			With-Action Weekday AM				Mitigation Weekday AM			
	Signalized Intersections	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS		V/C Ratio	Delay (sec/veh)	LOS	
1	Madison Ave &	WB	TR	0.80	45.7	D	0.86	51.2	D		0.86	51.2	D	
	E 29th St	NB	LT	0.60	22.8	C	0.61	23.1	C		0.61	23.1	C	
2	5th Ave &	EB	TR	1.11	73.6	E	1.29	138.7	F	*	1.12	68.2	E	
	W 30th St	SB	LT	0.65	18.5	B	0.66	18.7	B		0.72	22.7	C	
3	5th Ave &	WB	L	0.21	24.0	C	0.22	24.2	C		0.22	24.2	C	
	W 29th St	WB	T	0.38	26.5	C	0.44	27.6	C		0.44	27.6	C	
		SB	T	0.53	4.7	A	0.53	4.9	A		0.53	3.2	A	
		SB	R	0.45	7.8	A	0.59	12.2	B		0.59	10.8	B	
4	Broadway &	EB	TR	0.95	30.3	C	1.07	60.5	E	*	1.04	46.9	D	
	W 30th St	SB	LT	0.22	19.6	B	0.22	19.7	B		0.23	20.5	C	
5	Broadway &	WB	LT	0.76	30.6	C	0.95	53.8	D		0.95	53.5	D	
	W 29th St	SB	TR	0.21	12.9	B	0.20	13.0	B		0.20	12.7	B	
6	6th Ave &	WB	T	0.69	31.4	C	0.70	31.4	C		0.70	31.4	C	
	37th St	WB	R	0.75	43.0	D	0.78	46.2	D		0.78	46.2	D	
		NB	LT	0.81	5.7	A	0.83	6.0	A		0.83	6.0	A	
7	6th Ave &	EB	L	0.52	42.5	D	0.54	43.5	D		0.54	43.5	D	
	36th St	EB	T	0.44	17.2	B	0.46	17.5	B		0.47	18.3	B	
		NB	T	0.98	46.7	D	0.99	48.8	D		0.96	42.8	D	
		NB	R	0.94	67.5	E	0.98	79.4	E	*	0.95	69.3	E	
8	6th Ave &	EB	T	1.15	113.8	F	1.16	115.8	F		1.16	115.8	F	
	34th St	WB	T	0.85	42.5	D	0.85	42.5	D		0.85	42.5	D	
		WB	R	0.76	80.8	F	0.76	80.8	F		0.76	80.8	F	
		NB	T	0.54	15.8	B	0.55	15.8	B		0.55	15.8	B	
9	6th Ave &	EB	LT	1.24	137.8	F	1.34	174.1	F	*	1.24	134.0	F	
	W 30th St	NB	TR	0.75	5.8	A	0.78	6.4	A		0.82	7.5	A	
10	6th Ave &	WB	T	0.55	46.1	D	0.69	49.9	D		0.74	54.4	D	
	W 29th St	WB	R	0.39	42.9	D	0.46	44.4	D		0.51	47.4	D	
		NB	L	0.96	40.0	D	1.13	92.5	F	*	1.06	65.1	E	*
		NB	T	0.69	4.9	A	0.70	4.8	A		0.67	4.6	A	
11	6th Ave &	EB	LT	1.10	104.2	F	1.15	121.3	F	*	1.11	105.4	F	
	W 28th Ave	NB	TR	0.81	9.2	A	0.84	10.0	A		0.86	10.6	B	
12	6th Ave &	WB	TR	0.59	30.3	C	0.64	32.1	C		0.64	32.1	C	
	W 27th St	NB	LT	0.72	3.5	A	0.73	3.5	A		0.73	3.5	A	
13	6th Ave &	EB	LT	1.07	90.4	F	1.12	107.4	F	*	1.07	90.8	F	
	W 26th St	NB	TR	0.86	7.1	A	0.89	8.5	A		0.91	10.6	B	
14	6th Ave &	WB	TR	0.65	34.6	C	0.75	40.1	D		0.75	40.1	D	
	W 25th St	NB	LT	0.82	4.0	A	0.84	4.5	A		0.84	4.5	A	
15	6th Ave &	EB	T	0.97	59.3	E	0.97	60.6	E		0.97	60.6	E	
	W 23th Ave	WB	T	0.48	24.0	C	0.48	24.1	C		0.48	24.1	C	
		WB	R	0.12	19.2	B	0.12	19.2	B		0.12	19.2	B	
		WB	TR											
		NB	L	0.35	22.9	C	0.37	24.0	C		0.37	24.0	C	
		NB	T	0.89	28.2	C	0.90	28.8	C		0.90	28.8	C	
		NB	R	1.25	179.7	F	1.31	203.7	F	*	1.31	203.7	F	*
16	7th Ave &	EB	TR	1.36	200.9	F	1.30	178.0	F		1.30	178.0	F	
	W 38th St	SB	LT	0.68	21.2	C	0.69	21.4	C		0.69	21.4	C	
17	7th Ave &	WB	LT	0.82	39.1	D	0.82	38.9	D		0.82	38.9	D	
	W 37th St	SB	TR	0.64	6.2	A	0.64	5.6	A		0.64	5.6	A	
18	7th Ave &	EB	T	1.21	147.2	F	1.26	165.4	F	*	1.21	147.1	F	
	W 36th St	EB	R	1.29	189.7	F	1.24	171.3	F		1.19	151.3	F	
		SB	LT	0.67	7.6	A	0.67	7.4	A		0.69	7.5	A	
19	7th Ave &	WB	L	0.61	34.6	C	0.60	34.2	C		0.60	34.2	C	
	W 35th St	WB	T	0.60	32.7	C	0.66	34.9	C		0.66	34.9	C	
		SB	TR	0.68	8.9	A	0.66	8.1	A		0.66	8.3	A	
20	7th Ave &	WB	L	0.68	39.9	D	0.68	39.9	D		0.68	39.9	D	
	W 33rd St	SB	T	0.51	14.2	B	0.51	14.2	B		0.51	14.2	B	
21	7th Ave &	SB	LT	0.59	7.3	A	0.59	7.3	A		0.59	7.3	A	
	W 32nd St													

Table 21-5 (cont'd): Action-With-Mitigation Conditions at Impacts Lane Groups - AM

				No-Action Weekday AM			With-Action Weekday AM				Mitigation Weekday AM			
	Signalized Intersections	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS		V/C Ratio	Delay (sec/veh)	LOS	
22	7th Ave &	WB	L	0.49	23.7	C	0.56	26.0	C		0.56	26.0	C	
	W 31st St	WB	T	0.48	21.7	C	0.48	21.8	C		0.48	21.8	C	
		SB	T	0.56	3.7	A	0.56	3.8	A		0.56	3.8	A	
		SB	R	1.22	149.1	F	1.22	149.0	F		1.22	149.0	F	
23	7th Ave &	EB	T	0.74	21.3	C	0.77	23.0	C		0.85	29.8	C	
	W 30th St	EB	R	0.60	20.2	C	0.68	23.2	C		0.77	30.4	C	
		SB	L	1.39	226.4	F	1.73	376.9	F	*	1.34	207.9	F	
		SB	T	0.55	7.5	A	0.56	8.1	A		0.52	7.7	A	
24	7th Ave &	WB	L	0.43	32.4	C	0.45	33.0	C		0.45	34.7	C	
	W 29th St	WB	T	0.67	38.2	D	0.86	47.2	D		0.86	49.8	D	
		SB	T											
		SB	R											
		SB	TR	0.82	15.9	B	0.85	17.6	B		0.85	17.3	B	
25	7th Ave &	EB	TR	0.97	66.4	E	1.00	72.5	E	*	0.96	62.6	E	
	W 28th Ave	SB	L	0.58	12.7	B	0.66	16.0	B		0.69	17.6	B	
		SB	T	0.64	7.1	A	0.63	6.9	A		0.65	7.1	A	
26	7th Ave &	WB	L	0.58	25.5	C	0.64	26.4	C		0.64	26.5	C	
	W 27th St	WB	T	0.08	15.5	B	0.08	14.7	B		0.08	14.7	B	
		SB	T	0.63	5.3	A	0.62	5.2	A		0.62	5.3	A	
27	7th Ave &	EB	T	0.59	31.9	C	0.61	32.5	C		0.61	32.5	C	
	W 26th St	EB	R	0.53	32.2	C	0.54	32.6	C		0.54	32.6	C	
		SB	L	0.57	15.0	B	0.60	17.6	B		0.60	17.6	B	
		SB	T	0.73	10.1	B	0.73	10.5	B		0.73	10.5	B	
28	7th Ave &	WB	LT	0.73	32.8	C	0.80	35.3	D		0.80	35.3	D	
	W 25th St	SB	T											
		SB	R											
		SB	TR	0.82	10.1	B	0.83	10.1	B		0.83	10.1	B	
29	7th Ave &	EB	TR	0.82	28.8	C	0.82	28.9	C		0.82	28.9	C	
	W 24th St	SB	L	0.70	13.3	B	0.75	15.8	B		0.75	15.5	B	
		SB	T	0.73	5.5	A	0.73	5.7	A		0.73	5.4	A	
30	8th Ave &	EB	L	1.08	122.1	F	1.09	125.2	F		1.09	125.2	F	
	W 38th St	EB	T	0.64	23.9	C	0.63	23.4	C		0.63	23.4	C	
		NB	T	0.77	18.5	B	0.81	20.2	C		0.81	20.2	C	
		NB	R	1.52	295.4	F	1.23	182.9	F		1.23	182.9	F	
31	8th Ave &	WB	T	0.79	48.3	D	0.83	51.5	D		0.83	51.5	D	
	W 37th St	WB	R	0.60	48.3	D	0.62	50.1	D		0.62	50.1	D	
		NB	L	0.69	48.1	D	0.70	48.6	D		0.70	48.6	D	
		NB	T	0.52	17.4	B	0.52	17.4	B		0.52	17.4	B	
32	8th Ave &	EB	T	1.17	123.8	F	1.17	123.8	F		1.17	123.8	F	
	W34th St	WB	T	0.56	28.1	C	0.56	28.1	C		0.56	28.1	C	
		WB	R	0.47	29.2	C	0.47	29.4	C		0.47	29.4	C	
		NB	L	0.77	64.6	E	0.77	64.6	E		0.77	64.6	E	
		NB	TR	0.77	27.1	C	0.80	28.4	C		0.80	28.4	C	
33	8th Ave &	EB	L	0.99	63.1	E	1.03	72.6	E	*	0.98	59.5	E	
	W 30th St	EB	T	0.88	27.8	C	0.89	28.9	C		0.87	25.9	C	
		NB	T	0.49	9.6	A	0.52	10.3	B		0.53	10.2	B	
34	8th Ave &	WB	TR	0.93	44.8	D	1.17	112.5	F	*	1.10	85.6	F	*
	W 29th St	NB	L	1.19	146.2	F	1.24	166.4	F	*	1.19	147.5	F	
		NB	T	0.32	14.3	B	0.33	14.4	B		0.34	15.6	B	
35	8th Ave &	EB	T	0.91	55.9	E	0.92	58.3	E		0.92	58.3	E	
	W 24th St	NB	TR	0.70	19.7	B	0.71	19.8	B		0.71	19.8	B	
36	9th Ave &	EB	T	0.46	17.5	B	0.47	17.7	B		0.47	17.7	B	
	W 30th St	EB	R	1.46	257.0	F	1.46	257.0	F		1.46	257.0	F	
		SB	LT	1.01	57.1	E	1.02	60.8	E		1.02	60.8	E	
37	9th Ave &	WB	L	0.40	18.7	B	0.47	19.9	B		0.44	18.0	B	
	W 29th St	WB	T	1.01	45.8	D	1.18	107.6	F	*	1.11	77.0	E	*
		SB	TR	1.00	24.7	C	1.01	27.4	C		1.06	47.8	D	

