

A. INTRODUCTION

This chapter analyzes the proposed zoning text amendment to the Grand Central Subdistrict of the Special Midtown District and considers whether future utilization of the proposed zoning text amendment has the potential for additional significant adverse impacts beyond those identified for the proposed One Vanderbilt development. Additional development in the Vanderbilt Corridor that might occur in the foreseeable future pursuant to the proposed special permit provisions is considered below. As described more fully in Chapter 1, “Project Description,” the proposed text amendment would consist of a new special permit for a Grand Central Public Realm Improvement Bonus, modification to the existing Grand Central Subdistrict Landmark Transfer special permit, and modification of the uses permitted in the Vanderbilt Corridor to allow the development, conversion, or enlargement of hotels by a new special permit.

The zoning text amendment would be applicable to the proposed Vanderbilt Corridor, which comprises portions of five blocks between East 42nd and East 47th Streets located along the west side of Vanderbilt Avenue: Block 1277 (the One Vanderbilt site, Lots 20, 27, 46, and 52); Block 1278 (Lot 20); Block 1279 (Lots 23, 24, 25, 28, 45, and 48); Block 1281 (Lot 21), and Block 1282 (Lot 21). There are no specific proposals for redevelopment within the Vanderbilt Corridor besides the proposed One Vanderbilt development, and any future development on the other four blocks that utilizes the proposed Grand Central Public Realm Improvement Bonus, the modified Landmark Transfer special permit, or the special permit for hotel development, conversion, or enlargement would require separate environmental review, since these special permits are discretionary actions by the New York City City Planning Commission (CPC). Nevertheless, this conceptual analysis has been undertaken to evaluate the potential impacts of any redevelopment in addition to the proposed One Vanderbilt development that could reasonably be expected to occur within the proposed Vanderbilt Corridor in 2021 or the foreseeable future (defined as 2033), pursuant to the new special permit provisions under the proposed text amendment. The conceptual analysis provided below assumes that, in addition to the One Vanderbilt site, the Metropolitan Transportation Authority (MTA) site (Block 1279, Lots 23-25 and 48), is redeveloped by 2021, and that, in addition to the One Vanderbilt site and the MTA site, two additional projected development sites in the Vanderbilt Corridor—the 52 Vanderbilt Avenue site (Block 1279, Lot 45) and the Roosevelt Hotel site (Block 1281, Lot 21)—would be redeveloped by 2033.

PRINCIPAL CONCLUSIONS

This conceptual analysis concludes that any redevelopment in addition to the proposed One Vanderbilt development that could reasonably be expected to occur in the Vanderbilt Corridor in 2021 or by 2033 would not result in significant adverse impacts to land use, zoning, and public policy; socioeconomic conditions; urban design and visual resources; hazardous materials; water

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and sewer infrastructure; solid waste; energy; air quality; greenhouse gas emissions; noise; neighborhood character; public health; or construction. Future development that could occur in the Vanderbilt Corridor would be anticipated to result in additional significant adverse impacts to historic resources and transportation, specifically traffic and pedestrians.

In regard to land use, zoning, and public policy, the proposed One Vanderbilt development and the anticipated redevelopment of the three additional projected development sites within the Vanderbilt Corridor (the MTA site, the 52 Vanderbilt Avenue site, and the Roosevelt Hotel) would be compatible with the existing and proposed high-density commercial uses that are centered on the strong public transit resources in the East Midtown area and would contribute to the City's goal of maximizing modern commercial development near Grand Central Terminal.

In regard to open space, the passive open space ratio within the study area would decrease by approximately 2.1 percent in the 2021 With-Action condition and 1.8 percent in the 2033 With-Action condition as compared with the No-Action condition, and would remain at 0.04 acres of passive open space per 1,000 non-residents, below the City's goal of 0.15 acres of passive open space per 1,000 non-residents.

Given the lack of open space resources in the East Midtown area and the low open space ratio within the study area, the decrease in the open space ratio of approximately 1.8 percent in the Vanderbilt Corridor may be considered a significant adverse impact. The redevelopment of the three additional projected development sites within the Vanderbilt Corridor pursuant to the proposed actions would be subject to separate environmental review processes, which would determine the full impact of the projects on open space. Similar to the One Vanderbilt development, public open space resources such as a pedestrian plaza may be provided as a part of these three additional projected development sites, which may preclude a significant adverse impact. Additionally, other forms of support for area open space, such as funding for improvements to other resources as part of the improvements to the public realm, could be employed as partial or full mitigation if a significant adverse open space impact was identified.

In regard to historic and cultural resources, redevelopment of the One Vanderbilt site in either the No-Action or the With-Action condition (2021 and 2033) would remove the Vanderbilt Avenue Building at 51 East 42nd Street, which has been determined eligible for listing on the State and National Registers of Historic Places (S/NR); redevelopment of the Roosevelt Hotel site in either the No-Action or the With-Action condition (2033) would remove the New York City Landmark (NYCL)-eligible and S/NR-eligible Roosevelt Hotel; and conversion of the Vanderbilt Concourse Building at 52 Vanderbilt Avenue in the With-Action condition (2033) could result in a new significant adverse impact to that architectural resource if the exterior were to be adversely altered. To avoid inadvertent construction-period damage to Grand Central Terminal (NYCL, S/NR, National Historic Landmark) during construction of the proposed One Vanderbilt development, 317 Madison would develop and implement a construction protection plan (CPP). CPPs would also be prepared and implemented for the Pershing Square Building (NYCL-eligible, S/NR-eligible) and the Socony-Mobil Building (NYCL, S/NR-eligible) to avoid inadvertent damage from the construction of adjacent off-site transit-related improvements. Significant adverse impacts and potential mitigation measures would be identified during the environmental review for the redevelopment of the MTA site, 52 Vanderbilt Avenue site, and Roosevelt Hotel site. Pursuant to such environmental review, it is expected that a CPP would be developed and implemented to avoid adverse construction-related impacts to architectural resources within 90 feet of the three additional projected development sites. In addition, while it is not expected that the development of a 30 floor area ratio (FAR)

building on the MTA site or the Roosevelt Hotel site would result in significant adverse contextual impacts on nearby architectural resources, as the architectural resources in the study area largely comprise mid- to high-rise commercial buildings, this determination can only be made conclusively when a specific development proposal is assessed and specific bulk and massing details are available.

To reduce the potential for human or environmental exposure to known or unexpectedly encountered contamination during and following construction of the proposed One Vanderbilt development, an (E) Designation for hazardous materials will be assigned to the One Vanderbilt site that will be administered by the New York City Mayor's Office of Environmental Remediation (OER).

Based on the findings of the existing sampling, Remedial Action Plans (RAPs) and associated Construction Health and Safety Plans (CHASPs) would be prepared for implementation during construction of the One Vanderbilt site. In addition, during demolition, regulatory requirements pertaining to ACMs, LBP, and PCBs would be followed. Since the hazardous materials analysis identified the potential for subsurface contamination at Blocks 1279 and 1281, prior to any redevelopment of these blocks under the proposed actions, the assessment for potential impacts would be similar to that required for the proposed One Vanderbilt development, and it is therefore likely that (E) designations would be placed on these blocks. With these above-described measures, the proposed One Vanderbilt development and the anticipated redevelopment of the three additional projected development sites pursuant to the proposed actions is not expected to result in any significant adverse impacts related to hazardous materials.

In regard to transportation, the proposed One Vanderbilt development, together with the projected redevelopment of the MTA site, in 2021 would result in significant adverse impacts at 24 traffic intersections and 24 pedestrian elements, including 2 impacted sidewalks, 9 impacted corner reservoirs, and 13 impacted crosswalks. Some of these impacts could be mitigated with the same or similar improvement measures identified in Chapter 18, "Mitigation." Others, including those identified to be unmitigatable for the development of the One Vanderbilt site in 2021, would similarly be unmitigatable under the 2021 With-Action condition. Specifically for pedestrians, mitigation measures that would be subject to approval of the New York City Department of Transportation (DOT) have been identified for all 11 impacted locations. For the 2021 conceptual analysis, impacts at all but one location could be addressed with the same or similar mitigation measures. Impacts at this one remaining location in the context of the 2021 conceptual analysis would be the subject of a project-specific environmental review, but could potentially be unmitigated. At the time of implementation, if some or all of these pedestrian mitigation measures are deemed infeasible and no alternative mitigation measures can be identified; those impacts would be unmitigated.

In the 2033 conceptual With-Action condition, the proposed One Vanderbilt development together with the projected redevelopment of the three additional projected development sites within the Vanderbilt Corridor pursuant to the proposed actions, would result in significant adverse impacts at 34 traffic intersections; eight subway station elements, including four impacted escalators and four impacted stairways; and 37 pedestrian elements, including 6 impacted sidewalks, 10 impacted corner reservoirs, and 21 impacted crosswalks. Some of these impacts could be mitigated with the same or similar improvement measures identified. Others, including those identified to be unmitigatable for the development of the One Vanderbilt site in 2021, would similarly be unmitigatable under the 2033 conceptual With-Action condition.

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Specifically, for the 17 intersections identified to incur significant adverse traffic impacts under the 2021 With-Action condition, the number of unmitigated impacts is expected to increase from four to nine intersections in this 2033 conceptual analysis. For pedestrians, mitigation measures that would be subject to approval of DOT have been identified for all 11 impacted locations. For the 2033 conceptual analysis, impacts at all but one location could be addressed with the same or similar mitigation measures. Impacts at this one remaining location in the context of the 2033 conceptual analysis could potentially be unmitigated. At the time of implementation, if some or all of these pedestrian mitigation measures are deemed infeasible and no alternative mitigation measures can be identified; those impacts would be unmitigated.

As development programs for Block 1279 and Block 1281 become more defined, they will be studied as part of separate environmental reviews, for which more details on the predicted impacts and associated mitigation measures would be determined. It should also be noted that the potential future development of these two blocks would likely use the proposed Grand Central Public Realm Improvement Bonus special permit, the Landmark transfer special permit, or a combination of the two. Use of the Grand Central Public Realm Bonus would require the developer to provide funding for additional transit-related improvements, which could alleviate/eliminate some or all of the station impacts identified above. Regarding parking, future parking demand in 2033 with the proposed One Vanderbilt development, together with the projected redevelopment of the three additional projected development sites, is expected to result in a parking shortfall of 345 spaces or 14 percent over capacity during the weekday midday peak utilization period for the off-street parking facilities within ¼ mile of the Vanderbilt Corridor. However, as stated in the *CEQR Technical Manual*, a parking shortfall in Manhattan and other CBD neighborhoods does not constitute a significant adverse parking impact, due to the magnitude of available alternative modes of transportation.

In regard to air quality, the mobile source analysis shows that there would be no potential for significant adverse impacts on air quality from the vehicle trips that would be generated by the proposed One Vanderbilt development, together with the redevelopment of the three additional projected development sites in the Vanderbilt Corridor pursuant to the proposed actions in both the 2033 and 2021 analysis years. Each special permit would be subject to a separate discretionary approval process, with project-specific analysis that would address the potential effects of stationary source emissions on air quality. Air quality (E) designations for stationary sources (such as fossil-fuel fired heating and hot water systems) may be required for the three additional projected development sites, as with the One Vanderbilt site, to ensure that there are no significant adverse air quality impacts from these sources.

Building energy use and vehicle use associated with development within the Vanderbilt Corridor under the proposed actions would result in approximately 71 thousand metric tons of carbon dioxide equivalent (CO₂e) emissions per year. This assumes, conservatively, that all development would be completed by 2021; completing any of the development in later years would result in lower annual emissions, since vehicle efficiency improves over time. The development that could occur on the three additional projected development sites within the Vanderbilt Corridor pursuant to the proposed actions—as is the case with the One Vanderbilt development via the special permit requirements—would be required to commit to building energy efficiency, exceeding the current building code energy requirements, ensuring consistency with the efficient buildings goal defined in the *CEQR Technical Manual* as part of the City's GHG reduction goal and would support the other GHG goals by virtue of their nature and location: proximity to public transportation, reliance on natural gas, commitment to construction air quality controls, and the fact that as a matter of course, construction in New

York City uses recycled steel and includes cement replacements. Therefore, the proposed actions would be consistent with the City's emissions reduction goals.

In 2021 and 2033, comparing the No-Action condition with the With-Action condition, the maximum increase in $L_{eq(1)}$ noise levels would be 1.2 dBA at all of the mobile source noise analysis receptors. Changes of this magnitude would be imperceptible. Based on this analysis, up to 40 dB(A) of building attenuation could likely be required for the three additional projected development sites to achieve interior noise levels of 45 dBA or lower for residential and hotel uses, and 50 dBA or lower for commercial uses. To ensure the implementation of any attenuation requirements identified through the environmental reviews of future developments on the three additional projected development sites, noise (E) designations may be required, as with the One Vanderbilt site, to ensure that there are no significant adverse noise impacts on the three additional projected development sites.

There are no specific proposals to redevelop the four blocks of the proposed Vanderbilt Corridor north of the One Vanderbilt Site, but any future development would require separate land use application processes (including environmental reviews) that could take more than two years to complete. Although the construction at the MTA site is assumed to be complete by 2021, it would have a shorter duration and would likely generate less intense construction activity, as that development would be smaller than the One Vanderbilt development based on a site of roughly half the size. Further, that construction could not begin until its land use approvals are complete, whereas One Vanderbilt construction is expected to begin in 2015. These circumstances reduce the likelihood that peak construction activities for the proposed One Vanderbilt development and the development at the MTA site would overlap or conflict with each other. It is also unlikely that peak construction activities for the two additional projected development sites could overlap with those for the proposed One Vanderbilt development. In addition, much like the construction of the proposed One Vanderbilt development, two of the three additional projected development sites could undergo a comparable level of construction activities as-of-right under the 2033 No-Action condition, and the third site would essentially be a renovation of an existing building. It is anticipated that, although unlikely to actually occur, the cumulative effects of simultaneous construction of the three additional projected development sites and the proposed One Vanderbilt development, compared with the effects of the 2033 No-Action condition, would not be substantial. Overall, any specific construction-related impacts that could result from applications for the proposed zoning text amendment and special permit would be assessed and disclosed under and pursuant to separate environmental reviews for the individual development sites in the Vanderbilt Corridor.

Since the conceptual analysis did not identify the potential for the proposed One Vanderbilt development or the projected additional development in the Vanderbilt Corridor to result in significant unmitigated adverse impacts to air quality, water quality, hazardous materials, or noise, an analysis of public health was not warranted for this conceptual analysis. A more detailed analysis of public health, if necessary, would be performed pursuant to the separate environmental review of any special permit applications for future developments within the Vanderbilt Corridor.

B. ANALYSIS FRAMEWORK

PROPOSED VANDERBILT CORRIDOR: EXISTING CONDITIONS

The One Vanderbilt site is the portion of Block 1277 that is bounded by Madison and Vanderbilt Avenues and East 42nd and East 43rd Streets—the southernmost block of the Vanderbilt

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Corridor. It has a lot area of 43,313 square feet and is occupied by four low- to mid-rise buildings (between 7 and 22 stories) that are each more than 80 years old. In total, the four existing buildings on the development site contain 772,162 gsf of commercial space. The buildings all contain retail space on the ground floor and office space on the upper floors. In addition, within the footprint of the building on Lot 27 (51 East 42nd Street), there is a stairway connection between the street and the mezzanine level of the 42nd Street Shuttle station, subject to an easement benefitting New York City Transit (NYCT); this stairway is accessed on East 42nd Street through the main entrance to the building.

Block 1278 is located between East 43rd and East 44th Streets and has a site area of 43,313 square feet. The block is developed with one building, the Bank of America Plaza at 335 Madison Avenue. Originally built in 1913 as a hotel, the building was thoroughly renovated, reclad, and converted into an office building in 1981–1983. The building is 28 stories and approximately 874,734 gross square feet (gsf); thus, the site is currently developed at a FAR of approximately 20. The Bank of America Plaza contains ground-floor retail on Madison Avenue.

Block 1279 is located between East 44th and East 45th Streets and has a site area of 43,261 square feet. The block contains three 13- to 20-story buildings that serve as the headquarters of the MTA; a ventilation building for MTA’s under-construction East Side Access project; a 20-story office building (52 Vanderbilt Avenue); and the Yale Club at 50 Vanderbilt Avenue (Lot 28), a 22-story building containing clubhouse facilities and guestroom lodgings. The five commercial buildings were constructed between 1916 and 1926 and each contains ground-floor retail. In total, the five commercial buildings and the vent building contain approximately 700,346 gsf. Recently, MTA issued a Request for Proposals (RFP) for the redevelopment of its property at 341-347 Madison Avenue (Lots 23, 24, and 48), including the excess development rights from the ventilation building at 47 East 44th Street (Lot 25). The portion of the block that is subject to the RFP is developed at approximately 14.5 FAR.

Block 1281 is located between East 45th and East 46th Streets and has a site area of 43,313 square feet. The block is developed with the Roosevelt Hotel, which was built in 1922–1924. This 19-story, 598,248 gsf hotel contains 1,015 rooms and ground-floor retail along each street frontage; thus, the site is developed at approximately 13.8 FAR.

Block 1282 is located between East 46th and East 47th Streets and has a site area of 43,313 square feet. The block is developed with the 383 Madison Avenue building, which opened in 2002. Occupied by J.P. Morgan Chase & Company, this 47-story office building contains approximately 1,174,988 gsf of commercial space; thus, this site is developed at approximately 21.6 FAR. There is ground-floor retail along the Madison Avenue frontage.

ANALYSIS FRAMEWORK

There are no specific proposals to redevelop the four of the five blocks of the proposed Vanderbilt Corridor located north of the One Vanderbilt site, but it is conceivable that one or more of these sites would be redeveloped in the foreseeable future using the new Grand Central Public Realm Improvement Bonus, the modified Landmark Transfer special permit, or a combination of those special permits.

This conceptual analysis assumes that only a portion of Block 1279 (the MTA site: Lots 23-25 and 48; and the 52 Vanderbilt Avenue site: Lot 45) and Block 1281 in the Vanderbilt Corridor would be redeveloped in the foreseeable future (which together with the One Vanderbilt site compose the “projected development sites” for this conceptual analysis). Those two blocks were

analyzed as Projected Development Sites in the 2013 *East Midtown Rezoning and Related Actions Final EIS (FEIS)*. Blocks 1278 and 1282 would not be assumed to be redeveloped in the foreseeable future, as those two blocks contain recently renovated/constructed commercial buildings. In order to evaluate the potential cumulative effects of the proposed actions, this conceptual analysis considers the proposed development on the One Vanderbilt site and the projected developments on Block 1279 and Block 1281.

NO-ACTION CONDITION (2021)

In the 2021 No-Action condition, it is assumed that the buildings on the MTA-owned portions of Block 1279 (the MTA site) would be in office and retail use, which is similar to their use under existing conditions. It is assumed that the One Vanderbilt site could be redeveloped with a commercial building under the existing C5-3 and Special Midtown District regulations, which permit commercial development up to a maximum FAR of 15.0. Therefore, the One Vanderbilt site could be redeveloped with approximately 811,034 gsf of space (649,695 zsf), including 636,312 gsf of office space, 83,648 gsf of retail space, and 91,074 gsf of mechanical space. Further, a replacement stairway would be constructed that connects to the mezzanine level of the 42nd Street Shuttle station in accordance with the existing NYCT easement. (See Chapter 1, “Project Description” for additional details of the One Vanderbilt No-Action development). It is assumed that the Roosevelt Hotel site (Block 1281), the 52 Vanderbilt Avenue site (Block 1279, Lot 45), and the Yale Club at 50 Vanderbilt Avenue (Block 1279, Lot 28) would remain as in existing conditions.

WITH-ACTION CONDITION (2021)

In the 2021 With-Action Condition, it is anticipated that the MTA site would be redeveloped with a 30 FAR building, based on current MTA planning. Therefore, the 25,051-square-foot site could be redeveloped with 751,530 zsf of commercial space (939,412 gsf, assuming a standard gross factor of 1.25). The One Vanderbilt site would be developed as described in Chapter 1, “Project Description.” The Roosevelt Hotel site, the 52 Vanderbilt Avenue site, and Yale Club would remain as in existing conditions.

NO-ACTION CONDITION (2033)

In the 2033 No-Action condition, it is conservatively assumed that the MTA-owned portions of Block 1279 (the MTA site), Block 1281 (the Roosevelt Hotel site), and the One Vanderbilt site in the Vanderbilt Corridor could each be redeveloped with a commercial building under the existing C5-3 and Special Midtown District regulations, which permit commercial development up to a maximum FAR of 15.0. Therefore, the One Vanderbilt site would be redeveloped as described above. The 25,051-square-foot MTA site could be redeveloped with approximately 375,765 zoning square feet (zsf) of commercial space (469,706 gsf, assuming a standard gross factor of 1.25 to account for mechanical space), and the 43,313-square-foot Roosevelt Hotel site could be redeveloped with 649,695 zsf of commercial space (812,119 gsf, assuming a standard gross factor of 1.25 to account for mechanical space). In addition, it is assumed that the 52 Vanderbilt Avenue site (Block 1279, Lot 45) and the Yale Club at 50 Vanderbilt Avenue (Block 1279, Lot 28) would remain as in existing conditions.