Notes:
EB - eastbound, WB - westbound, NB - northbound, SB - southbound
L - left, T - through, R - right, DefL - Analysis considers a defacto left-turn lane on this approach
V/C ratio - volume-to-capacity ratio
Sec/veh - seconds per vehicle
LOS - level of service
* - Denotes an impacted movement (With-Action LOS E with delay 5 sec >= No-Action delay, or With-Action F with delay 4 sec >= No-Action delay)
Analysis is based on the 2000 Highway Capacity Manual methodology (Synchro 12)

Table 21-6: Action-With-Mitigation Conditions at Impacted Lane Groups - Midday

				No-Action Weekday Midday			With-Action Weekday Midday				Mitigation Weekday Midday			
	Signalized Intersections	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS		V/C Ratio	Delay (sec/veh)	LOS	
1	Madison Ave &	WB	TR	0.63	37.8	D	0.71	42.1	D		0.71	42.1	D	
	E 29th St	NB	LT	0.62	23.0	C	0.63	23.2	C		0.63	23.2	C	
2	5th Ave &	EB	TR	1.05	69.7	E	1.16	105.3	F	*	1.08	72.3	E	
	W 30th St	SB	LT	0.58	17.2	B	0.59	17.4	B		0.62	19.2	B	
3	5th Ave &	WB	L	0.32	25.8	C	0.33	26.1	C		0.33	26.1	C	
	W 29th St	WB	T	0.14	22.9	C	0.22	23.9	C		0.22	23.9	C	
		SB	T	0.48	5.0	A	0.48	5.0	A		0.48	4.3	A	
		SB	R	0.44	8.4	A	0.55	11.8	B		0.55	11.0	B	
4	Broadway &	EB	TR	0.78	29.0	C	0.88	34.1	C		0.88	34.0	C	
	W 30th St	SB	LT	0.45	24.6	C	0.46	25.2	C		0.46	25.2	C	
5	Broadway &	WB	LT	0.44	25.4	C	0.62	27.7	C		0.62	27.5	C	
	W 29th St	SB	TR	0.28	16.9	B	0.28	17.2	B		0.28	17.2	B	
6	6th Ave &	WB	T	0.67	29.2	C	0.68	29.5	C		0.66	28.2	C	
	37th St	WB	R	1.07	106.2	F	1.10	113.7	F	*	1.06	99.3	F	
		NB	LT	0.61	4.1	A	0.62	4.9	A		0.64	5.3	A	
7	6th Ave &	EB	L	0.26	34.8	C	0.32	36.1	D		0.32	36.1	D	
	36th St	EB	T	0.46	17.5	B	0.47	17.7	B		0.47	17.7	B	
		NB	T	0.55	20.8	C	0.55	20.9	C		0.55	20.9	C	
		NB	R	0.64	30.2	C	0.68	32.6	C		0.68	32.6	C	
8	6th Ave &	EB	T	1.08	91.0	F	1.08	91.5	F		1.08	91.5	F	
	34th St	WB	T	0.99	63.7	E	0.99	64.1	E		0.99	64.1	E	
		WB	R	0.30	43.7	D	0.30	43.7	D		0.30	43.7	D	
		NB	T	0.43	14.3	B	0.43	14.3	B		0.43	14.3	B	
9	6th Ave &	EB	LT	0.93	42.6	D	1.01	54.2	D		1.01	55.2	E	*
	W 30th St	NB	TR	0.72	4.7	A	0.75	5.4	A		0.75	5.3	A	
10	6th Ave &	WB	T	0.50	42.4	D	0.60	46.0	D		0.68	52.2	D	
	W 29th St	WB	R	0.34	39.1	D	0.39	41.0	D		0.46	45.9	D	
		NB	L	1.43	215.5	F	1.60	288.4	F	*	1.40	203.8	F	
		NB	T	0.72	4.9	A	0.73	4.9	A		0.68	4.4	A	
11	6th Ave &	EB	LT	0.87	54.9	D	0.91	59.8	E		0.91	59.8	E	
	W 28th Ave	NB	TR	0.84	7.9	A	0.86	8.3	A		0.86	8.3	A	
12	6th Ave &	WB	TR	0.54	29.0	C	0.57	29.7	C		0.57	29.7	C	
	W 27th St	NB	LT	0.82	3.8	A	0.83	3.1	A		0.83	3.3	A	
13	6th Ave &	EB	LT	1.08	87.7	F	1.09	93.0	F	*	1.06	80.2	F	
	W 26th St	NB	TR	0.97	16.6	B	0.99	21.6	C		1.02	28.9	C	
14	6th Ave &	WB	TR	0.85	48.3	D	0.90	54.2	D		0.90	54.2	D	
	W 25th St	NB	LT	0.84	6.9	A	0.86	7.4	A		0.86	8.3	A	
15	6th Ave &	EB	T	0.83	39.2	D	0.83	39.8	D		0.86	43.4	D	
	W 23th Ave	WB	T										A	
		WB	R										A	
		WB	TR	0.51	24.8	C	0.51	24.8			0.52	25.9		
		NB	L	0.52	33.5	C	0.54	35.2	D		0.52	32.6	C	
		NB	T	0.87	26.9	C	0.89	27.9	C		0.87	25.9	C	
		NB	R	1.28	190.6	F	1.30	196.7	F	*	1.23	170.1	F	
16	7th Ave &	EB	TR	1.10	94.2	F	1.08	87.4	F		1.08	87.4	F	
	W 38th St	SB	LT	0.69	21.2	C	0.69	21.4	C		0.69	21.4	C	
17	7th Ave &	WB	LT	0.89	43.8	D	0.89	44.0	D		0.89	44.0	D	
	W 37th St	SB	TR	0.57	3.9	A	0.57	3.7	A		0.57	3.7	A	
18	7th Ave &	EB	T	0.95	65.7	E	1.02	81.8	F	*	0.95	62.8	E	
	W 36th St	EB	R	0.95	76.9	E	0.90	65.8	E		0.82	51.3	D	
		SB	LT	0.66	6.5	A	0.67	6.2	A		0.70	6.6	A	
19	7th Ave &	WB	L	0.70	39.2	D	0.71	39.5	D		0.68	36.8	D	
	W 35th St	WB	T	0.87	49.7	D	0.92	57.1	E	*	0.89	51.2	D	
		SB	TR	0.62	7.0	A	0.61	6.8	A		0.62	7.1	A	
20	7th Ave &	WB	L	1.74	384.9	F	1.74	384.9	F		1.74	384.9	F	
	W 33rd St	SB	T	0.45	13.4	B	0.45	13.5	B		0.45	13.5	B	
21	7th Ave &	SB	LT	0.60	9.2	A	0.61	9.2	A		0.61	9.2	A	
	W 32nd St													

Table 21-6 (cont'd): Action-With-Mitigation Conditions at Impacted Lane Groups - MD

				No-Action Weekday Midday			With-Action Weekday Midday				Mitigation Weekday Midday			
	Signalized Intersections	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS		V/C Ratio	Delay (sec/veh)	LOS	
22	7th Ave & W 31st St	WB	L	0.36	20.5	C	0.42	21.7	C		0.42	21.7	C	
		WB	T	0.59	24.2	C	0.59	24.4	C		0.59	24.4	C	
		SB	T	0.57	3.2	A	0.58	3.2	A		0.58	3.2	A	
		SB	R	0.98	67.7	E	0.98	67.5	E		0.98	67.5	E	
23	7th Ave & W 30th St	EB	T	0.54	19.4	B	0.60	21.4	C		0.66	24.5	C	
		EB	R	0.54	21.8	C	0.65	26.5	C		0.73	32.4	C	
		SB	L	1.01	82.6	F	1.27	173.3	F	*	1.05	93.8	F	*
		SB	T	0.53	5.8	A	0.54	6.4	A		0.50	6.0	A	
24	7th Ave & W 29th St	WB	L	0.46	28.8	C	0.48	30.2	C		0.48	31.1	C	
		WB	T	0.70	32.1	C	0.80	35.5	D		0.80	37.2	D	
		SB	T											
		SB	R											
		SB	TR	0.85	17.7	B	0.89	20.9	C		0.89	20.7	C	
25	7th Ave & W 28th Ave	EB	TR	0.70	36.5	D	0.71	37.2	D		0.71	37.2	D	
		SB	L	0.51	8.9	A	0.57	10.3	B		0.57	10.4	B	
		SB	T	0.53	5.4	A	0.54	5.3	A		0.54	5.4	A	
26	7th Ave & W 27th St	WB	L	0.67	30.3	C	0.70	30.9	C		0.70	30.9	C	
		WB	T	0.08	16.7	B	0.08	16.1	B		0.08	16.3	B	
		SB	T	0.55	4.8	A	0.56	4.7	A		0.56	4.7	A	
27	7th Ave & W 26th St	EB	T	0.50	29.2	C	0.50	29.3	C		0.50	29.3	C	
		EB	R	0.45	29.6	C	0.45	29.6	C		0.45	29.6	C	
		SB	L	0.85	33.1	C	0.89	38.9	D		0.89	38.9	D	
		SB	T	0.51	6.9	A	0.52	7.1	A		0.52	7.1	A	
28	7th Ave & W 25th St	WB	LT	0.78	33.0	C	0.82	34.3	C		0.82	34.2	C	
		SB	T											
		SB	R											
		SB	TR	0.70	10.4	B	0.71	10.3	B		0.71	10.3	B	
29	7th Ave & W 24th St	EB	TR	0.44	26.7	C	0.45	26.7	C		0.45	26.7	C	
		SB	L	0.77	18.1	B	0.83	24.0	C		0.83	24.0	C	
		SB	T	0.48	4.0	A	0.48	4.1	A		0.48	4.1	A	
30	8th Ave & W 38th St	EB	L	0.86	71.1	E	0.86	71.1	E		0.86	71.1	E	
		EB	T	0.41	18.0	B	0.41	18.0	B		0.41	18.0	B	
		NB	T	0.73	15.2	B	0.75	15.5	B		0.75	14.9	B	
		NB	R	1.25	181.5	F	1.18	151.8	F		1.18	151.0	F	
31	8th Ave & W 37th St	WB	T	1.00	81.8	F	1.02	87.8	F	*	0.99	81.0	F	
		WB	R	0.70	63.1	E	0.69	62.5	E		0.67	60.7	E	
		NB	L	0.54	40.5	D	0.54	40.6	D		0.54	40.6	D	
		NB	T	0.54	17.6	B	0.54	17.7	B		0.56	18.5	B	
32	8th Ave & W34th St	EB	T	1.06	87.1	F	1.06	87.1	F		1.06	87.1	F	
		WB	T	1.04	80.3	F	1.04	80.3	F		1.04	80.3	F	
		WB	R	0.47	28.9	C	0.47	29.0	C		0.47	29.0	C	
		NB	L	0.73	60.1	E	0.73	60.1	E		0.73	60.1	E	
		NB	TR	0.72	24.9	C	0.75	25.9	C		0.75	25.9	C	
33	8th Ave & W 30th St	EB	L	1.11	116.5	F	1.15	132.5	F	*	1.11	114.6	F	
		EB	T	0.59	29.4	C	0.66	32.0	C		0.65	30.7	C	
		NB	T	0.43	8.0	A	0.45	8.7	A		0.47	8.5	A	
34	8th Ave & W 29th St	WB	TR	1.11	92.7	F	1.27	157.8	F	*	1.20	127.4	F	*
		NB	L	0.99	86.3	F	1.01	94.2	F	*	0.98	84.2	F	
		NB	T	0.32	14.3	B	0.33	14.4	B		0.34	15.6	B	
35	8th Ave & W 24th St	EB	T	0.78	42.5	D	0.80	44.1	D		0.80	44.1	D	
		NB	TR	0.59	18.6	B	0.61	18.8	B		0.61	18.8	B	
36	9th Ave & W 30th St	EB	T	0.37	16.3	B	0.41	16.8	B		0.41	16.8	B	
		EB	R	0.96	74.9	E	0.96	75.5	E		0.96	75.5	E	
		SB	LT	0.93	42.6	D	0.94	44.0	D		0.94	44.0	D	
37	9th Ave & W 29th St	WB	L	0.40	24.0	C	0.45	24.3	C		0.45	24.6	C	
		WB	T	0.90	32.5	C	0.99	39.9	D		0.99	40.1	D	
		SB	TR	0.80	13.1	B	0.81	13.2	B		0.81	13.2	B	

Notes:
EB - eastbound, WB - westbound, NB - northbound, SB - southbound
L - left, T - through, R - right, DefL - Analysis considers a defacto left-turn lane on this approach
V/C ratio - volume-to-capacity ratio
Sec/veh - seconds per vehicle
LOS - level of service
* - Denotes an impacted
movement (With-Action LOS E
Analysis is based on the 2000 Highway Capacity Manual methodology (Synchro 12)

Table 21-7: Action-With-Mitigation Conditions at Impacted Lane Groups - PM

				No-Action Weekday PM			With-Action Weekday PM				Mitigation Weekday PM			
	Signalized Intersections	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS		V/C Ratio	Delay (sec/veh)	LOS	
1	Madison Ave &	WB	TR	1.04	86.4	F	1.14	119.0	F	*	1.05	86.8	F	
	E 29th St	NB	LT	0.72	26.4	C	0.73	26.7	C		0.78	30.8	C	
2	5th Ave &	EB	TR	1.08	71.7	E	1.21	117.7	F	*	1.09	66.7	E	
	W 30th St	SB	LT	0.68	19.1	B	0.69	19.4	B		0.74	22.6	C	
3	5th Ave &	WB	L	0.37	26.9	C	0.40	27.7	C		0.45	31.6	C	
	W 29th St	WB	T	0.58	31.1	C	0.66	33.8	C		0.74	40.4	D	
		SB	T	0.55	5.1	A	0.56	5.2	A		0.52	2.5	A	
		SB	R	0.83	31.5	C	1.17	121.0	F	*	1.01	63.6	E	*
4	Broadway &	EB	TR	0.83	25.4	C	0.97	32.5	C		0.97	31.2	C	
	W 30th St	SB	LT	0.27	20.7	C	0.30	21.4	C		0.30	21.4	C	
5	Broadway &	WB	LT	1.02	65.8	E	1.20	129.4	F	*	1.09	87.8	F	*
	W 29th St	SB	TR	0.21	16.1	B	0.24	17.7	B		0.27	21.0	C	
6	6th Ave &	WB	T	1.01	69.6	E	1.03	73.8	E		0.99	64.2	E	
	37th St	WB	R	1.07	102.1	F	1.11	114.9	F	*	1.07	101.2	F	
		NB	LT	0.90	11.1	B	0.91	12.0	B		0.93	13.5	B	
7	6th Ave &	EB	L	0.69	49.7	D	0.75	54.1	D		0.75	54.1	D	
	36th St	EB	T	0.43	17.0	B	0.44	17.2	B		0.44	17.2	B	
		NB	T	0.81	27.5	C	0.82	27.7	C		0.82	27.7	C	
		NB	R	0.94	68.4	E	0.96	73.0	E		0.96	73.0	E	
8	6th Ave &	EB	T	1.18	128.1	F	1.19	131.4	F		1.19	131.4	F	
	34th St	WB	T	1.08	88.6	F	1.08	89.8	F		1.08	89.8	F	
		WB	R	0.66	98.4	F	0.66	98.4	F		0.66	98.4	F	
		NB	T	0.61	16.7	B	0.61	16.8	B		0.61	16.8	B	
9	6th Ave &	EB	LT	1.25	143.7	F	1.35	183.5	F	*	1.26	141.5	F	
	W 30th St	NB	TR	0.91	11.6	B	0.94	14.2	B		0.98	20.6	C	
10	6th Ave &	WB	T	1.21	155.8	F	1.33	204.2	F	*	1.33	207.4	F	*
	W 29th St	WB	R	0.57	46.5	D	0.64	47.6	D		0.64	50.3	D	
		NB	L	1.47	230.2	F	2.05	488.8	F	*	2.05	487.7	F	*
		NB	T	0.78	5.0	A	0.80	5.0	A		0.80	5.2	A	
11	6th Ave &	EB	LT	1.14	125.4	F	1.21	153.2	F	*	1.13	118.3	F	
	W 28th Ave	NB	TR	0.91	9.6	A	0.93	10.9	B		0.98	16.7	B	
12	6th Ave &	WB	TR	0.61	30.4	C	0.65	31.8	C		0.65	31.8	C	
	W 27th St	NB	LT	0.83	2.6	A	0.84	2.7	A		0.84	2.7	A	
13	6th Ave &	EB	LT	1.07	93.5	F	1.11	104.8	F	*	1.11	104.8	F	*
	W 26th St	NB	TR	1.08	45.0	D	1.11	58.2	E	*	1.11	54.8	D	
14	6th Ave &	WB	TR	1.09	98.8	F	1.15	121.7	F	*	1.07	90.9	F	
	W 25th St	NB	LT	0.98	15.3	B	1.01	22.7	C		1.06	42.9	D	
15	6th Ave &	EB	T	0.86	41.6	D	0.87	42.5	D		0.89	46.5	D	
	W 23th Ave	WB	T	0.65	28.4	C	0.65	28.5	C		0.67	30.0	C	
		WB	R	0.05	17.5	B	0.05	17.6	B		0.05	18.2	B	
		WB	TR											
		NB	L	0.59	35.4	D	0.64	40.0	D		0.61	36.0	D	
		NB	T	0.99	43.1	D	1.01	48.6	D		0.99	42.4	D	
		NB	R	2.01	512.2	F	2.13	567.3	F	*	1.97	494.7	F	
16	7th Ave &	EB	TR	1.07	92.3	F	1.07	91.2	F		1.07	93.4	F	
	W 38th St	SB	LT	0.71	21.7	C	0.72	22.0	C		0.72	22.0	C	
17	7th Ave &	WB	LT	1.03	71.8	E	1.04	74.6	E		1.04	74.6	E	
	W 37th St	SB	TR	0.65	4.9	A	0.66	4.8	A		0.66	4.8	A	
18	7th Ave &	EB	T	1.24	156.7	F	1.31	187.8	F	*	1.22	148.9	F	
	W 36th St	EB	R	0.98	83.9	F	0.96	78.0	E		0.89	60.2	E	
		SB	LT	0.79	11.1	B	0.80	11.1	B		0.84	12.0	B	
19	7th Ave &	WB	L	0.34	26.6	C	0.36	27.1	C		0.36	27.1	C	
	W 35th St	WB	T	0.82	44.9	D	0.87	49.4	D		0.87	49.4	D	
		SB	TR	0.82	9.5	A	0.83	9.2	A		0.83	9.3	A	
20	7th Ave &	WB	L	1.27	186.4	F	1.27	186.4	F		1.27	186.4	F	
	W 33rd St	SB	T	0.52	14.3	B	0.53	14.4	B		0.53	14.4	B	
21	7th Ave &	SB	LT	0.67	8.6	A	0.68	8.6	A		0.68	8.6	A	
	W 32nd St													

Table 21-7 (cont'd): Action-With-Mitigation Conditions at Impacted Lane Groups - PM

				No-Action Weekday PM			With-Action Weekday PM			Mitigation Weekday PM		
	Signalized Intersections	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
22	7th Ave & W 31st St	WB	L	0.49	23.7	C	0.55	25.8	C	0.55	25.8	C
		WB	T	0.45	21.0	C	0.46	21.1	C	0.46	21.1	C
		SB	T	0.67	3.8	A	0.68	3.8	A	0.68	3.8	A
		SB	R	1.12	105.5	F	1.12	105.1	F	1.12	105.1	F
23	7th Ave & W 30th St	EB	T	0.68	24.2	C	0.76	26.5	C	0.76	25.9	C
		EB	R	0.82	35.6	D	0.98	56.4	E *	0.98	57.0	E *
		SB	L	1.13	118.9	F	1.60	311.8	F *	1.60	311.8	F *
		SB	T	0.64	6.9	A	0.65	7.3	A	0.65	7.3	A
24	7th Ave & W 29th St	WB	L	0.54	37.9	D	0.57	38.8	D	0.57	38.8	D
		WB	T	1.03	65.4	E	1.11	99.4	F *	1.11	99.4	F *
		SB	T	0.96	26.1	C	0.98	30.0	C	0.98	30.0	C
		SB	R	2.88	881.4	F	3.98	1374.1	F *	3.98	1374.1	F *
		SB	TR									
25	7th Ave & W 28th Ave	EB	TR	0.80	41.5	D	0.82	43.6	D	0.82	43.6	D
		SB	L	0.49	7.2	A	0.64	11.1	B	0.64	11.1	B
		SB	T	0.63	5.5	A	0.64	5.5	A	0.64	5.5	A
26	7th Ave & W 27th St	WB	L	1.10	99.0	F	1.19	131.8	F *	1.09	88.6	F
		WB	T	0.04	13.5	B	0.04	13.1	B	0.04	12.2	B
		SB	T	0.65	4.5	A	0.66	4.5	A	0.69	4.8	A
27	7th Ave & W 26th St	EB	T	0.55	30.4	C	0.56	30.8	C	0.56	30.8	C
		EB	R	0.51	31.5	C	0.53	32.5	C	0.53	32.5	C
		SB	L	0.46	10.0	A	0.56	13.9	B	0.56	14.0	B
		SB	T	0.76	10.7	B	0.77	10.8	B	0.77	11.1	B
28	7th Ave & W 25th St	WB	LT	1.08	71.6	E	1.14	96.0	F *	1.06	62.6	E
		SB	T	0.78	7.4	A	0.80	7.4	A	0.83	8.2	A
		SB	R	0.51	9.0	A	0.54	10.0	A	0.58	12.1	B
		SB	TR									
29	7th Ave & W 24th St	EB	TR	0.48	27.6	C	0.50	27.4	C	0.50	27.4	C
		SB	L	0.72	12.6	B	0.88	25.8	C	0.88	24.0	C
		SB	T	0.77	4.1	A	0.77	4.3	A	0.77	3.9	A
30	8th Ave & W 38th St	EB	L	0.55	44.4	D	0.55	44.4	D	0.55	44.4	D
		EB	T	0.42	18.0	B	0.43	18.2	B	0.44	19.0	B
		NB	T	0.74	17.5	B	0.75	17.8	B	0.73	16.5	B
		NB	R	1.19	233.6	F	1.26	256.0	F *	1.18	223.8	F
31	8th Ave & W 37th St	WB	T	0.73	47.7	D	0.74	47.9	D	0.74	47.9	D
		WB	R	0.65	51.9	D	0.63	51.3	D	0.63	51.3	D
		NB	L	0.78	54.3	D	0.79	54.9	D	0.79	54.9	D
		NB	T	0.47	16.5	B	0.48	16.7	B	0.48	16.7	B
32	8th Ave & W34th St	EB	T	0.95	58.1	E	0.95	58.1	E	0.95	58.1	E
		WB	T	1.01	71.1	E	1.01	71.1	E	1.01	71.1	E
		WB	R	0.44	28.0	C	0.45	28.4	C	0.45	28.4	C
		NB	L	0.95	90.9	F	0.95	90.9	F	0.95	90.9	F
		NB	TR	0.90	35.2	D	0.94	40.6	D	0.94	40.6	D
33	8th Ave & W 30th St	EB	L	1.30	188.4	F	1.42	237.7	F *	1.30	185.6	F
		EB	T	0.85	41.2	D	0.98	58.0	E *	0.93	47.5	D
		NB	T	0.57	10.1	B	0.60	10.9	B	0.63	12.1	B
34	8th Ave & W 29th St	WB	TR	1.52	264.4	F	1.67	330.3	F *	1.62	308.5	F *
		NB	L	1.01	94.2	F	1.06	109.9	F *	0.99	86.9	F
		NB	T	0.37	14.7	B	0.38	14.8	B	0.38	15.5	B
35	8th Ave & W 24th St	EB	T	0.61	32.6	C	0.64	33.7	C	0.64	33.7	C
		NB	TR	0.60	17.6	B	0.62	17.9	B	0.62	17.9	B
36	9th Ave & W 30th St	EB	T	0.55	20.8	C	0.63	22.3	C	0.63	22.3	C
		EB	R	1.31	202.3	F	1.31	203.8	F	1.31	203.8	F
		SB	LT	0.91	36.8	D	0.92	38.0	D	0.92	38.0	D
37	9th Ave & W 29th St	WB	L	0.46	23.3	C	0.51	23.9	C	0.48	22.2	C
		WB	T	1.28	158.8	F	1.34	182.0	F *	1.26	147.3	F
		SB	TR	0.76	9.3	A	0.77	9.3	A	0.81	9.4	A