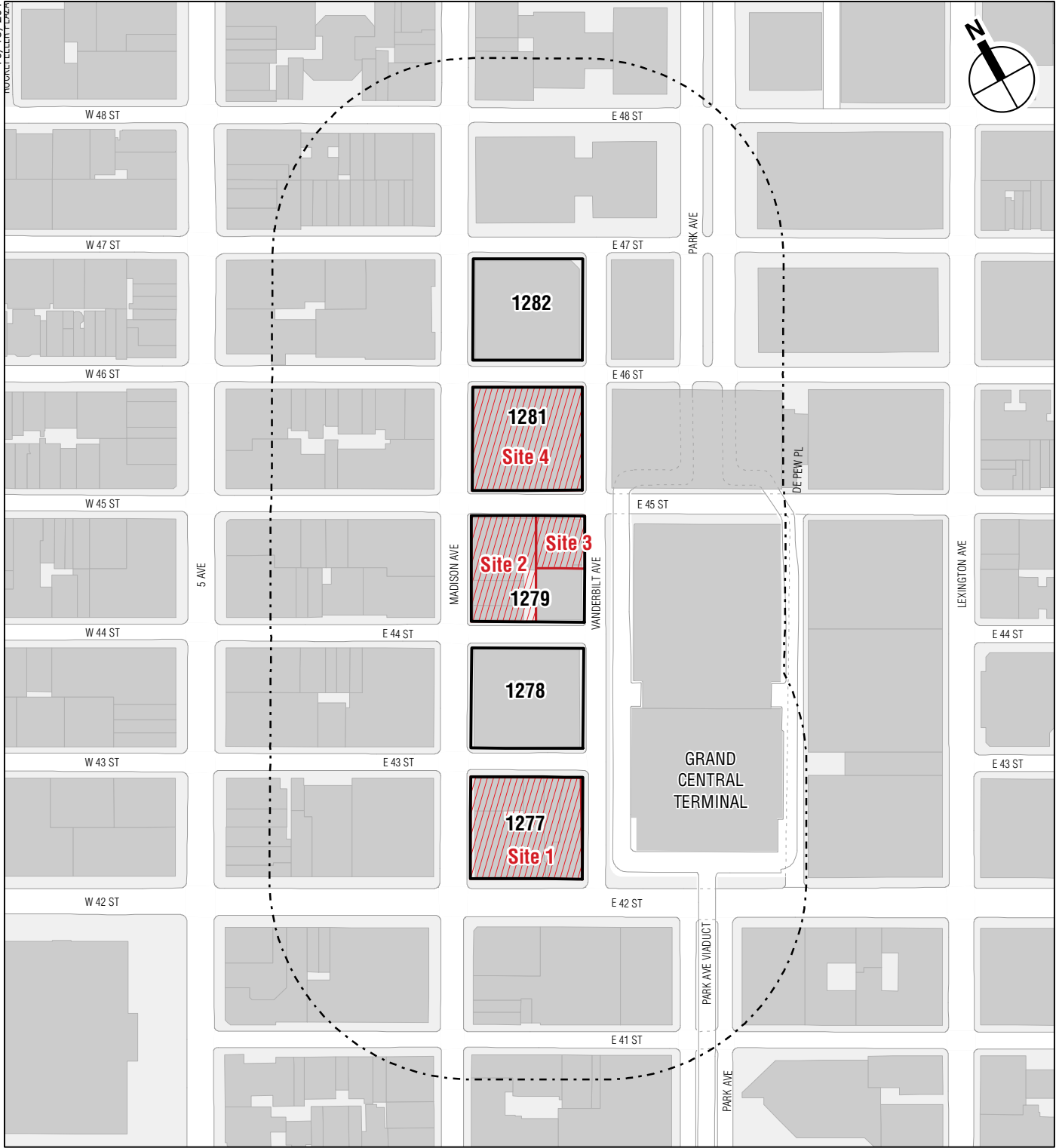
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WITH-ACTION CONDITION (2033)

In the With-Action condition, along with the One Vanderbilt site, it is assumed that the MTA site and the Roosevelt Hotel site in the Vanderbilt Corridor could each be redeveloped with a commercial building of 30 FAR, utilizing the new public realm improvement bonus, the increased development rights transfer from landmarks, or a combination of the two. Therefore, the MTA site could be redeveloped as described above, and the Roosevelt Hotel site could be redeveloped with 1,299,390 zsf of commercial space (1,624,237 gsf, assuming a standard gross factor of 1.25). In addition, it is assumed that the 162,330-square-foot building on the 52 Vanderbilt Avenue site would remain at its current built form but would utilize the special permit for hotel use to allow the conversion of the structure from predominantly office use. See **Table 19-1** for a summary of projected development by site. The One Vanderbilt site would be developed as described in Chapter 1, “Project Description.”

**Table 19-1
Projected Development Sites for Conceptual Analysis**

Map No. ¹	Projected Development Site	Site Area	Existing Conditions (gsf)	No-Action Condition	With-Action Condition	Increment, No Action-With Action
2021						
1	One Vanderbilt site (Block 1277, Lots 20, 27, 46, and 52)	43,313	Office: 583,569 Retail: 45,978	Office: 636,312 Retail: 83,648	Office: 1,079,000 Retail: 53,000 Restaurant: 27,000 Trading floor: 246,000 Observation deck/rooftop amenity space: 55,000	Office: 442,688 Retail: -30,648 Restaurant: 27,000 Trading floor: 246,000 Observation deck/rooftop amenity space: 55,000
2 ²	MTA site (Block 1279, Lots 23-25, 48)	25,051	Office: 352,171 Local Retail: 10,950 Total: 363,121	No change in gsf or use	Office: 914,361 gsf Local Retail: 25,051 gsf Total: 751,530 zsf 939,412 gsf	Office: 562,190 gsf Local Retail: 14,101 gsf Total: 576,291 gsf
3	52 Vanderbilt Avenue site (Block 1279, Lot 45)	9,105	Office: 152,830 Retail: 9,500	No change in gsf or use	No change in gsf or use	No change in gsf or use
4 ³	Roosevelt Hotel site (Block 1281, Lot 21)	43,313	Hotel: 598,248 (1,015 rooms)	No change in gsf or use	No change in gsf or use	No change in gsf or use
2033						
1	One Vanderbilt site (Block 1277, Lots 20, 27, 46, and 52)	43,313	Office: 583,569 Retail: 45,978	Office: 636,312 Retail: 83,648	Office: 1,079,000 Retail: 53,000 Restaurant: 27,000 Trading floor: 246,000 Observation deck/rooftop amenity space: 55,000	Office: 442,688 Retail: -30,648 Restaurant: 27,000 Trading floor: 246,000 Observation deck/rooftop amenity space: 55,000
2	MTA site (Block 1279, Lots 23-25, 48)	25,051	Office: 352,171 Local Retail: 10,950 Total: 363,121	Office: 444,655 gsf Local Retail: 25,051 gsf Total: 375,765 zsf 469,706 gsf	Office: 914,361 gsf Local Retail: 25,051 gsf Total: 751,530 zsf 939,412 gsf	Office: 469,706 gsf Local Retail: 0 gsf Total: 375,765 zsf 469,706 gsf
3	52 Vanderbilt Avenue site (Block 1279, Lot 45)	9,105	Office: 152,830 Retail: 9,500	No change in gsf or use	No change in gsf, conversion to hotel (approx.. 250 rooms)	Office: -162,330 gsf Retail: 0 Hotel: 250 rooms
4	Roosevelt Hotel site (Block 1281, Lot 21)	43,313	Hotel: 598,248 (1,015 rooms)	Office: 768,806 gsf Local Retail: 43,313 gsf Total: 649,695 zsf 812,119 gsf	Office: 1,580,924 gsf Local Retail: 43,313 gsf Total: 1,299,390 zsf 1,624,237 gsf	Office: 812,118 Local Retail: 0 Total: 649,695 zsf 812,118 gsf
Notes:						
1. See Figure 19-1 .						
2. Analyzed as Projected Development Site 7 in the <i>East Midtown Rezoning and Related Actions FEIS</i> , together with 50 and 52 Vanderbilt Avenue (Block 1279, Lots 28 and 45, respectively).						
3. Analyzed as Projected Development Site 9 in the <i>East Midtown Rezoning and Related Actions FEIS</i> .						



-  Proposed Vanderbilt Corridor
-  Vanderbilt Corridor Development Sites
-  Vanderbilt Corridor Study Area Boundary (400-Foot Perimeter)



ANALYSIS YEARS

There are two analysis years for this conceptual analysis: 2021, which is analyzed to consider the potential development of the MTA site in advance of other projected development sites; and 2033, which is slightly more than 20 years out from the analysis year for the proposed One Vanderbilt development and is the same analysis year analyzed in the *East Midtown Rezoning and Related Actions FEIS* (2013). The analysis year in that FEIS was based on long-term projections of the East Midtown area’s potential to capture a proportionate share of the City’s new office development.

STUDY AREA

The study areas for the conceptual analysis vary by technical area and are defined below.

OTHER ASSUMPTIONS

In the absence of specific proposals for redevelopment on the blocks affected by the proposed actions, this chapter can provide only a generic assessment of potential environmental impacts. For some analysis areas (e.g., direct business displacement, shadows, urban design), full analysis at a level consistent with the methodologies for the *CEQR Technical Manual* will only be possible at the time that a site-specific application for special permit(s) is made, when specific bulk and massing details are available, particularly as any such special permit application would likely include bulk modifications along with the request for additional floor area. Each such special permit would be subject to a separate discretionary approval, and any environmental impacts associated with such action would be assessed and disclosed pursuant to separate environmental review, with a project-specific analysis beyond what is analyzed in this chapter on a conceptual and generic basis.

C. LAND USE, ZONING, AND PUBLIC POLICY

The land uses of the projected development sites and surrounding area, as well as the zoning and public policies that apply to the Vanderbilt Corridor, are described in detail in Chapter 2, “Land Use, Zoning, and Public Policy.” The descriptions of existing conditions provided below summarize the information provided in that chapter.

The study area for the analysis of land use, zoning, and public policy encompasses the area within a ¼-mile of the Vanderbilt Corridor, and extends roughly from East/West 52nd Street to the north,¹ Third Avenue to the east, East/West 37th Street to the south, and Avenue of the Americas to the west. The Vanderbilt Corridor and a large portion of the study area are located within Community District 5, with a portion of the study area also extending to Community District 6.

Neither the proposed One Vanderbilt development nor the redevelopment of the three additional projected development sites in the Vanderbilt Corridor pursuant to the proposed actions would result in significant adverse impacts with respect to land use, zoning, or public policy.