Notes:
EB - eastbound, WB - westbound, NB - northbound, SB - southbound
L - left, T - through, R - right, DefL - Analysis considers a defacto left-turn lane on this approach
V/C ratio - volume-to-capacity ratio
Sec/veh - seconds per vehicle
LOS - level of service
* - Denotes an impacted
movement (With-Action LOS E
Analysis is based on the 2000 Highway Capacity Manual methodology (Synchro 12)

Table 21-8: Action-With-Mitigation Conditions at Impacted Lane Groups - Saturday

				No-Action Saturday Midday			With-Action Saturday Midday			Mitigation Saturday Midday		
	Signalized Intersections	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
1	Madison Ave &	WB	TR	0.88	56.9	E	1.01	84.6	F *	0.93	61.9	E *
	E 29th St	NB	LT	0.51	20.6	C	0.53	20.9	C	0.56	23.5	C
2	5th Ave &	EB	TR	0.92	34.6	C	1.16	93.9	F *	1.04	47.7	D
	W 30th St	SB	LT	0.55	16.7	B	0.56	17.0	B	0.61	19.5	B
3	5th Ave &	WB	L	0.16	23.3	C	0.18	23.7	C	0.18	23.7	C
	W 29th St	WB	T	0.41	27.1	C	0.53	29.6	C	0.53	29.6	C
		SB	T	0.42	5.0	A	0.44	5.2	A	0.44	4.2	A
		SB	R	0.53	11.5	B	0.80	30.5	C	0.80	28.5	C
4	Broadway &	EB	TR	0.76	23.6	C	0.99	35.3	D	0.99	33.0	C
	W 30th St	SB	LT	0.28	20.6	C	0.30	21.2	C	0.30	21.2	C
5	Broadway &	WB	LT	0.84	38.0	D	1.14	108.3	F *	1.02	68.2	E *
	W 29th St	SB	TR	0.31	19.1	B	0.37	21.8	C	0.40	25.6	C
6	6th Ave &	WB	T	0.69	29.8	C	0.73	30.9	C	0.73	30.9	C
	37th St	WB	R	0.67	36.0	D	0.75	42.1	D	0.75	42.1	D
		NB	LT	0.77	6.6	A	0.79	7.3	A	0.79	7.3	A
7	6th Ave &	EB	L	0.57	44.0	D	0.65	47.9	D	0.65	47.9	D
	36th St	EB	T	0.61	20.1	C	0.64	20.8	C	0.64	20.8	C
		NB	T	0.69	23.5	C	0.70	23.7	C	0.70	23.7	C
		NB	R	0.63	31.1	C	0.73	38.5	D	0.73	38.5	D
8	6th Ave &	EB	T	1.14	110.6	F	1.14	111.9	F	1.14	111.9	F
	34th St	WB	T	1.01	68.7	E	1.01	69.7	E	1.01	69.7	E
		WB	R	0.24	41.5	D	0.24	41.5	D	0.24	41.5	D
		NB	T	0.52	15.5	B	0.53	15.5	B	0.53	15.5	B
9	6th Ave &	EB	LT	1.23	136.0	F	1.42	214.1	F *	1.23	124.8	F
	W 30th St	NB	TR	0.72	3.4	A	0.77	4.1	A	0.85	8.2	A
10	6th Ave &	WB	T	0.79	53.7	D	0.97	68.3	E *	0.97	73.0	E *
	W 29th St	WB	R	0.29	37.9	D	0.39	39.3	D	0.39	40.9	D
		NB	L	1.64	305.3	F	2.72	788.6	F *	2.72	787.5	F *
		NB	T	0.81	6.0	A	0.84	6.2	A	0.84	6.3	A
11	6th Ave &	EB	LT	0.97	68.1	E	1.08	93.7	F *	1.00	71.1	E
	W 28th Ave	NB	TR	0.90	10.9	B	0.95	14.2	B	1.00	24.4	C
12	6th Ave &	WB	TR	0.65	31.9	C	0.73	35.1	D	0.73	35.1	D
	W 27th St	NB	LT	0.82	4.2	A	0.85	4.3	A	0.85	4.2	A
13	6th Ave &	EB	LT	0.87	42.1	D	0.96	57.4	E *	0.93	50.1	D
	W 26th St	NB	TR	0.91	9.7	A	0.97	15.4	B	1.00	21.1	C
14	6th Ave &	WB	TR	0.63	34.0	C	0.70	37.3	D	0.70	37.3	D
	W 25th St	NB	LT	0.88	9.8	A	0.92	12.6	B	0.92	14.5	B
15	6th Ave &	EB	T	0.85	40.5	D	0.86	41.2	D	0.91	49.6	D
	W 23th Ave	WB	T									A
		WB	R									A
		WB	TR	0.60	26.9	C	0.60	27.1	C	0.64	29.9	
		NB	L	0.61	38.4	D	0.68	45.7	D	0.60	36.6	D
		NB	T	0.85	25.8	C	0.88	27.2	C	0.84	23.6	C
		NB	R	1.44	258.1	F	1.54	303.1	F *	1.38	229.4	F
16	7th Ave &	EB	TR	1.37	201.3	F	1.48	246.0	F *	1.37	202.4	F
	W 38th St	SB	LT	0.59	19.1	B	0.60	19.4	B	0.63	21.2	C
17	7th Ave &	WB	LT	1.00	64.0	E	1.04	75.8	E *	1.00	63.9	E
	W 37th St	SB	TR	0.57	6.2	A	0.60	7.0	A	0.61	7.4	A
18	7th Ave &	EB	T	1.55	290.9	F	1.66	338.9	F *	1.55	288.6	F
	W 36th St	EB	R	0.78	49.2	D	0.82	54.7	D	0.75	44.4	D
		SB	LT	0.68	9.4	A	0.71	9.4	A	0.74	10.1	B
19	7th Ave &	WB	L	0.72	40.0	D	0.76	43.0	D	0.76	43.0	D
	W 35th St	WB	T	0.75	39.3	D	0.81	43.8	D	0.81	43.8	D
		SB	TR	0.65	6.4	A	0.67	6.6	A	0.67	6.8	A
20	7th Ave &	WB	L	1.11	125.4	F	1.12	127.2	F	1.12	127.2	F
	W 33rd St	SB	T	0.47	13.6	B	0.48	13.8	B	0.48	13.8	B
21	7th Ave & W 32nd St	SB	LT	0.59	7.7	A	0.60	7.7	A	0.60	7.7	A

Table 21-8(cont'd): Action-With-Mitigation Conditions at Impacted Lane Groups – Saturday

				No-Action Saturday Midday			With-Action Saturday Midday				Mitigation Saturday Midday			
	Signalized Intersections	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS		V/C Ratio	Delay (sec/veh)	LOS	
22	7th Ave & W 31st St	WB	L	0.39	21.1	C	0.49	23.6	C		0.49	23.6	C	
		WB	T	0.44	20.9	C	0.45	21.0	C		0.45	21.0	C	
		SB	T	0.55	3.2	A	0.57	3.3	A		0.57	3.3	A	
		SB	R	1.03	82.6	F	1.03	82.0	F		1.03	82.0	F	
23	7th Ave & W 30th St	EB	T	0.79	28.0	C	0.91	33.4	C		1.01	53.0	D	
		EB	R	0.73	28.6	C	1.00	55.3	E	*	1.12	96.9	F	*
		SB	L	0.65	22.2	C	1.06	98.7	F	*	0.89	51.9	D	
		SB	T	0.54	6.7	A	0.56	7.6	A		0.52	7.2	A	
24	7th Ave & W 29th St	WB	L	0.43	33.1	C	0.51	34.5	C		0.46	31.5	C	
		WB	T	0.91	43.4	D	1.12	96.9	F	*	1.02	57.5	E	*
		SB	T											
		SB	R											
		SB	TR	0.80	15.5	B	0.88	19.9	B		0.96	27.7	C	
25	7th Ave & W 28th Ave	EB	TR	0.97	64.3	E	1.02	76.9	E	*	0.98	66.5	E	
		SB	L	0.43	7.5	A	0.62	12.4	B		0.64	13.1	B	
		SB	T	0.56	5.9	A	0.58	5.8	A		0.59	6.2	A	
26	7th Ave & W 27th St	WB	L	0.53	20.0	B	0.61	21.3	C		0.61	21.4	C	
		WB	T	0.26	14.6	B	0.26	14.3	B		0.26	14.3	B	
		SB	T	0.64	6.8	A	0.66	6.4	A		0.66	6.7	A	
27	7th Ave & W 26th St	EB	T	0.56	31.1	C	0.58	31.6	C		0.58	31.6	C	
		EB	R	0.43	28.8	C	0.45	29.5	C		0.45	29.5	C	
		SB	L	0.42	6.9	A	0.54	10.5	B		0.54	10.5	B	
		SB	T	0.65	7.0	A	0.67	7.2	A		0.67	7.2	A	
28	7th Ave & W 25th St	WB	LT	0.71	29.4	C	0.78	32.0	C		0.78	32.0	C	
		SB	T											
		SB	R											
		SB	TR	0.81	11.4	B	0.84	11.8	B		0.84	11.9	B	
29	7th Ave & W 24th St	EB	TR	0.56	21.0	C	0.58	21.9	C		0.62	23.9	C	
		SB	L	0.88	26.2	C	1.09	74.2	E	*	1.01	48.7	D	
		SB	T	0.66	5.4	A	0.68	5.7	A		0.64	4.4	A	
30	8th Ave & W 38th St	EB	L	1.04	111.6	F	1.05	114.5	F		1.05	114.5	F	
		EB	T	0.64	23.6	C	0.65	24.0	C		0.70	28.2	C	
		NB	T	0.94	26.1	C	0.98	32.9	C		0.91	19.4	B	
		NB	R	1.82	425.0	F	2.32	642.2	F	*	1.80	404.2	F	
31	8th Ave & W 37th St	WB	T	1.04	89.4	F	1.08	100.6	F	*	1.05	92.1	F	
		WB	R	0.57	52.5	D	0.70	56.5	E		0.67	56.0	E	
		NB	L	0.60	42.5	D	0.61	43.0	D		0.61	43.0	D	
		NB	T	0.65	19.8	B	0.69	20.6	C		0.70	21.6	C	
32	8th Ave & W34th St	EB	T	0.92	51.4	D	0.92	51.4	D		0.92	51.4	D	
		WB	T	0.81	38.6	D	0.81	38.6	D		0.81	38.6	D	
		WB	R	0.37	26.0	C	0.38	26.2	C		0.38	26.2	C	
		NB	L	0.78	63.1	E	0.78	63.1	E		0.78	63.1	E	
		NB	TR	0.94	40.3	D	0.99	51.1	D		0.99	51.1	D	
33	8th Ave & W 30th St	EB	L	1.15	113.0	F	1.28	164.1	F	*	1.14	105.0	F	
		EB	T	0.89	32.0	C	1.06	65.2	E	*	0.98	42.4	D	
		NB	T	0.56	6.8	A	0.61	8.0	A		0.66	10.1	B	
34	8th Ave & W 29th St	WB	TR	1.14	101.7	F	1.42	218.7	F	*	1.38	201.2	F	*
		NB	L	1.16	138.4	F	1.24	170.5	F	*	1.15	135.2	F	
		NB	T	0.47	15.9	B	0.48	16.0	B		0.49	16.7	B	
35	8th Ave & W 24th St	EB	T	0.63	34.3	C	0.67	35.8	D		0.67	35.8	D	
		NB	TR	0.69	20.6	C	0.72	21.3	C		0.72	21.3	C	
36	9th Ave & W 30th St	EB	T	0.44	17.1	B	0.52	18.4	B		0.52	18.4	B	
		EB	R	1.46	260.5	F	1.47	262.8	F		1.47	262.8	F	
		SB	LT	1.01	57.1	E	1.02	60.9	E		1.02	60.9	E	
37	9th Ave & W 29th St	WB	L	0.37	23.9	C	0.44	24.4	C		0.40	21.8	C	
		WB	T	1.28	158.2	F	1.46	238.1	F	*	1.33	180.5	F	*
		SB	TR	0.92	34.6	C	0.93	35.2	D		1.01	44.3	D	

Notes:
EB - eastbound, WB - westbound, NB - northbound, SB - southbound
L - left, T - through, R - right, DefL - Analysis considers a defacto left-turn lane on this approach
V/C ratio - volume-to-capacity ratio
Sec/veh - seconds per vehicle
LOS - level of service
* - Denotes an impacted
movement (With-Action LOS E
Analysis is based on the 2000 Highway Capacity Manual methodology (Synchro 12)

Proposed Scheule For Traffic Mitigation Measures

Subject to the final review and approval of DOT, the mitigation measures summarized in **Table 21-4** would be implemented to mitigate the significant adverse traffic impacts resulting from full build-out of the Proposed Actions in 2034. As the development of the Proposed Actions would be expected to occur over an approximately 10-year period, it is possible that some of the significant adverse traffic impacts could occur prior to full build-out in 2034.

Based on the anticipated construction schedule shown in Chapter 19, "Construction," incremental vehicle trips associated with traffic generated by projected development sites could potentially result in significant adverse traffic impacts beginning in the fourth quarter of 2027 when completed incremental development on four projected development sites would result in a net increase of 715 dwelling units and 92,468 gsf of local retail space. This level of new development would generate more than the *CEQR Technical Manual* analysis threshold of 50 peak hour vehicle trips in all peak periods. It should be noted that the potential for the conversion of existing nonresidential floor area to residential use was conservatively not considered as the specific location of the area modeled for residential conversions is not known, and therefore, site-specific construction projections cannot be made. At this earlier time, implementation of some or all of the mitigation measures developed for full build-out of the Proposed Actions in 2034 would be considered by DOT at impacted intersections, likely focusing on those corridors where project-generated traffic would be most concentrated, such as along Sixth and Seventh Avenues.

Effects Of Traffic Mitigation On Parking Conditions

As discussed above, the proposed traffic mitigation plan would incorporate a number of modifications to curbside parking regulations. As shown in **Table 21-4**, new restrictions would be implemented along the west curb of 8th Avenue near the cross streets of West 28th and 29th Streets. New "no standing anytime" restrictions in these areas would displace a total of approximately two on-street parking spaces.

As discussed in Chapter 13, "Transportation," the Proposed Actions would generate a peak net parking demand of approximately 1,274 spaces in the weekday overnight period and 1,319 spaces in the Saturday overnight period. With the proposed traffic mitigation, the displacement would increase the demand by up to approximately two spaces during each of these periods. As discussed in Chapter 13, "Transportation," the Affected Area is located within Parking Zone 1 and the inability of a proposed project or the surrounding area to accommodate future parking demands would be considered a parking shortfall, but would generally not be considered significant under *CEQR Technical Manual* guidance due to the magnitude of available alternative modes of transportation, As such, given that the Affected Area is well served by alternate modes of transportation, any potential parking shortfall would not be considered significant as a result of these traffic mitigation measures.

Pedestrians

As discussed in Chapter 13, "Transportation," the results of the analyses of pedestrian conditions show that demand from the Proposed Actions would significantly adversely impact

19 sidewalks, three corners, and six crosswalks in one or more peak hours under the With Action Condition (see **Table 21-9**).

A significant adverse pedestrian impact is considered mitigated if measures implemented return the anticipated conditions to an acceptable level, following the same criteria used in determining impacts. Standard mitigation for projected significant adverse pedestrian impacts can include providing additional signal green time or new signal phases; widening crosswalks; relocating or removing street furniture or other impediments to pedestrian flow; providing curb extensions, neck-downs, or lane reductions to reduce pedestrian crossing distance; and sidewalk widening. Discussed below are recommended mitigation measures to address the Proposed Actions' significant adverse pedestrian impacts. The mitigation measures generally consist of the relocation/removal of impediments to sidewalk flow along with crosswalk widening. Implementation of the recommended pedestrian improvements is subject to review and approval by DOT. If DOT determines that an identified pedestrian improvement is infeasible, alternative and equivalent measures will be explored. Absent the identification and implementation of additional feasible mitigation measures that would mitigate the pedestrian impacts to the greatest extent practicable, the Proposed Actions would result in unmitigated significant adverse pedestrian impacts.

Table 21-9: Summary of Significant Pedestrian Impacts

Corridor/Intersection	Impacted Element		Peak Hour			
			AM	MD	PM	SAT
W 30th St between 5 Ave & Broadway	S7	South Sidewalk	X		X	X
W 36th St between 5 Ave & 6 Ave	S11	South Sidewalk			X	
W 35th St between 5 Ave & 6 Ave	S12	North Sidewalk	X	X	X	X
6 Ave between W 34th St & W 35th St	S13	East Sidewalk				X
6 Ave between W 33rd St & W 34th St	S16	West Sidewalk				X
6 Ave between W 30th St & W 31st St	S18	East Sidewalk	X		X	X
6 Ave between W 30th St & W 31st St	S19	West Sidewalk	X		X	X
W 31st St between 6 Ave & 7 Ave	S20	South Sidewalk	X	X	X	X
6 Ave between W 31st St & W 32nd St	S21	West Sidewalk				X
6 Ave between W 28th St & W 29th St	S26	West Sidewalk			X	
6 Ave between W 29th St & W 30th St	S28	West Sidewalk			X	X
6 Ave between W 27th St & W 28th St	S33	West Sidewalk			X	
6 Ave between W 25th St & W 26th St	S34	East Sidewalk			X	X
W 30th St between 6 Ave & 7 Ave	S46	South Sidewalk	X	X	X	X
7 Ave between W 29th St & W 30th St	S47	West Sidewalk			X	
7 Ave between W 28th St & W 29th St	S49	East Sidewalk			X	
Broadway between W 31st St & W 32nd St	S56	East Sidewalk	X	X	X	X
W 29th St between 5 Ave & Broadway	S59	North Sidewalk			X	
W 28th St between 6 Ave & Broadway	S62	South Sidewalk	X	X	X	X
6 Ave at W 34th St	X10	East Crosswalk				X
6 Ave at W 31st St	X11	West Crosswalk			X	X
6 Ave at W 30th St	X13	West Crosswalk			X	
6 Ave at W 29th St	X16	West Crosswalk			X	
6 Ave at W 24th St	X26	North Crosswalk	X	X	X	X
7 Ave at W 29th St	X31	West Crosswalk			X	
6 Ave at W 33rd St	C034	Northwest Corner				X
6 Ave at W 32nd St	C035	Northeast Corner			X	
7 Ave at W 31st St	C076	Southwest Corner			X	

Sidewalks

Of the 63 sidewalks analyzed, 19 are expected to be significantly adversely impacted by incremental demand from the Proposed Actions in one or more peak hours. **Table 21-10** shows the recommended mitigation measures to address these impacts and their effectiveness. As shown in **Table 21-10**, with implementation of the proposed mitigation measures, the Proposed Actions' significant adverse impacts to three, two, seven, and six sidewalks would be mitigated during the weekday AM, midday and PM, and Saturday peak hours, respectively. Practicable mitigation measures could not be identified for significant adverse impacts at five, three, nine, and seven sidewalks during the same peak hours, and these impacts would therefore remain unmitigated. In the absence of the application of any mitigation measure or disapproval of a particular mitigation measure from applicable City agency, an impact would remain unmitigated.

Table 21-10: Action-With-Mitigation Sidewalk Conditions

Sidewalk		No-Action			With-Action			Action-with-Mitigation			Mitigation Measures
		Effective Width (ft)	Average Pedestrian Space (ft^2/ped)	LOS	Effective Width (ft)	Average Pedestrian Space (ft^2/ped)	LOS	Effective Width (ft)	Average Pedestrian Space (ft^2/ped)	LOS	
Weekday AM Peak Hour											
S7	South sidewalk along W 38 St between 5 Ave and 6 Ave	1.5	21.0	E	1.5	18.3	E *	2.5	18.3	E *	- Unmitigatable.
S12	North sidewalk along W 35 St between 5 Ave and 6 Ave	2.0	14.6	E	2.0	11.9	E *	2.5	15.8	E	- Reduce width of outdoor dining area by 0.5 ft.
S18	East sidewalk along 6 Ave btw W 30 St & W 31 St	3.0	34.0	D	3.0	29.7	D *	3.5	35.0	D	- Remove store sign.
S19	West sidewalk along 6 Ave btw W 30 St & W 31 St	3.5	13.9	E	3.5	12.7	E *	3.5	12.7	E *	- Unmitigatable.
S20	South sidewalk along W 31 St between 6 Ave and 7 Ave	2.0	19.1	E	2.0	16.7	E *	2.0	16.7	E *	- Unmitigatable.
S46	South sidewalk along W 30 St between 6 Ave and 7 Ave	1.5	42.1	C	1.5	25.8	D *	7.0	125.5	B	- Restripe authorized vehicle parking spaces from angled parking to parallel parking.
S56	East sidewalk along Broadway between W 31 St and W 32 St	4.0	31.8	D	4.0	27.4	D *	4.0	27.4	D *	- Unmitigatable.
S62	South sidewalk along W 28 St between 6 Ave and Broadway	2.5	23.7	D	2.5	18.7	E *	2.5	18.7	E *	- Unmitigatable.
Weekday MD Peak Hour											
S12	North sidewalk along W 35 St between 5 Ave and 6 Ave	2.0	18.2	E	2.0	15.1	E *	2.5	19.7	E	- Reduce width of outdoor dining area by 0.5 ft.
S20	South sidewalk along W 31 St between 6 Ave and 7 Ave	2.0	22.8	E	2.0	20.0	E *	2.0	20.0	E *	- Unmitigatable.
S46	South sidewalk along W 30 St between 6 Ave and 7 Ave	1.5	32.5	D	1.5	22.4	E *	7.0	110.4	B	- Restripe authorized vehicle parking spaces from angled parking to parallel parking.
S56	East sidewalk along Broadway between W 31 St and W 32 St	4.0	30.3	D	4.0	27.2	D *	4.0	27.2	D *	- Unmitigatable.
S62	South sidewalk along W 28 St between 6 Ave and Broadway	2.5	26.9	D	2.5	22.4	E *	2.5	22.4	E *	- Unmitigatable.