¹ In Manhattan, streets running east-west are divided into east and west sections by Fifth Avenue.

EXISTING CONDITIONS

LAND USE

The Vanderbilt Corridor is predominantly developed with commercial uses. Two blocks are fully occupied by large modern office towers; the remaining sites within the Vanderbilt Corridor contain older commercial buildings.

The One Vanderbilt site contains four lots that are developed with low- to mid-rise commercial office buildings dating from early 20th century. The office spaces on this site are occupied by a wide variety of businesses typical for the East Midtown area, and all four buildings on the project site contain retail space on the first floor. In addition, within the footprint of the building on Lot 27, there is a stairway connection between the street and the 42nd Street Shuttle platform, the Grand Central subway station, and Grand Central Terminal (at the Shuttle passageway); this stairway is accessed on East 42nd Street through the main entrance to the building on Lot 27. The One Vanderbilt site also includes the portion of Vanderbilt Avenue adjacent to the development site, located between East 42nd Street and East 43rd Street, which is a one-way street (60 feet wide) carrying one lane of northbound traffic.

The block between East 44th and East 45th Streets (Block 1279, Lots 23-25, 28, 45, and 48) contains three 13- to 20-story buildings that serve as the headquarters of the MTA; a ventilation structure for the East Side Access project, currently under construction; a 20-story office building (52 Vanderbilt Avenue); and the Yale Club, a 22-story building containing clubhouse facilities and guestroom lodgings. The site between East 45th and East 46th Streets (Block 1281, Lot 21) contains the Roosevelt Hotel, an 18-story building dating from the 1920s.

The study area includes a portion of the East Midtown neighborhood, one of New York City's premier commercial districts, which is centered on Grand Central Terminal, one of the City's primary transportation hubs, located adjacent to the project site. The study area contains some of the largest office towers in the East Midtown area, as well as a particularly dense retail sector. The area also contains a large number of hotels, including major regional hotels similar to the Roosevelt Hotel, such as the Grand Hyatt New York, as well as smaller historic social clubs with lodging facilities similar to the Yale Club. A portion of the southern study area extends into the Murray Hill neighborhood, a more residential area generally built to a lower density than the East Midtown commercial area. For additional description of the study area, see Chapter 2, "Land Use, Zoning and Public Policy."

ZONING

The Vanderbilt Corridor and the majority of the study area are located within a commercial zoning district (C5-3) that covers a large portion of the East Midtown area. The Vanderbilt Corridor, and the additional blocks within the study area immediately surrounding Grand Central Terminal (between East 48th Street and East 41st Street) are located within the Grand Central Subdistrict of the Special Midtown District. This Subdistrict is intended to facilitate the transfer of development rights from Grand Central Terminal to sites on the surrounding blocks, as well as to enhance the pedestrian environment (both above- and below-grade).

PUBLIC POLICY

The Vanderbilt Corridor is not located within a historic district, and none of the buildings located in the Vanderbilt Corridor are designated landmarks; however, the Grand Central

Subdistrict of the Special Midtown District includes several landmarked buildings. As described in Chapter 2, “Land Use, Zoning, and Public Policy,” landmarked buildings may transfer unused development rights to other receiving sites within the Grand Central Subdistrict, which would generate a floor area bonus for developments on receiving sites, with the approval of CPC.

The Vanderbilt Corridor and a large portion of the study area also are located within the boundaries of the Grand Central Partnership, a Business Improvement District (BID).

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2021)

In the 2021 future without the proposed actions, it is assumed that the One Vanderbilt site could be redeveloped with a commercial building under the existing C5-3 and Special Midtown District regulations, which permit commercial development up to a maximum FAR of 15.0. The One Vanderbilt site would be redeveloped with approximately 811,034 gsf of space (649,695 zsf), including 636,312 gsf of office space, 83,648 gsf of retail space, and 91,074 gsf of mechanical space. The MTA site, the Roosevelt Hotel site, 52 Vanderbilt Avenue, and the Yale Club would remain as in existing conditions.

As discussed in Chapter 2, “Land Use, Zoning, and Public Policy,” following the withdrawal of the proposed East Midtown Rezoning, the East Midtown area is currently undergoing additional consideration as part of a broad planning process that includes area stakeholders. The planning process will likely introduce new zoning regulations applicable to the East Midtown portion of the study area that will be in place by 2021, and may begin to result in additional development within the study area. However, because this process is in its preliminary stages with the specific regulations of the rezoning unknown at this time, and because any future proposal would require its own environmental review, this analysis conservatively assumes that the overall area’s zoning would not change by 2021.

The *East Midtown Rezoning and Related Actions FEIS* identified several projected development sites that are expected to be redeveloped by 2021 absent any changes to the zoning regulations. This includes several sites located within the study area, in particular two sites located on the blocks immediately to the west of the Vanderbilt Corridor (Block 1278, Lots 62-64, and Block 1281, Lots 62, 64, and 65). As analyzed in that FEIS, these No-Action redevelopment projects are expected to be primarily residential buildings with retail space on the ground level. This residential redevelopment will be a significant alteration of the land use character of the East Midtown area; however, as noted above, the area is likely to be the subject of new zoning regulations intended to preserve and strengthen the area’s status as a primarily commercial office district.

No changes to public policies applicable to the Vanderbilt Corridor or the study area such as the New York City Landmarks Law and the Grand Central Partnership BID are presently contemplated to be made by 2021.

THE FUTURE WITH THE PROPOSED ACTIONS (2021)

In the 2021 future with the proposed actions, the proposed floor area bonus mechanisms would become available to sites within the proposed Vanderbilt Corridor. This would allow sites within the Corridor to be redeveloped to a maximum commercial FAR of 30.0, above the base 15.0 FAR maximum or the 21.6 FAR maximum for sites that use the existing landmark development right transfer special permit. By 2021 the One Vanderbilt site and one of the Vanderbilt Corridor projected development sites—the MTA site—are expected to be redeveloped with 30.0 FAR

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buildings utilizing the new public realm improvement bonus, the increased development rights transfer from landmarks, or a combination of the two. The proposed One Vanderbilt development and the projected development of the MTA site would be compatible with the existing and proposed high-density commercial uses that are centered on the strong public transit resources in the East Midtown area, and would contribute to the City's goal of maximizing modern commercial development near Grand Central Terminal. The Roosevelt Hotel site, the 52 Vanderbilt Avenue site, and Yale Club would remain as in existing conditions.

The proposed One Vanderbilt development would utilize both the proposed the Grand Central Public Realm Improvement Bonus special permit and the amended landmark transfer special permit (see Chapter 1, "Project Description"). The projected redevelopment of the MTA site could also use either special permit or a combination of the two. In connection with any use of the Public Realm Improvement Bonus, development on the MTA site could include public amenities such as open public spaces, subsurface pedestrian passageways leading to subway or rail mass transit facilities, public plazas, arcades, or improvements to the right-of way such as streetscape, sidewalk, crosswalk, and median enhancements. The development on the MTA site might also be required to be set back from the lot line on the ground floor to provide widened sidewalks.¹ The Improvement Bonus could also be achieved through the provision of off-site pedestrian and transit improvements. The types of amenities that would be required and the amount of floor area that would be permitted on the MTA site would be determined by CPC and the City Council during a public review process addressing a specific proposal for the site. To the extent the Public Realm Improvement Bonus is used, redevelopment of the MTA site, like the proposed One Vanderbilt development, would contribute to the goal of improving public circulation and transit access in the area around Grand Central Terminal.

Additional assessment of the proposed actions' potential impact on the Vanderbilt Corridor is included below, under the 2033 With-Action condition, as it is also applicable for the 2021 With-Action condition.

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2033)

In the 2033 future without the proposed actions, it is assumed that the One Vanderbilt site, the MTA-owned portions of Block 1279, and Block 1281 in the Vanderbilt Corridor could each be redeveloped with a commercial building under the existing C5-3 and Special Midtown District regulations, which permit commercial development up to a maximum FAR of 15.0. Therefore, the One Vanderbilt site would be redeveloped with approximately 811,034 gsf of space (649,695 zsf), including 636,312 gsf of office space, 83,648 gsf of retail space, and 91,074 gsf of mechanical space; the 25,051-square-foot MTA-owned portion of Block 1279 (Lots 23-25 and 48) could be redeveloped with approximately 375,765 zsf of commercial space (469,706 gsf, assuming a standard gross factor of 1.25 to account for mechanical space); and the 43,313-square-foot Block 1281 could be redeveloped with 649,695 zsf of commercial space (812,119 gsf, assuming a standard gross factor of 1.25 to account for mechanical space). In addition, it is assumed that the other buildings on Block 1279 (52 Vanderbilt Avenue and 50 Vanderbilt Avenue/the Yale Club, Lots 45 and 28, respectively) would remain as in existing conditions.

¹ The Grand Central Public Realm Improvement Bonus special permit requires that developments in the Vanderbilt Corridor provide a minimum 20-foot-wide sidewalk along Madison Avenue and a 15-foot-wide sidewalk along the side streets.

Following the withdrawal of the proposed East Midtown Rezoning, the East Midtown area is currently undergoing additional consideration as part of a broad planning process that includes area stakeholders. The planning process will likely introduce new zoning regulations applicable to the East Midtown portion of the study area that will be in place by 2033, and may result in additional development within the study area. However, because this process is in its preliminary stages and the specific regulations of the Rezoning are not known at this time, and any future proposal would require its own environmental review, this analysis conservatively assumes that the overall area's zoning would not change by 2033.

The *East Midtown Rezoning and Related Actions FEIS* identified several projected development sites that are expected to be redeveloped by 2033 absent any changes to the zoning regulations. This includes several sites located within the study area, in particular two sites located on the blocks immediately to the west of the Vanderbilt Corridor (Block 1278, Lots 62-64, and Block 1281, Lots 62, 64, and 65). As analyzed in that FEIS, these No-Action redevelopment projects are expected to be primarily residential buildings with ground-level retail space. This residential redevelopment will be a significant alteration the land use character of the East Midtown area; however, as noted above, the area is likely to be the subject of new zoning regulations intended to preserve and strengthen the area's status as a primarily commercial office district. No changes to public policies applicable to the Vanderbilt Corridor or the study area such as the New York City Landmarks Law and the Grand Central Partnership BID are presently contemplated to be made by 2033.

THE FUTURE WITH THE PROPOSED ACTIONS (2033)

In the 2033 future with the proposed actions, the proposed floor area bonus mechanisms would become available to sites within the proposed Vanderbilt Corridor. This would allow sites within the Corridor to be redeveloped to a maximum commercial FAR of 30.0, above the base 15.0 FAR maximum or the 21.6 FAR maximum for sites that use the existing landmark development right transfer special permit. The One Vanderbilt site and two of the Vanderbilt Corridor projected development sites—the MTA site and the Roosevelt Hotel site—are expected to be redeveloped with 30.0 FAR buildings utilizing the new public realm improvement bonus, the increased development rights transfer from landmarks, or a combination of the two. The proposed One Vanderbilt development and the projected development sites within the Vanderbilt Corridor would be compatible with the existing and proposed high-density commercial uses that are centered on the strong public transit resources in the East Midtown area, and would contribute to the City's goal of maximizing modern commercial development near Grand Central Terminal.

The redevelopments of the MTA site and the Roosevelt Hotel site would use either the Grand Central Public Realm Improvement Bonus, through which projects in the Vanderbilt Corridor would receive bonus floor area up to a maximum FAR of 30.0 in connection with public space and transit improvements; the landmark transfer special permit, or a combination of these special permits, and may therefore include public amenities such as open public spaces, subsurface pedestrian passageways leading to subway or rail mass transit facilities, public plazas, arcades, or improvements to the right-of way such as streetscape, sidewalk, crosswalk, and median enhancements. As with the MTA site, the development on the Roosevelt Hotel site may be required to be set back from the lot line on the ground floor to provide widened sidewalks along Madison Avenue and the side streets between Madison and Vanderbilt Avenues, as required by the Grand Central Public Realm Improvement Bonus special permit. The Improvement Bonus also could be achieved through the provision of off-site pedestrian and transit improvements.

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The types of amenities that would be required and the amount of floor area that would be permitted on the MTA site would be determined by CPC and the City Council during a public review process addressing a specific proposal for the site. In this way, the redevelopment of the MTA and Roosevelt Hotel sites, like the proposed One Vanderbilt development, would contribute to the goal of improving public circulation and transit access in the area around Grand Central Terminal.

The proposed DCP actions would only apply to the Vanderbilt Corridor; therefore, the proposed actions would not facilitate any other new development in any other part of the study area. Although additional redevelopment may occur within the study area by 2033 as a result of the regulations introduced by a revised East Midtown Rezoning plan, the specific regulations of the Rezoning are not known at this time and thus future development attributable to the Rezoning cannot be determined. Nonetheless, the study area is expected to remain a predominantly commercial area in the East Midtown portion of the study area with a larger residential component in the Murray Hill area. The proposed actions would not alter the underlying zoning in the Vanderbilt Corridor or within the study area, which would remain predominantly a mix of high-density commercial and residential districts.

The bonus special permit mechanisms introduced by the proposed text amendment would be similar to existing bonus mechanisms within the Special Midtown District and bonus mechanisms proposed for the area in the East Midtown Rezoning. The Grand Central Public Realm Improvement Bonus special permit would support the goal of providing transit and pedestrian improvements for the East Midtown area and around Grand Central Terminal in particular, and the expanded landmark special permit would support the goal of landmark preservation within the Grand Central Subdistrict. Developments on sites within the Vanderbilt Corridor pursuant to the proposed special permit mechanisms would be subject to individual review under the special permit process to ensure that they provide suitable infrastructure improvements and/or meet the requirements for landmark preservation. Developments that surpass 21.6 FAR would be required to conform to the findings in the Grand Central Public Realm Improvement Bonus special permit regarding the ground-floor level, massing, and energy performance to also ensure that developments at these densities present an overall building plan and distribution of bulk appropriate to the surrounding area. In order to meet the special permit findings, any proposed hotel or hotel enlargement in the Vanderbilt Corridor would be required to incorporate services and facilities that would complement the office uses in East Midtown, such as meeting facilities. This special permit process would ensure the development of full-service hotels that would support the overall East Midtown business district.

The proposed actions would not result in any changes to public policies affecting the Vanderbilt Corridor or the study area such as the New York City Landmarks Law or the Grand Central Partnership BID, and any additional development on Vanderbilt Corridor sites anticipated as a result of the proposed actions would be consistent with the applicable public policies. Overall, the proposed actions would not result in any significant adverse impacts to public policies governing the Vanderbilt Corridor or the study area. Furthermore, the proposed actions and the projected development on the Vanderbilt Corridor sites would support PlaNYC's sustainability goals, particularly those relating to transit-oriented development, energy efficiency, and public open space. Overall, the proposed actions would not result in significant adverse impacts to land use, zoning, and public policy.

D. SOCIOECONOMIC CONDITIONS

Neither the 2021 With-Action condition nor the 2033 With-Action condition would result in significant adverse impacts with respect to socioeconomic conditions. The 2021 and 2033 With-Action conditions would not directly displace any residents, and therefore would not result in significant adverse socioeconomic impacts due to direct residential displacement. The 2021 and 2033 With-Action conditions would not introduce a residential population, and therefore would not introduce a trend that could potentially result in indirect residential displacement. The potential for direct business displacement, indirect business displacement, and adverse effects on specific industries for the 2021 and 2033 With-Action conditions is analyzed below.

2021

The One Vanderbilt site would be redeveloped in the 2021 No-Action condition, and therefore there would be no direct business displacement associated with this site (existing businesses on this site would be displaced in the No-Action condition). The MTA site would not be redeveloped in the 2021 No-Action condition. The ground-floor retail space on the MTA site currently includes three clothing/clothing accessories stores, a limited-service eating establishment, and a sporting goods store. While the office space is currently occupied by the MTA, the MTA is in the process of vacating this site. For this analysis, it is assumed that in 2021, the MTA site would be re-tenanted with a similar mix of ground-retail and professional office uses. Assuming full occupancy and a standard employment ratio of one employee per 250 square feet of commercial office space, there would be an estimated 1,409 office workers on the MTA site. In addition, based on ESRI Business Analyst and Manta employment estimates, the ground-floor retail establishments employ approximately 40 workers. As the 2021 With-Action condition would displace more than 100 employees; assessments of direct business displacement and indirect business displacement are necessary.

DIRECT BUSINESS DISPLACEMENT

In the 2021 With-Action condition, the businesses in the 352,171 gsf of office space at the MTA site would be displaced. Although the current tenant (the MTA) is vacating the MTA site, it is assumed that the office space would be re-tenanted with a mix of office tenants in sectors such as: Professional, Scientific, and Technical Services; Finance and Insurance; Real Estate, Rental and Leasing; Administrative, Support, Waste Management, and Remediation Services; and Information. These types of businesses are common in the ¼-mile study area, with 2,470 firms in the Professional, Scientific, and Technical Services sector; 1,703 firms in the Finance and Insurance sector; 571 firms in the Real Estate, Rental and Leasing sector; 998 firms in the Administrative, Support, Waste Management, and Remediation Services sector; and 400 firms in the Information sector.¹

The ¼-mile study area has a well-established commercial market with approximately 41.3 million gsf of commercial office space. The direct business displacement on the MTA site would represent approximately 0.8 percent of the office space square footage in the study area in the No-Action condition. When considering that the office buildings on the MTA site are Class B/Class C office buildings, the displacement on Site 2 would represent 0.6 percent of the Class

¹ ESRI Business Analyst Online, Business Summary Report, 2014.

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B and Class C office space in Midtown Manhattan.¹ Thus, due to the concentration of commercial office uses in the study area, it is expected that the services provided by the displaced office tenants would likely be available to local residents and businesses elsewhere in the study area.

The five retail establishments that would be displaced from the MTA site include three clothing/clothing accessories stores, a sporting goods store, and a limited-service eating establishment. The study area contains a particularly dense retail sector, with ground-floor retail stores located along most building frontages. Fifth and Madison Avenues are particular strong shopping corridors with large national retail chains and high-end apparel stores. Within the ¼-mile study area, there are an estimated 234 clothing and clothing accessories stores; 26 sporting goods, hobby, book, and music stores; and 253 food services and drinking places. The products and services provided by the displaced retail business would continue to be available to local customers elsewhere in the trade area.

The uses that would be directly displaced in the 2021 With-Action condition represent a small portion of the study area employment (approximately 1.4 percent). Also, given the dense concentration of retail and office space in the study area, it is expected that the products and services that would be displaced would likely continue to be available in the study area in the 2021 With-Action condition. It is expected that the potentially displaced businesses would likely be able to find comparable space within the study area or elsewhere within the borough or City. In addition, there are no regulations or publicly adopted plans to preserve, enhance, or otherwise protect retail and office uses. Therefore, the 2021 With-Action condition would not result in significant adverse direct business displacement impacts.

INDIRECT BUSINESS DISPLACEMENT

The 2021 With-Action condition would result in a net increase of 1.00 million gsf of commercial office space, 27,000 gsf of restaurant space, 246,000 gsf of trading floor space, and a 55,000-square-foot observation deck; it would also result in a 16,547 gsf reduction in retail space as compared with the No-Action condition (see “Increment, No Action-With Action” in **Table 19-1**). Though there would be additional commercial development in the Vanderbilt Corridor in the 2021 With-Action condition as compared with the 2021 No-Action condition, East Midtown has a well-established commercial market, largely defined by a wide variety of office space. The incremental office space—approximately 1.00 million gsf—would represent an approximate 2 percent increase over the office space square footage in the study area in the No-Action condition. This would not be considered substantial in an area already characterized by significant commercial development, and would not be enough to alter or accelerate existing economic trends.

While the proposed project would directly displace employment from the MTA site, there would be a net increase in commercial office space. This additional space would introduce workers to the study area, increasing the customer base for existing businesses in the study area.

Therefore, based on *CEQR Technical Manual* guidelines, the 2021 With-Action condition would not result in any significant adverse impacts due to indirect business displacement.

¹ Based on a discussion with the Director of Research at Cushman & Wakefield on February 18, 2015, as of year-end 2014, there was 59.5 million square feet of Class B and Class C office space in Midtown Manhattan.

ADVERSE EFFECTS ON SPECIFIC INDUSTRIES

The 2021 With-Action condition would not result in significant adverse impacts on specific industries. The retail and office tenants that would be directly displaced represent a small portion of the businesses and employment within their industries citywide, and the goods and services provided by these businesses can be found elsewhere in the City. Although these businesses are valuable individually and collectively to the City's economy, the goods and services offered by potentially displaced uses can be found elsewhere within the ¼-mile study area and within the City. Therefore, the 2021 With-Action condition would not affect business conditions in any specific industry within or outside of the study area. Similarly, any potential indirect business displacement that could occur as a result of the 2021 With-Action condition would be limited, and would not be expected to adversely affect conditions within any City industries.

2033

In the 2033 With-Action condition, neither the proposed development of the One Vanderbilt site nor the redevelopment of the three additional projected development sites in the Vanderbilt Corridor pursuant to the proposed zoning text amendment would result in significant adverse impacts with respect to socioeconomic conditions.