Note:

* denotes a significant adverse impact based on *CEQR Technical Manual* criteria

Table 21-10 (cont'd): Action-With-Mitigation Sidewalk Conditions

Sidewalk		No-Action			With-Action			Action-with-Mitigation			
		Effective Width (ft)	Average Pedestrian Space (ft^2/ped)	LOS	Effective Width (ft)	Average Pedestrian Space (ft^2/ped)	LOS	Effective Width (ft)	Average Pedestrian Space (ft^2/ped)	LOS	Mitigation Measures
Weekday PM Peak Hour											
S7	South sidewalk along W 38 St between 5 Ave and 6 Ave	1.5	19.3	E	1.5	16.2	E *	2.5	28.8	D	- Unmitigatable.
S11	South sidewalk along W 36 St between 5 Ave and 6 Ave	2.5	27.9	D	2.5	24.9	D *	3.5	35.6	D	- Relocate store sign.
S12	North sidewalk along W 35 St between 5 Ave and 6 Ave	2.0	8.3	F	2.0	6.6	F *	2.5	9.7	F	- Reduce width of outdoor dining area by 0.5 ft.
S18	East sidewalk along 6 Ave btw W 30 St & W 31 St	3.0	26.5	D	3.0	23.1	D *	3.5	27.4	D	- Remove store sign.
S19	West sidewalk along 6 Ave btw W 30 St & W 31 St	3.5	11.3	E	3.5	10.1	F *	3.5	10.1	F *	- Unmitigatable.
S20	South sidewalk along W 31 St between 6 Ave and 7 Ave	2.0	12.5	E	2.0	10.6	F *	2.0	10.6	F *	- Unmitigatable.
S26	West sidewalk along 6 Ave btw W 28 St & W 29 St	5.0	37.5	D	5.0	30.3	D *	5.0	30.3	D *	- Unmitigatable.
S28	West sidewalk along 6 Ave btw W 29 St & W 30 St	4.0	28.1	D	4.0	23.6	D *	5.0	30.1	D	- Reduce width of outdoor dining area by 1 ft.
S33	West sidewalk along 6 Ave btw W 27 St & W 28 St	5.0	33.6	D	5.0	27.5	D *	5.0	27.5	D *	- Unmitigatable.
S34	East sidewalk along 6 Ave btw W 25 St & W 26 St	3.5	35.6	D	3.5	28.2	D *	6.0	49.6	C	- Remove vestibule.
S46	South sidewalk along W 30 St between 6 Ave and 7 Ave	1.5	22.8	E	1.5	14.3	E *	7.0	75.1	C	- Restripe authorized vehicle parking spaces from angled parking to parallel parking.
S47	West sidewalk along 7 Ave btw W 29 St & W 30 St	4.5	23.5	D	4.5	21.1	E *	5.0	23.8	D	- Reduce width of outdoor dining area by 0.5 ft.
S49	East sidewalk along 7 Ave btw W 28 St & W 29 St	5.0	36.9	D	5.0	31.3	D *	5.0	31.3	D *	- Unmitigatable.
S56	East sidewalk along Broadway between W 31 St and W 32 St	4.0	19.1	E	4.0	17.0	E *	4.0	17.0	E *	- Unmitigatable.
S59	North sidewalk along W 29 St between 5 Ave and Broadway	3.0	37.0	D	3.0	24.8	D *	3.0	24.8	D *	- Unmitigatable.
S62	South sidewalk along W 28 St between 6 Ave and Broadway	2.5	20.3	E	2.5	15.6	E *	2.5	15.6	E *	- Unmitigatable.
Saturday Peak Hour											
S7	South sidewalk along W 38 St between 5 Ave and 6 Ave	1.5	47.5	C	1.5	28.0	D *	2.5	47.8	C	- Unmitigatable.
S12	North sidewalk along W 35 St between 5 Ave and 6 Ave	2.0	17.9	E	2.0	12.8	E *	2.5	16.9	E	- Reduce width of outdoor dining area by 0.5 ft.
S13	East sidewalk along 6 Ave btw W 34 St & W 35 St	5.5	35.0	D	5.5	30.2	D *	5.5	30.2	D *	- Unmitigatable.
S16	West sidewalk along 6 Ave btw W 33 St & W 34 St	5.0	16.2	E	5.0	14.4	E *	5.0	14.4	E *	- Unmitigatable.
S18	East sidewalk along 6 Ave btw W 30 St & W 31 St	3.0	36.5	D	3.0	26.6	D *	3.5	31.3	D *	- Remove store sign.
S19	West sidewalk along 6 Ave btw W 30 St & W 31 St	3.5	19.4	E	3.5	16.1	E *	3.5	16.1	E *	- Unmitigatable.
S20	South sidewalk along W 31 St between 6 Ave and 7 Ave	2.0	23.6	D	2.0	17.2	E *	2.0	17.2	E *	- Unmitigatable.
S21	West sidewalk along 6 Ave btw W 31 St & W 32 St	7.5	35.8	D	7.5	30.9	D *	8.5	35.3	D	- Relocate store sign.
S28	West sidewalk along 6 Ave btw W 29 St & W 30 St	4.0	36.1	D	4.0	27.6	D *	5.0	34.9	D	- Reduce width of outdoor dining area by 1 ft.
S34	East sidewalk along 6 Ave btw W 25 St & W 26 St	3.5	43.9	C	3.5	30.7	D *	6.0	53.8	C	- Remove vestibule.
S46	South sidewalk along W 30 St between 6 Ave and 7 Ave	1.5	55.3	C	1.5	20.8	E *	7.0	103.1	B	- Restripe authorized vehicle parking spaces from angled parking to parallel parking.
S56	East sidewalk along Broadway between W 31 St and W 32 St	4.0	33.2	D	4.0	27.5	D *	4.0	27.5	D *	- Unmitigatable.
S62	South sidewalk along W 28 St between 6 Ave and Broadway	2.5	35.0	D	2.5	21.1	E *	2.5	21.1	E *	- Unmitigatable.

Note:
* denotes a significant adverse impact based on *CEQR Technical Manual* criteria

Crosswalks

Of the 41 crosswalks analyzed, six are expected to be significantly adversely impacted by incremental demand from the Proposed Actions in one or more peak hours. **Table 21-11** shows the recommended mitigation measures to address these impacts and their effectiveness. As shown in **Table 21-11**, with implementation of the proposed mitigation measures, all of the impacts would be fully mitigated. In the absence of the application of any mitigation measure or disapproval of a particular mitigation measure from applicable City agency, an impact would remain unmitigated.

Table 21-11: Action-With-Mitigation Crosswalk Conditions

Intersection	Crosswalk		No-Action Width (ft)	No-Action Average Pedestrian Space (ft^2/ped)	No-Action LOS	With-Action Width (ft)	With-Action Average Pedestrian Space (ft^2/ped)	With-Action LOS	Action-with-Mitigation Width (ft)	Action-with-Mitigation Average Pedestrian Space (ft^2/ped)	Action-with-Mitigation LOS	Mitigation Measures
Weekday AM Peak Hour												
6 Ave & W 24 St	X26	West	15.0	11.1	E	15.0	9.5	E *	18.5	12.1	E	- Widen crosswalk by 3.5 ft.
Weekday Midday Peak Hour												
6 Ave & W 24 St	X26	West	15.0	15.6	D	15.0	12.9	E *	18.5	16.3	D	- Widen crosswalk by 3.5 ft.
Weekday PM Peak Hour												
6 Ave & W 31 St	X11	West	16.0	13.9	E	16.0	12.4	E *	18.0	14.2	E	- Widen crosswalk by 2 ft.
6 Ave & W 30 St	X13	West	14.5	19.8	D	14.5	17.1	D *	16.0	18.0	D	- Widen crosswalk by 1.5 ft.
6 Ave & W 29 St	X16	West	15.0	22.9	D	15.0	18.4	D *	16.0	19.8	D	- Widen crosswalk by 1 ft.
6 Ave & W 24 St	X26	West	15.0	7.4	F	15.0	6.5	F *	18.5	8.3	E	- Widen crosswalk by 3.5 ft.
7 Ave & W 29 St	X31	West	18.0	21.9	D	18.0	18.9	D *	18.5	19.5	D	- Widen crosswalk by 0.5 ft.
Saturday Peak Hour												
6 Ave & W 34 St	X10	East	16.0	19.7	D	16.0	17.6	D *	16.5	18.2	D	- Widen crosswalk by 0.5 ft.
6 Ave & W 31 St	X11	West	16.0	18.8	D	16.0	15.2	D *	18.0	17.4	D	- Widen crosswalk by 2 ft.
6 Ave & W 24 St	X26	West	15.0	13.8	E	15.0	10.0	E *	18.5	12.7	E	- Widen crosswalk by 3.5 ft.

Notes:

Action-with-mitigation takes into account traffic mititgation measures.

* denotes a significant adverse impact based on *CEQR Technical Manual* criteria

Corners

Of the 116 corners analyzed, three are expected to be significantly adversely impacted by incremental demand from the Proposed Actions (two in the weekday PM peak hour and one in the Saturday peak hour). As shown in **Table 21-12**, the Proposed Actions' significant adverse impacts to one corner would be fully mitigated in the weekday PM peak hour. Two corners in the weekday PM and/or Saturday peak hours would remain unmitigated. In the absence of the application of any mitigation measure or disapproval of a particular mitigation measure from applicable City agency, an impact would remain unmitigated.

Table 21-12: Action-With-Mitigation Corner Conditions

Intersection	Corner		No-Action Average Pedestrian Space (ft^2/ped)	No-Action LOS	With-Action Average Pedestrian Space (ft^2/ped)	With-Action LOS	Action-with-Mitigation Average Pedestrian Space (ft^2/ped)	Action-with-Mitigation LOS	Mitigation Measures
Weekday PM Peak Hour									
6 Ave & W 32 St	C035	NE	14.9	E	13.4	E *	22.3	D	- Relocate garbage can.
7 Ave & W 31 St	C076	SW	9.4	E	8.4	E *	8.4	E *	- Unmitigatable.
Saturday Peak Hour									
6 Ave & W 33 St	C034	NW	16.1	D	14.5	E *	14.5	E *	- Unmitigatable.

Notes:

Action-with-mitigation takes into account traffic mititgation measures.

* denotes a significant adverse impact based on *CEQR Technical Manual* criteria

Effects of Traffic Mitigation on Pedestrian Conditions

Proposed traffic mitigation measures (discussed previously) would potentially affect pedestrian conditions at a total of 27 analyzed crosswalks and 59 analyzed corner areas at 18 intersections in one or more peak hours. The recommended traffic mitigation measures

at each of these locations would consist of signal timing adjustments of one to three seconds. As shown in **Tables 20-13** and **20-14**, with implementation of these proposed signal timing adjustments, all affected analyzed crosswalks and corner areas would continue to operate at a non-adverse impact LOS D or better in all analyzed peak hours with the exception of the east crosswalk at Broadway and West 29th Street during the weekday PM peak hour. Sufficient pedestrian crossing time would also continue to be provided at all crosswalks.

Table 21-13: Action-With-Traffic Mitigation Crosswalk Conditions

Intersection	Crosswalk		With-Action Condition								Action-with-Mitigation								Proposed Traffic Mitigation
			Average Pedestrian Space (ft²/ped)				Level of Service				Average Pedestrian Space (ft²/ped)				Level of Service				
			AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	
5 Ave & E 30 St	X1	South	85.7	86.3	57.9	78.7	A	A	B	A	99.2	93.1	64.9	88.1	A	A	A	A	- Transfer 4s of green time from SB to EB in AM. - Transfer 2s of green time from SB to EB in midday. - Transfer 3s of green time from SB to EB in PM and Saturday.
	X2	West	92.5	105.5	54.4	69.9	A	A	B	A	83.4	100.3	50.2	64.7	A	A	B	A	
5 Ave & E 29 St	X3	West	72.7	80.3	41.0	47.3	A	A	B	B	72.7	80.3	44.7	47.3	A	A	B	B	- Transfer 3s of green time from WB to SB in PM.
6 Ave & W 36 St	X8	East	17.2	17.0	15.1	22.5	D	D	D	D	17.9	17.0	15.1	22.5	D	D	D	D	- Transfer 1s of green time from EBT to NB in AM.
6 Ave & W 30 St	X12	East	45.7	32.2	29.9	35.2	B	C	C	C	42.6	32.2	27.8	30.2	B	C	C	C	- Transfer 2s of green time from NB to EB in AM and PM. - Transfer 4s of green time from NB to EB in Saturday.
	X13	West	22.0	23.5	17.1	36.3	D	D	D *	C	23.1	26.2	18.0	35.2	D	C	D	C	
6 Ave & W 29 St	X14	East	32.8	31.8	25.2	25.0	C	C	C	C	34.6	34.7	25.2	25.0	C	C	C	C	- Transfer 2s of green time from NB to WB in AM. - Transfer 3s of green time from NB to WB in midday.
	X15	South	57.2	71.5	41.7	57.9	B	A	B	B	51.5	62.1	41.7	57.9	B	A	B	B	
	X16	West	33.3	31.3	18.4	20.7	C	C	D *	D	38.1	37.3	19.8	22.3	C	C	D	D	
6 Ave & W 28 St	X17	East	48.5	39.2	30.9	32.8	B	C	C	C	47.1	39.2	29.0	30.5	B	C	C	C	- Transfer 1s of green time from NB to EB in AM. - Transfer 2s of green time from NB to EB in PM and Saturday.
	X18	West	45.4	46.2	34.7	32.9	B	B	C	C	44.1	46.2	32.7	30.9	B	B	C	C	
6 Ave & W 26 St	X21	East	39.0	40.0	28.8	30.5	C	C	C	C	37.7	38.6	28.8	29.5	C	C	C	C	- Transfer 1s of green time from NB to EB in AM, midday, and Saturday.
	X22	West	42.9	44.2	30.0	30.6	B	B	C	C	41.6	42.9	30.0	29.7	B	B	C	C	
6 Ave & W 25 St	X23	East	42.2	46.4	46.2	39.0	B	B	B	C	42.2	46.4	43.6	39.0	B	B	B	C	- Transfer 2s of green time from NB to EB in PM.
	X24	West	45.7	40.2	22.9	31.3	B	B	D	C	45.7	40.2	21.4	31.3	B	B	D	C	
6 Ave & W 23 St	X27	North	29.7	43.9	31.0	35.5	C	B	C	C	29.7	41.9	29.5	32.2	C	B	C	C	- Transfer 1s of green time from EB/WB to NB in midday and PM. - Transfer 2s of green time from EB/WB to NB in Saturday.
	X28	East	37.4	33.8	38.2	38.6	C	C	C	C	37.4	35.0	39.6	41.3	C	C	C	B	
	X29	West	69.1	45.9	28.1	46.0	A	B	C	B	69.1	47.5	29.1	49.0	A	B	C	B	
7 Ave & W 29 St	X30	East	29.1	25.5	25.6	35.4	C	C	C	C	29.1	25.5	25.6	32.1	C	C	C	C	- Transfer 3s of green time from SB to WB in Saturday.
	X31	West	35.3	27.5	18.9	34.8	C	C	D *	C	36.4	28.3	19.5	32.0	C	C	D	C	
Broadway & W 30 St	X35	East	54.5	51.7	36.2	42.5	B	B	C	B	53.0	51.7	36.2	42.5	B	B	C	B	- Transfer 1s of green time from SB to EB in AM.
	X36	South	73.3	65.4	62.4	64.2	A	A	A	A	75.9	65.4	62.4	64.2	A	A	A	A	
	X37	West	59.0	75.4	41.4	49.6	B	A	B	B	57.4	75.4	41.4	49.6	B	A	B	B	
Broadway & W 29 St	X38	North	70.3	94.8	46.5	59.0	A	A	B	A	70.3	94.8	51.9	65.3	A	A	B	A	- Transfer 3s of green time from SB to WB in PM and Saturday.
	X39	East	28.1	24.3	19.5	22.9	C	C	D	D	28.1	24.3	17.8	20.9	C	C	D *	D	
	X40	South	54.9	63.6	36.4	41.3	B	A	C	B	54.9	63.6	40.8	45.9	B	A	B	B	
	X41	West	70.8	80.9	37.0	46.1	A	A	C	B	70.8	80.9	33.8	41.9	A	A	C	B	

Notes:

Action-with-mitigation takes into account the crosswalk widening for pedestrian mitigation in all peak hours.

* denotes a significant adverse impact based on *CEQR Technical Manual* criteria.

Table 21-14: Action-With-Traffic Mitigation Corner Conditions

Intersection	Corner		With-Action Condition: Average Pedestrian Space (ft²/ped)				With-Action Condition: Level of Service				Action-with-Mitigation: Average Pedestrian Space (ft²/ped)				Action-with-Mitigation: Level of Service				Proposed Traffic Mitigation
			AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	
5 Ave & E 30 St	C005	NE	173.9	120.3	105.1	142.7	A	A	A	A	173.5	119.9	104.8	142.5	A	A	A	A	- Transfer 4s of green time from SB to EB in AM. - Transfer 2s of green time from SB to EB in midday. - Transfer 3s of green time from SB to EB in PM and Saturday.
	C006	SE	171.0	109.7	96.6	148.9	A	A	A	A	170.6	109.6	96.5	148.6	A	A	A	A	
	C007	SW	172.3	190.4	106.0	148.2	A	A	A	A	172.1	190.4	105.7	148.0	A	A	A	A	
	C008	NW	171.7	176.0	100.7	140.4	A	A	A	A	171.6	175.9	100.3	139.9	A	A	A	A	
5 Ave & E 29 St	C009	SE	190.8	176.6	132.4	184.4	A	A	A	A	190.8	176.6	132.5	184.4	A	A	A	A	- Transfer 3s of green time from WB to SB in PM.
	C010	SW	88.5	96.4	51.2	58.1	A	A	B	B	88.5	96.4	51.7	58.1	A	A	B	B	
	C011	NW	129.3	149.4	80.1	99.2	A	A	A	A	129.3	149.4	80.6	99.2	A	A	A	A	
6 Ave & W 37 St	C024	SE	67.0	79.5	67.3	73.9	A	A	A	A	67.0	79.4	67.3	73.9	A	A	A	A	- Transfer 1s of green time from NB to WB in midday and PM.
6 Ave & W 36 St	C025	NE	82.6	68.6	61.7	100.4	A	A	A	A	82.7	68.6	61.7	100.4	A	A	A	A	- Transfer 1s of green time from EBT to NB in AM.
	C026	SE	29.3	32.8	23.9	42.3	C	C	D	B	29.6	32.8	23.9	42.3	C	C	D	B	
6 Ave & W 30 St	C043	NE	82.9	77.0	59.9	87.3	A	A	B	A	82.8	77.0	59.7	87.0	A	A	B	A	- Transfer 2s of green time from NB to EB in AM and PM. - Transfer 4s of green time from NB to EB in Saturday.
	C044	SE	108.1	88.4	69.2	88.6	A	A	A	A	107.8	88.4	69.1	88.0	A	A	A	A	
	C045	SW	65.8	70.9	48.3	88.5	A	A	B	A	65.7	70.9	48.0	88.0	A	A	B	A	
	C046	NW	43.7	53.8	37.8	91.2	B	B	C	A	43.3	53.8	37.5	90.6	B	B	C	A	
6 Ave & W 29 St	C047	NE	84.6	94.4	62.1	70.4	A	A	A	A	85.0	95.1	62.1	70.4	A	A	A	A	- Transfer 2s of green time from NB to WB in AM. - Transfer 3s of green time from NB to WB in midday.
	C048	SE	78.5	81.4	56.4	61.7	A	A	B	A	78.7	81.6	56.4	61.7	A	A	B	A	
	C049	SW	73.9	78.8	43.5	59.1	A	A	B	B	74.0	79.2	43.5	59.1	A	A	B	B	
	C050	NW	82.7	93.0	51.8	63.7	A	A	B	A	83.0	93.6	51.8	63.7	A	A	B	A	
6 Ave & W 28 St	C051	NE	102.5	101.2	71.9	85.0	A	A	A	A	102.4	101.2	71.8	84.8	A	A	A	A	- Transfer 1s of green time from NB to EB in AM. - Transfer 2s of green time from NB to EB in PM and Saturday.
	C052	SE	73.2	80.9	52.7	61.0	A	A	B	A	73.2	80.9	52.6	60.9	A	A	B	A	
	C053	SW	66.0	79.0	57.4	57.9	A	A	B	B	66.0	79.0	57.3	57.8	A	A	B	B	
	C054	NW	64.5	75.2	49.8	54.7	A	A	B	B	64.5	75.2	49.7	54.5	A	A	B	B	
6 Ave & W 26 St	C059	NE	78.9	86.8	62.0	67.4	A	A	A	A	78.7	86.6	62.0	67.2	A	A	A	A	- Transfer 1s of green time from NB to EB in AM, midday, and Saturday.
	C060	SE	109.7	109.0	74.4	79.3	A	A	A	A	109.6	108.9	74.4	79.2	A	A	A	A	
	C061	SW	78.4	76.2	56.3	58.9	A	A	B	B	78.2	76.1	56.3	58.8	A	A	B	B	
	C062	NW	84.7	92.3	63.9	69.4	A	A	A	A	84.6	92.1	63.9	69.3	A	A	A	A	
6 Ave & W 25 St	C063	NE	118.7	127.4	106.4	93.6	A	A	A	A	118.7	127.4	106.2	93.6	A	A	A	A	- Transfer 2s of green time from NB to EB in PM.
	C064	SE	77.1	81.3	74.4	70.0	A	A	A	A	77.1	81.3	74.2	70.0	A	A	A	A	
	C065	SW	84.6	79.1	55.0	59.0	A	A	B	B	84.6	79.1	54.7	59.0	A	A	B	B	
	C066	NW	98.7	81.3	51.3	65.9	A	A	B	A	98.7	81.3	50.9	65.9	A	A	B	A	
6 Ave & W 23 St	C071	NE	92.7	114.8	99.1	109.9	A	A	A	A	92.7	114.8	99.0	109.7	A	A	A	A	- Transfer 1s of green time from EB/WB to NB in midday and PM. - Transfer 2s of green time from EB/WB to NB in Saturday.
	C072	SE	99.8	89.3	67.0	88.6	A	A	A	A	99.8	89.2	66.8	88.4	A	A	A	A	
	C073	SW	120.2	95.4	54.2	100.8	A	A	B	A	120.2	95.4	54.2	100.7	A	A	B	A	
	C074	NW	104.3	113.1	69.1	101.8	A	A	A	A	104.3	113.1	69.1	101.8	A	A	A	A	
7 Ave & W 30 St	C077	NE	58.6	50.0	48.5	80.0	B	B	B	A	59.0	50.4	48.5	80.0	B	B	B	A	- Transfer 3s of green time from SB to WB in AM and midday.
	C078	SE	64.9	50.6	47.9	72.4	A	B	B	A	65.2	51.1	47.9	72.4	A	B	B	A	
	C079	SW	65.8	48.9	35.8	58.9	A	B	C	B	66.2	49.3	35.8	58.9	A	B	C	B	
	C080	NW	72.2	56.6	45.5	73.0	A	B	B	A	72.5	56.9	45.5	73.0	A	B	B	A	
7 Ave & W 29 St	C081	NE	72.4	62.4	64.1	91.7	A	A	A	A	72.4	62.4	64.1	91.1	A	A	A	A	- Transfer 3s of green time from SB to WB in Saturday.
	C082	SE	66.6	58.7	51.1	74.2	A	B	B	A	66.6	58.7	51.1	73.6	A	B	B	A	
	C083	SW	95.2	72.1	57.3	94.0	A	A	B	A	95.2	72.1	57.3	93.5	A	A	B	A	
	C084	NW	92.4	74.0	64.7	101.8	A	A	A	A	92.4	74.0	64.7	101.2	A	A	A	A	
7 Ave & W 28 St	C085	NE	69.8	57.8	49.9	72.5	A	B	B	A	69.6	57.8	49.9	72.4	A	B	B	A	- Transfer 1s from SB to EB in AM and Saturday.
	C086	SE	96.3	78.3	69.4	103.7	A	A	A	A	96.3	78.3	69.4	103.5	A	A	A	A	
	C087	NW	73.1	89.6	65.0	78.8	A	A	A	A	73.0	89.6	65.0	78.7	A	A	A	A	
7 Ave & W 27 St	C088	NE	78.0	68.1	71.0	125.3	A	A	A	A	78.0	68.1	70.5	125.3	A	A	A	A	- Transfer 2s of green time from SB to EB in PM.
	C089	SE	66.2	50.4	52.5	97.3	A	B	B	A	66.2	50.4	52.1	97.3	A	B	B	A	
7 Ave & W 25 St	C092	NE	100.4	88.0	90.6	112.9	A	A	A	A	100.4	88.0	90.3	112.9	A	A	A	A	-Transfer 2s from SB to WB in PM.
	C093	SE	85.2	83.6	90.7	102.6	A	A	A	A	85.2	83.6	90.5	102.6	A	A	A	A	
7 Ave & W 24 St	C094	NE	85.8	86.0	75.2	88.1	A	A	A	A	85.8	86.0	75.2	88.3	A	A	A	A	- Transfer 2s from EB to SB in Saturday.
	C095	SE	83.9	91.5	74.9	91.1	A	A	A	A	83.9	91.5	74.9	91.2	A	A	A	A	
Broadway & W 30 St	C104	NE	66.5	66.1	45.3	55.1	A	A	B	B	66.3	66.1	45.3	55.1	A	A	B	B	- Transfer 1s of green time from SB to EB in AM.
	C105	SE	46.3	44.3	31.4	37.0	B	B	C	C	46.3	44.3	31.4	37.0	B	B	C	C	
	C106	SW	120.3	130.6	86.2	102.9	A	A	A	A	120.2	130.6	86.2	102.9	A	A	A	A	
	C107	NW	80.3	99.1	58.9	72.1	A	A	B	A	80.3	99.1	58.9	72.1	A	A	B	A	
Broadway & W 29 St	C108	NE	55.5	54.4	31.5	47.0	B	B	C	B	55.5	54.4	31.1	46.5	B	B	C	B	- Transfer 3s of green time from SB to WB in PM and Saturday.
	C109	SE	62.4	58.0	41.8	48.2	A	B	B	B	62.4	58.0	41.5	47.9	A	B	B	B	
	C110	SW	51.4	61.0	28.0	33.0	B	A	C	C	51.4	61.0	27.3	32.6	B	A	C	C	
	C111	NW	80.6	90.0	45.2	52.4	A	A	B	B	80.6	90.0	45.0	52.0	A	A	B	B	