DIRECT BUSINESS DISPLACEMENT

In addition to the proposed One Vanderbilt site, three additional projected development sites in the Vanderbilt Corridor would be redeveloped with commercial uses, as described in **Table 19-1**. The proposed One Vanderbilt site and two of these sites—the MTA site and the Roosevelt Hotel site—would also be redeveloped in the 2033 No-Action condition, and therefore there would be no direct business displacement associated with these sites (existing businesses on these sites would be displaced in the 2033 No-Action condition). The third projected development site—the 52 Vanderbilt Avenue site—would not be redeveloped in the 2033 No-Action condition, and its conversion from an office building to a hotel in the 2033 With-Action condition could result in the direct displacement of more than 100 office and retail employees on the site, which is the CEQR threshold warranting assessment of potential impacts due to direct business displacement.

The office-based major tenants at the 52 Vanderbilt Avenue site include businesses in the information; finance and insurance; professional, scientific, and technical; and management of companies and enterprises sectors. The retail businesses include a restaurant and a deli. While all businesses are important to the City's economy, these potentially displaced businesses do not provide products or services that are essential to the local economy, and these types of goods and services would continue to be found within the study area, borough, and City. These businesses also do not serve a user base that is dependent upon their existing location within the study area. None of the businesses are the subject of regulations or publicly adopted plans aimed at preserving, enhancing, or otherwise protecting them in their current location. It is expected that the potentially displaced businesses would likely be able to find comparable space within the study area or elsewhere within the borough or City.

INDIRECT BUSINESS DISPLACEMENT

The redevelopment of the One Vanderbilt site and the three additional projected development sites would result in a more than 2.1 million gsf increase in commercial office space, and an approximately 160,000 gsf increase in hotel use as compared with the 2033 No-Action

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condition. This increment exceeds the 200,000-square-foot threshold for assessment of potential indirect business displacement. Though there would be additional office and hotel development as compared with the 2033 No-Action condition, East Midtown is one of the most sought-after dynamic office markets and central business districts in the New York region—largely defined by a wide variety of office space—and the area also contains a large number of hotels, including both major regional hotels as well as smaller historic social clubs with lodging facilities. The Vanderbilt Corridor includes approximately 3 million gsf of office space, and the ¼-mile study area has approximately 41.3 million gsf of office. The additional office space developed in the Vanderbilt Corridor under the 2033 With-Action condition would not represent enough new economic activity to alter existing economic patterns in the area.

ADVERSE EFFECTS ON SPECIFIC INDUSTRIES

Like the 2021 With-Action condition, the 2033 With-Action condition would not result in significant adverse impacts on specific industries. The goods and services offered by potentially displaced uses can be found elsewhere within the ¼-mile study area and within the City. Also, any potential indirect business displacement that could occur as a result of the 2033 With-Action condition would be limited, and would not be expected to adversely affect conditions within any City industries.

Therefore, the proposed One Vanderbilt development and the redevelopment of the other Vanderbilt Corridor sites—as compared with the 2033 No-Action condition—would not result in any significant adverse impacts due to indirect business displacement.

E. OPEN SPACE

INTRODUCTION

This section assesses the potential cumulative impacts on open space resources of the projected additional development in the Vanderbilt Corridor resulting from the proposed actions in addition to the proposed One Vanderbilt development. The One Vanderbilt site, the MTA site, the 52 Vanderbilt Avenue site, and the Roosevelt Hotel site are all currently developed with commercial buildings. None of the sites contain open space; therefore, redevelopment of the sites would not displace or alter any open space resources, and a direct effects analysis is not warranted. The proposed One Vanderbilt development and redevelopment of the projected development sites would introduce a new non-residential population to the Vanderbilt Corridor that would place added demand on nearby open spaces. Therefore, an indirect effects analysis was performed. The analysis follows the methodology described in Chapter 4, “Open Space,” in accordance with the guidelines of the *CEQR Technical Manual*.

The analysis finds that the proposed One Vanderbilt development and the redevelopment of the three additional projected development sites would result in decreases in the passive open space ratio of approximately 2.1 percent in the 2021 With-Action condition and 1.8 percent in the 2033 With-Action condition, which may be considered significant adverse open space impacts. However, similar to One Vanderbilt, additional open space resources, such as a pedestrian plaza, may be included in the redevelopment of the three additional projected development sites, particularly projects that utilize the proposed Grand Central Public Realm Improvement Bonus. New open space resources may preclude a significant adverse open space impact. Any future development within the Vanderbilt Corridor pursuant to the proposed actions would be subject to individual environmental review, which would determine any open space impacts and potential mitigation measures.

STUDY AREA

As described in Chapter 4, “Open Space,” the *CEQR Technical Manual* recommends using a study area based on a ¼-mile radius for a non-residential open space analysis. The study area for the Vanderbilt Corridor open space analysis includes eight census tracts according to the 2010 U.S. Census (tracts 80, 82, 84, 92, 94, 96, 102, and 104) located partially or wholly within a ¼-mile radius of the Vanderbilt Corridor (see **Figure 19-2**). In addition to the area considered in the open space analysis for the proposed One Vanderbilt development (see Chapter 4, “Open Space” for details), this study area includes the two census tracts (102 and 104) that are bounded by the Avenue of the Americas, East/West 56th Street, Park Avenue, and East/West 49th Street.

EXISTING CONDITIONS

STUDY AREA NON-RESIDENTIAL POPULATION

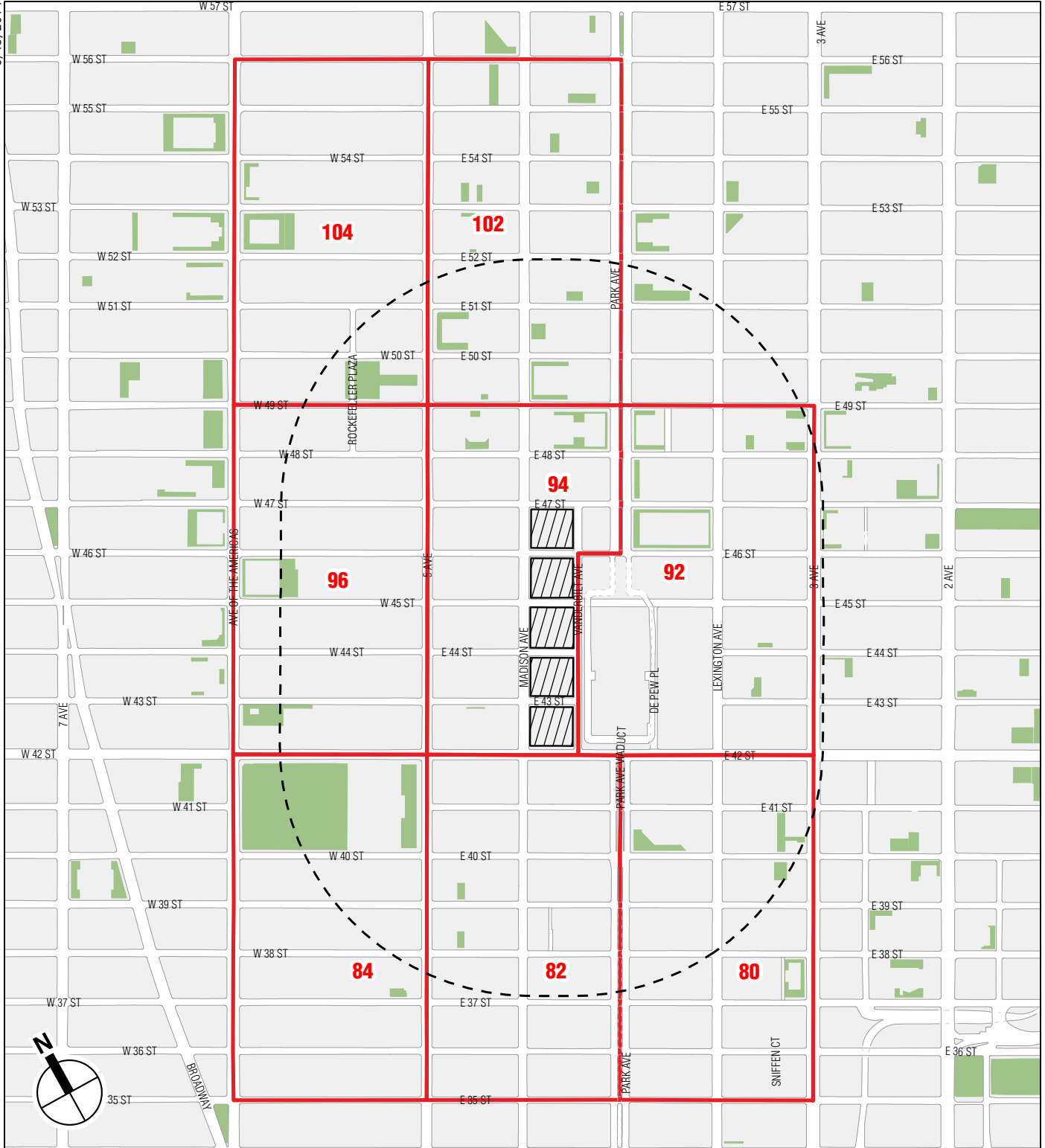
Based on the data reported in the *East Midtown Rezoning and Related Actions FEIS*, the eight census tracts in the open space study area contain a total worker population 327,741, a visitor population of 23,806, and a student population of 8,551, for a total non-residential population of 360,098 (see **Table 19-2**).




Table 19-2
Existing Non-Residential Population within the Study Area

Census Tract	Worker Population	College/Post-Secondary Student Population	Visitor Population	Total Population
80	25,873	40	2,048	27,961
82	44,200	821	2,342	47,363
84	25,195	534	1,216	26,945
92	58,697	0	7,764	66,461
94	48,547	5,202	2,080	55,829
96	41,384	387	2,880	44,651
102	42,310	1,567 ¹	3,208	47,085
104	41,535	0	2,268	43,803
Total	327,741	8,551	23,806	360,098
Notes:				
1. Student enrollment of the Laboratory Institute of Merchandising; see Table 4-2 for enrollment of the remaining educational institutions within the study area.				
Source: <i>East Midtown Rezoning and Related Actions FEIS.</i>				

STUDY AREA OPEN SPACE RESOURCES

As shown in **Table 19-3** and **Figure 19-3**, there are 41 open space resources located within the non-residential study area. This includes the open space resources included in the One Vanderbilt open space analysis, such as Bryant Park (see Chapter 4, “Open Space” for details), and 18 additional resources located within census tracts 102 and 104. Of the additional resources, Rockefeller Plaza (the public area within the Rockefeller Center campus) is the most prominent, with a total of 0.83 acres of open space. Rockefeller Plaza is a particularly popular resource for tourists and features seasonal attractions, including a skating rink during winter. As in the case of the One Vanderbilt open space analysis, several resources are indoor passive recreational spaces that are open to the public during daytime hours, such as a below-grade plaza and seating area located at 650 Fifth Avenue. These open spaces contain a total of 15.57 acres of open space, of which 15.11 acres are passive open space.