Notes:

* denotes a significant adverse impact based on *CEQR Technical Manual* criteria.

Proposed Schedule for Pedestrian Mitigation Measures

Subject to DOT approval, the pedestrian mitigation measures described above would be implemented to mitigate the significant adverse sidewalk and crosswalk impacts resulting from full build-out of the Proposed Actions in 2034. As the development of the Proposed Actions would be expected to occur over an approximately 10-year period, it is possible that the sidewalk, corner, and crosswalk impacts could occur prior to full build-out in 2034.

Based on the anticipated construction schedule shown in Chapter 19, "Construction," 200 or more incremental pedestrian trips generated by the Proposed Actions would potentially occur on the impacted sidewalks, corners, and crosswalks beginning in the first quarter of 2028. It should be noted that the potential for the conversion of existing nonresidential floor area to residential use was conservatively not considered as the specific location of the area modeled for residential conversions is not known, and therefore, site-specific construction projections cannot be made. At this earlier point in time, implementation of the mitigation measures developed for full build-out of the Proposed Actions in 2034 would be considered to address the potential significant adverse pedestrian impacts.

H. Air Quality

As presented in Chapter 14, "Air Quality," air quality impact of exceedance of NAAQS 1-hour NO_2 at Projected Development Site 17 and Potential Development Site G would be mitigated by the requirement of inoperable windows at certain heights of the buildings. Site G would also experience ambient Cadmium concentration higher than NYSDEC DAR-1 annual guideline concentration (AGC). Inoperable window requirement would be mapped to Site G to prevent excessive cancer risk (equivalent to 10 times of AGC) caused by Cadmium. On the other hand, this measure may not eliminate exposure of Cadmium concentrations higher than its AGC, which is considered a significant adverse air quality impact.

Between the DEIS and FEIS, further investigation will be conducted to quantify the emission rate of Cadmium from Ben-Amun Co Inc. Revision to the air quality impact analysis will be conducted if the investigation indicates different Cadmium emission rate compared to what is in the facility's current permit. Based on the analysis of this DEIS, exceedance of AGC for Cadmium at Site G would be an unmitigated impact.

For the area modeled for residential conversions, because of the non-site-specific nature of the conversion model, no specific development sites have been identified among the 1,093,808 gsf RWCDS residential conversion area. Since the air quality analysis has indicated exceedance of NAAQS 1-hour NO_2 and exceedance of NYSDEC DAR-1 annual guideline concentration (AGC) for Cadmium, the possibility of similar air quality impacts to the conversion sites cannot be eliminated.

I. Noise

It is assumed that 1,093,808 gsf of existing nonresidential floor area would convert to residential use over the next decade, but this RWCDS residential conversion model is not site-specific. Due to the non site-specific nature of the 1,093,808 gsf area modeled for residential conversion, a conversion's proximity to mobile sources such as heavily trafficked roadways, rail lines or other rail infrastructure, within the path of aircraft, or near other stationary sources of noise, such as large boiler or generator systems, is not known. However, as ambient noise assessment evidenced that residential development in the Project Area would need to provide up to 33 dBA of window/wall attenuation requirement to meet the acceptable interior noise level, residential conversions in the proposed Midtown South Mixed-Use (MSMX) Districts would achieve the acceptable interior noise goal as any new dwelling units in the proposed Mixed-Use Districts would require minimum of 35 dBA of attenuation per ZR 123-32. On the other hand, while the majority of residential conversion is expected to be within the Mixed-Use Districts, project generated residential conversion is also assumed at portions of MSMX Affected Area in C6-4M Districts that would be outside of the proposed Mixed-Use District. Therefore, as there is no mechanism to ensure adequate noise attenuation measures at project generated residential conversions to occur outside of the proposed Mixed-Use District, the potential for elevated interior noise levels (in the absence of sufficient building attenuation measures) cannot be ruled out, significant adverse noise impacts could occur for the area modeled for residential conversion, and the impact would remain unmitigated.

J. Construction

Transportation

As presented in Chapter 19, "Construction", it is expected that potential significant adverse traffic and pedestrian impacts could occur during construction and that these impacts would be within the range of impacts identified Chapter 13, "Transportation" for the 2034 With-Action conditions. As presented in Chapter 13, "Transportation", the Proposed Actions would result in significant adverse impacts to: a) vehicular traffic at 28 intersections and b) pedestrians at 19 sidewalks, three corners, and six crosswalks. Therefore, there is the potential for significant adverse construction transportation impacts at the same 28 intersections and 19 sidewalks, three corners, and six crosswalks.

The mitigation measures identified above for 2034 operational traffic and pedestrian impacts would likely be similarly effective at mitigating any potential 2028 construction traffic and pedestrian impacts. These mitigation measures would also be subject to DOT review and approval. If DOT determines that an identified improvement is infeasible, and no alternative and equivalent measure is identified, then the impact would be unmitigated and would constitute an unavoidable significant adverse impact.

As indicated above, regardless of any proposed mitigation measures, impacts to one or more lane group(s) would remain unmitigated in one or more peak hours at 11 intersections and at eleven sidewalks and two corners in one or more peak hours in the 2034 With-Action

condition. Consequently, these impacts could also constitute unavoidable significant adverse traffic impacts in the 2028 construction peak as a result of the Proposed Actions (see also Chapter 22, "Unavoidable Adverse Impacts").

Air Quality

As presented in Chapter 19, "Construction," $PM_{2.5}$ would be below its NAAQS for both evaluated scenarios (cumulative impacts from projected development sites 46 & 49 and 51 & 52) but it would exceed the annual and 24-hour *de minimis* threshold. The exceedance of the de minimis threshold would be considered a significant adverse construction air quality impact. Between the DEIS and FEIS, additional review and evaluation will be performed to determine whether the identified impacts related to Annual PM2.5 increments will be avoided. This may include use of more refined assumptions in terms of construction equipment usage, and the use of newer construction equipment with lower particulate emissions, as applicable.

At this time, no practicable mitigation measures have been identified. Between the DEIS and FEIS, mitigation measures will be explored. In the event practicable mitigation measure are not identified, this would be an unmitigated impact.

Noise

As presented in Chapter 19, "Construction," approval of the Proposed Actions would result in significant adverse construction noise impacts throughout and adjacent to the Project Area (refer to **Figure 19-3**).

The analysis presented in Chapter 19 was based on a conceptual construction schedule. The conceptual construction schedule conservatively accounts for overlapping construction activities at development sites. The noise analysis results show that the predicted noise levels could exceed the construction noise impact criteria throughout the Affected Area. It is possible that the actual construction may be of less magnitude, or that construction on multiple projected development sites may not overlap, in which case construction noise would be less intense than the analysis predicts.

Construction would be required to follow the NYC Noise Control Code for construction noise control measures. The following proposed mitigation measures beyond the noise controls already identified in Chapter 19, "Construction," may partially mitigate significant adverse impacts at some affected receptors:

- Noise barriers constructed from plywood or other materials at a height of 12 to 16 feet utilized to provide shielding;
- Utilization of isolation pads between the pile driver hammer and piles;
- Acoustical shrouds surrounding the pile driver hammer and piles;
- Electric cranes or cranes with exhaust silencers that have lower noise emission levels; and

- Excavators with exhaust silencers that have lower noise emission levels.

Between publication of the DEIS and FEIS, all possible mitigation measures to address the identified construction noise impacts will be explored. In the event no additional practicable or feasible mitigation measures are determined, the significant adverse construction noise impacts associated with the construction of projected development sites 3, 7, 15, 16, 18, 19, 25, 31, 32, 33, 36, 40, 41, 42, 43, 45, 47, 48, 49, 51, 53, 55, and 62 would be unavoidable.