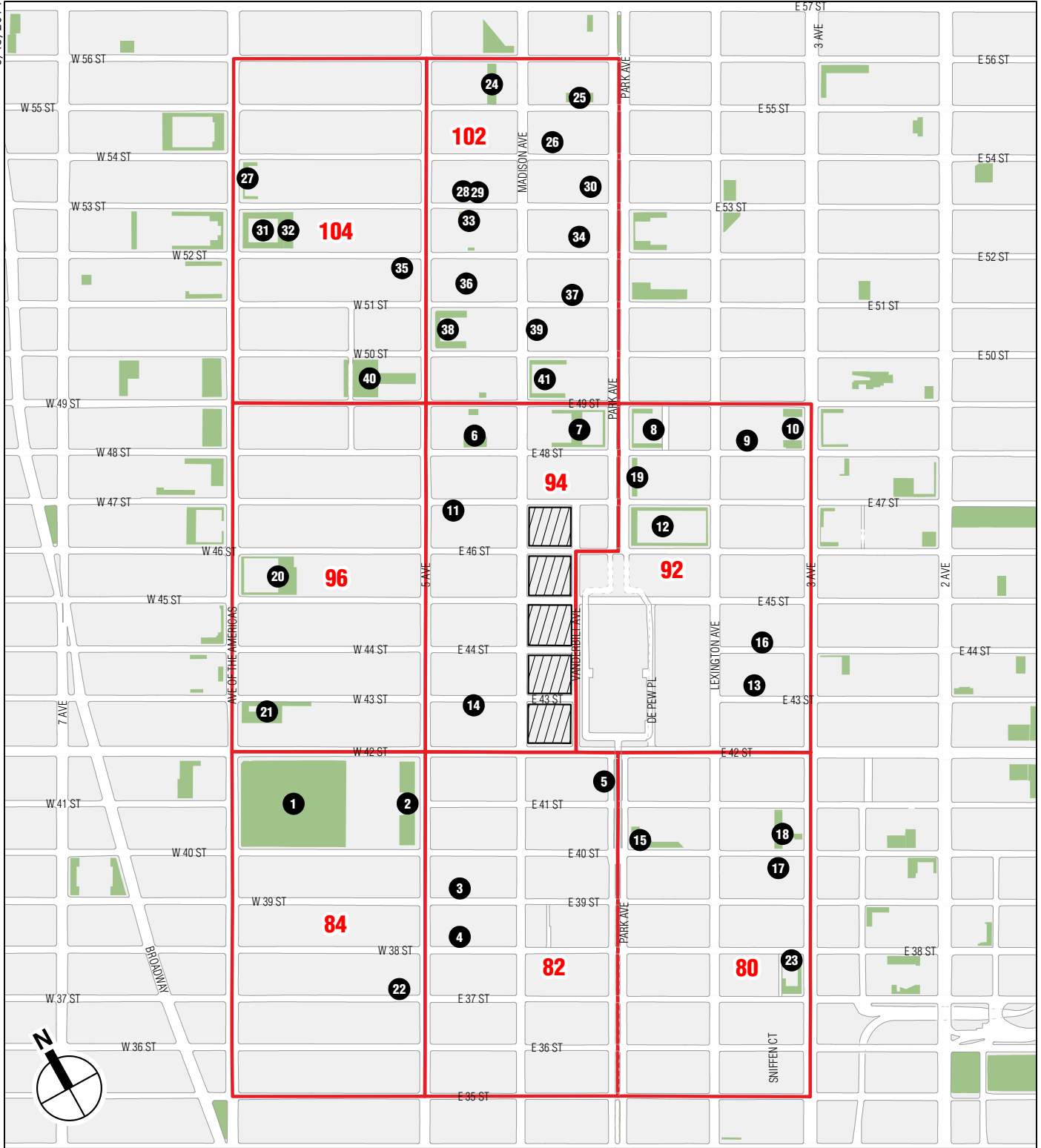





-  Proposed Vanderbilt Corridor
-  1/4-Mile Radius
-  Non-Residential Study Area Census Tracts

0 1,000 FEET



Conceptual Non-Residential
Open Space Study Area
Figure 19-2



-  Proposed Vanderbilt Corridor
-  Non-Residential Study Area Census Tracts
-  Open Space Resource

0 1,000 FEET

Conceptual Open Space Analysis
 -Open Space Resources
Figure 19-3

Table 19-3
Existing Publicly Accessible Open Space Inventory

Map Ref. No. ¹	Name/Location	Owner or Agency	Features	Acres of Active Open Space	Acres of Passive Open Space	Total Acres	Condition/ Utilization
1	Bryant Park	DPR	Tables and chairs, benches, monuments and fountains, landscaping and trees, vendors, game area, carousel, pétanque courts, reading area, temporary ice rink (seasonal)	0.25 ²	4.33	4.58	Excellent/High
2	Stephen A. Schwarzman Building Steps	NYPL/DPR	Plaza/terrace, tables and chairs, seating steps, statues, plantings and trees	0	1.01	1.01	Excellent/Moderate
3	Fifth Avenue Tower	Fifth Ave Condo—B.H.	Plaza, trees and planters, seating wall/ledges	0	0.05	0.05	N/A ³
4	425 Fifth Avenue	425 Fifth Avenue Condominium/ AKAM Associates	Plaza, seating wall/ledges, planters and trees	0	0.09	0.09	N/A ³
5	Sculpture Court at Phillip Morris International	120 Park Avenue Associates, LLC	Indoor arcade with tables and chairs, plantings, seating wall/ledges; outdoor arcade with seating wall/ledges	0	0.21	0.21	Good/Moderate
6	Tower 49	Kato Kagaku Co., LTC	Plaza/arcade, trees, planters, marble benches, seating wall/ledges, tables and movable chairs	0	0.27	0.27	Good/Moderate
7	280 Park Avenue	Broadway 280 Park Fee	Plaza, trees, planters with seating ledges, tables and movable chairs	0	0.40	0.40	N/A ³
8	Westvaco, 299 Park Avenue	Fisher-Park Lane Owner LLC	Plaza/arcade, trees, planters, benches	0	0.36	0.36	Good/Low
9	Cosmopolitan Condominiums, 141 East 48th Street	Cosmopolitan Condominiums	Plaza, trees, planters with seating ledges, seating wall/ledges	0	0.06	0.06	Good/Low
10	780 Third Avenue	Teachers Insurance and Annuity Association of America	Plaza, seating wall/ledges, food trucks, restaurant tables and chairs	0	0.09	0.09	Good/Moderate
11	575 Fifth Avenue	575 Fifth Avenue Condominium	Indoor plaza with tables and movable chairs, garbage cans	0	0.23	0.23	Excellent/High
12	245 Park Avenue	Brookfield Financial	Plaza/arcade, planters, seating ledges	0	0.79	0.79	Good/Low
13	425 Lexington Avenue	Hines 425 Lexington Avenue, LLC	Plaza, seating wall/ledges, planters with seating ledges, garbage cans	0	1.00	0.10	Good/Low
14	Emigrant Savings Bank, 6 East 43rd Street	6 East 43rd Street Corp.	Plaza, planters with seating ledges, statue	0	0.03	0.03	Good/Low
15	101 Park Avenue Plaza	101 Park Avenue Associates, LLC	Plaza/arcade, plantings, seating wall/ledges, seating steps, water feature	0	0.34	0.34	Good/Moderate

Table 19-3 (cont'd)
Existing Publicly Accessible Open Space Inventory

Map Ref. No. ¹	Name/Location	Owner or Agency	Features	Acres of Active Open Space	Acres of Passive Open Space	Total Acres	Condition/Utilization
16	Two Grand Central Tower, 140 East 45th Street	2 GCT Partners, LLC	Plaza/arcade, planters, seating ledge garbage cans	0	0.11	0.11	Good/Low
17	600 Third Avenue	Third Avenue Tower Owner, LLC	Plaza/arcade, trees, planters with seating, ledges, lighting	0	0.20	0.20	Fair/Low
18	Grand Central Plaza, 622 Third Avenue	622 Third Ave Company, LLC	Outdoor plaza with trees, planters with seating ledges, benches, seating wall/ledges, garbage cans; indoor arcade with benches, seating wall/ledges, lighting, heating; landscaped terrace with trees, planters, benches, tables and movable chairs, lattice, garbage cans	0	0.62	0.62	Good/Moderate
19	275 Park Avenue Plaza	277 Park Avenue LLC	Plaza/arcade, seating ledges, planters	0	0.13	0.13	Good/Low
20	1166 Sixth Avenue Plaza	A of A Condo	Plaza/through-block arcade, tables and chairs, benches, seating walls and ledges, trees, planters, sculpture	0	0.63	0.63	Excellent/High
21	Grace Plaza, 1114 Sixth Avenue	1114 Trizechahn-Swig, LLC	Plaza/arcade, trees, plantings, tables and chairs, benches, water fountain, food vendor	0	0.52	0.52	Excellent/High
22	420 Fifth Avenue Plaza	Dryland Properties, LLC/CVS Albany, LLC	Plaza, trees, planters, seating wall and ledges, bicycle rack	0	0.09	0.09	Good/Moderate
23	Murray Hill Mews, 160 East 38th Street	Murray Hill Mews Owners, CP	Plaza, trees, planters, benches	0	0.15	0.15	Good/Low
24	Sony Plaza, 550 Madison Avenue	550 Madison Avenue Trust, Ltd.	Indoor plaza and through-block arcade, tables and chairs, benches, plantings, vendors, exhibition space; outdoor arcade, plantings	0	0.32	0.32	Excellent/High
25	Park Avenue Tower, 65 East 55th Street	NY-Midtown Properties	Plaza, planters with seating ledges	0	0.15	0.15	Good/Low
26	Warburg Dillon Read Plaza, 535 Madison Avenue Plaza	Madison Tower Association	Plaza/arcade, tables and chairs, trees, planters with seating ledges	0	0.15	0.15	Good/High
27	1330 Sixth Avenue Plaza	1330 Acquisition Co.	Plaza, seating wall and ledges/steps, planters, sculpture, tables and chairs	0	0.14	0.14	Good/Low
28	Paley Park, 3 East 53rd Street	Greenpark Foundation, Inc.	Vest-pocket park, trees, plantings, tables and chairs, water feature	0	0.10	0.10	Excellent/High

Table 19-3 (cont'd)
Existing Publicly Accessible Open Space Inventory

Map Ref. No. ¹	Name/Location	Owner or Agency	Features	Acres of Active Open Space	Acres of Passive Open Space	Total Acres	Condition/Utilization
29	520 Madison Avenue Plaza	Eli Acquisition, LLC	Plaza, trees, tables and chairs, sculpture	0	0.06	0.06	Good/High
30	Lever House, 390 Park Avenue	390 Park Avenue Associates	Plaza, trees, planters, benches, sculpture	0	0.26	0.26	Good/Moderate
31	CBS Building, 51 West 52nd Street	CBS, Inc.	Plaza, seating wall and ledges	0	0.22	0.22	Good/Moderate
32	Morgan Stanley Smith Barney, 31 West 52nd Street	40 West 53rd Partners	Plaza and through-block arcade, trees, plantings, seating wall and ledges, sculptures	0	0.28	0.28	Excellent/High
33	HarperCollins Publishers, 10 East 53rd Street	Millenium Estates, Ltd./10E53 Owner, LLC	Plaza/through-block arcade with retail, planters, seating wall and ledges	0	0.15	0.15	N/A-Construction
34	Park Avenue Plaza, 55 East 52nd Street	Park Avenue Plaza Owner, LLC	Indoor plaza, tables and chairs, vendors, exhibition space, water feature, artwork	0	0.30	0.30	Good/Moderate
35	650 Fifth Avenue Plaza	650 Fifth Avenue Company	Below-grade plaza with tables and chairs, fixed seats, food vendor	0	0.10	0.10	Good/High
36	Olympic Tower, 634 Fifth Avenue	Olympic Tower Condominium	Atrium with planters, tables and chairs, artwork	0	0.20	0.20	Excellent/Low
37	40 East 52nd Street Plaza	40 East 52nd Street, LP	Plaza, seating wall and ledges, planters, water feature	0	0.09	0.09	Good/High
38	St. Patrick's Cathedral, 460 Madison Avenue	Diocese of New York	Plaza, seating steps	0	0.74	0.74	Fair/Moderate ⁴
39	New York Palace Hotel, 457 Madison Avenue	New York Palace Hotel	Courtyard, plantings, tables and chairs	0	0.14	0.14	Good/High
40	Rockefeller Plaza	Rockefeller Group	Plaza, trees, plantings, through-block arcade, ice skating rink (seasonal), retail, statue/fountain, café (seasonal)	0.21	0.62	0.83	Excellent/High
41	Wells Fargo Building, 437 Madison Avenue	Madison Avenue Leasehold, LLC	Plaza/arcade, seating wall and ledges/steps	0	0.28	0.28	Fair/Moderate ⁵
Non-Residential Study Area Total				0.46	15.11	15.57	
Notes:							
1. See Figure 19-3 for location of open spaces.							
2. For purposes of analysis, the pétanque court (0.05 acres) and ½ of the seasonal ice skating rink (0.20 acres) in Bryant Park are included as active recreation spaces.							
3. Open spaces with no listed condition or utilization were temporarily closed to the public due to construction on adjacent buildings at the time of surveying in April and July 2014.							
4. The open space around St. Patrick's Cathedral was partially closed to the public due to ongoing façade restoration work on the Cathedral, with the accessible space largely covered by scaffolding.							
5. A portion of the Wells Fargo Building open space was closed to the public due to construction.							
Sources: DPR open space data base; <i>East Midtown Rezoning and Related Actions FEIS</i> ; Jerold S. Kayen, <i>Privately Owned Public Spaces</i> (The New York City Department of City Planning and the Municipal Art Society of New York, 2000); AKRF, Inc. field survey, April and July, 2014.							

ADEQUACY OF OPEN SPACES

As described in Chapter 4, “Open Space,” the non-residential open space analysis focuses on passive open spaces because these are the open spaces that non-residents would be most likely to use; the adequacy of the open spaces in the area is assessed by comparing the ratio of non-residents to acres of passive open space with the City’s planning goal of 0.15 acres of passive space per 1,000 non-residents. The study area has an existing ratio of 0.04 acres of passive open space per 1,000 non-residents, which is below the City’s goal of 0.15 acres (see **Table 19-4**).

Table 19-4

Existing Conditions: Adequacy of Open Space Resources

Total Population		Open Space Acreage			Open Space Ratios per 1,000 People			Open Space Goals		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Non-Residential (¼-Mile) Study Area										
Non-Residents	360,098	15.57	0.46	15.11	0.04	0	0.04	N/A	N/A	0.15
Notes:		Ratios in acres per 1,000 people.								
Sources:		DPR open space data base; <i>East Midtown Rezoning and Related Actions FEIS</i> ; AKRF, Inc. field survey, April and July, 2014.								

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2021)

STUDY AREA NON-RESIDENTIAL POPULATION

Projected Development Sites

Absent the proposed actions, in 2021 the One Vanderbilt site would be redeveloped with a commercial building under the existing zoning regulations, which would introduce 2,796 new workers. The MTA site, the 52 Vanderbilt site, and the Roosevelt Hotel site would all remain in their current conditions and would not introduce any additional workers.

Study Area

Several development projects within the study area are expected to introduce new non-residents by 2021. This includes commercial projects within Census Tracts 80, 82, 84, 92, 94, and 96 previously discussed in Chapter 4, “Open Space.” Several additional projects located in Census Tracts 102 and 104 will introduce new non-residents to the study area, such as the Tower Verre (53 West 53rd Street), a 300-unit residential building that will also contain expansion space for the Museum of Modern Art. As shown on **Table 19-5**, the No-Action projects within the study area are expected to introduce a total of 4,421 workers and 3,704 visitors to the study area by 2021.

With the addition of the new workers from the No-Action redevelopment of the One Vanderbilt site, as well as the new workers (4,421) and visitors (3,704) from the additional projects expected to be complete by 2021, the non-residential population within the study area is expected to increase to 371,019.

Vanderbilt Corridor and One Vanderbilt

Table 19-5

2021 No-Action Condition: Population from Additional Projects in the Study Area

<u>Map Ref. No.¹</u>	<u>Project Name/Address</u>	<u>Development Program</u>	<u>Status/Build Year²</u>	<u>Workers³</u>	<u>Visitors⁴</u>
Development Projects					
<u>1</u>	<u>516-520 Fifth Avenue</u>	<u>Mixed commercial/residential: 121,024 gsf hotel (208 rooms), residential (145 units), 35,000 gsf retail</u>	<u>2021</u>	<u>189</u>	<u>371</u>
<u>2</u>	<u>14-20 West 40th Street</u>	<u>Mixed commercial/residential: 4,500 gsf restaurant/retail, residential (91 units) and hotel (215 rooms)</u>	<u>2021</u>	<u>99</u>	<u>384</u>
<u>3</u>	<u>451 Lexington Avenue</u>	<u>Commercial: 119,449 gsf hotel (284 rooms), 7,500 gsf retail</u>	<u>2015</u>	<u>129</u>	<u>507</u>
<u>4</u>	<u>30 West 46th Street</u>	<u>Commercial: 72,191 gsf hotel (196 rooms)</u>	<u>2021</u>	<u>73</u>	<u>350</u>
<u>5</u>	<u>Archer NY Hotel, 45 West 38th Street</u>	<u>Commercial: hotel with 180 rooms</u>	<u>2014</u>	<u>67</u>	<u>321</u>
<u>6</u>	<u>International Gem Tower, 50 West 47th Street</u>	<u>Commercial: 748,000 gsf office</u>	<u>2014⁵</u>	<u>2,992</u>	<u>=</u>
<u>7</u>	<u>686-700 Third Avenue</u>	<u>Commercial: 7,500 gsf retail, 234,348 gsf hotel (361 rooms)</u>	<u>2021</u>	<u>158</u>	<u>644</u>
<u>8</u>	<u>36 East 51st Street</u>	<u>Commercial 65,276 gsf office, 4,000 gsf retail</u>	<u>2015</u>	<u>273</u>	<u>=</u>
<u>9</u>	<u>Baccarat Hotel and Residences, 18-20 West 53rd Street</u>	<u>Mixed commercial/residential: hotel with 114 rooms, 70 residential units, 5,014 gsf community facility (Donnell Library)</u>	<u>2014</u>	<u>51</u>	<u>203</u>
<u>10</u>	<u>Tower Verre, 53 West 53rd Street</u>	<u>Mixed commercial/residential: hotel will 167 rooms, 300 residential units, 68,097 gsf community facility (MoMA expansion)</u>	<u>2021</u>	<u>143</u>	<u>298</u>
<u>11</u>	<u>John Pierce Residences, 11 East 51st Street</u>	<u>Mixed commercial/residential: 19,322 gsf retail, 269 residential units</u>	<u>2021</u>	<u>69</u>	<u>=</u>
<u>12</u>	<u>19 East 54th Street</u>	<u>Commercial: 11,166 gsf retail, hotel with 253 rooms</u>	<u>2021</u>	<u>129</u>	<u>451</u>
<u>13</u>	<u>325 Lexington Avenue</u>	<u>Mixed commercial/residential: 2,370 gsf retail, residential (125 units)</u>	<u>2014⁶</u>	<u>12</u>	<u>=</u>
<u>14</u>	<u>23 East 39th Street</u>	<u>Commercial: 32,871 gsf hotel (98 rooms)</u>	<u>2021</u>	<u>37</u>	<u>175</u>
Total				<u>4,421</u>	<u>3,704</u>
Open Space Projects					
<u>A</u>	<u>Pershing Square Plaza</u>	<u>Plaza with landscaping and seating (0.37 acres)</u>	<u>2015</u>	<u>=</u>	<u>=</u>
<u>B</u>	<u>11 East 51st Street</u>	<u>Plaza attached to John Pierce Residences commercial/residential project (see project no. 11) (0.07 acres)</u>	<u>2021</u>	<u>=</u>	<u>=</u>

Notes:

1. See Figure 19-4.

2. Projects that are currently under construction are assumed to be complete by 2015; projects for which an expected date of completion date is not available are assumed to be complete by the proposed One Vanderbilt development's Build Year of 2021.

3. Based on estimates of one worker per 250 gsf of office space, one worker per 333 gsf of retail space, one worker per 2.67 hotel rooms, one worker per 25 residential units, and one worker per 1,000 gsf of community facility space.

4. Based on estimated number of hotel guests, calculated by multiplying the number of hotel rooms by an occupancy rate of 89.2 percent and two guests per occupied room, following the calculations of the *East Midtown Rezoning and Related Actions FEIS*.

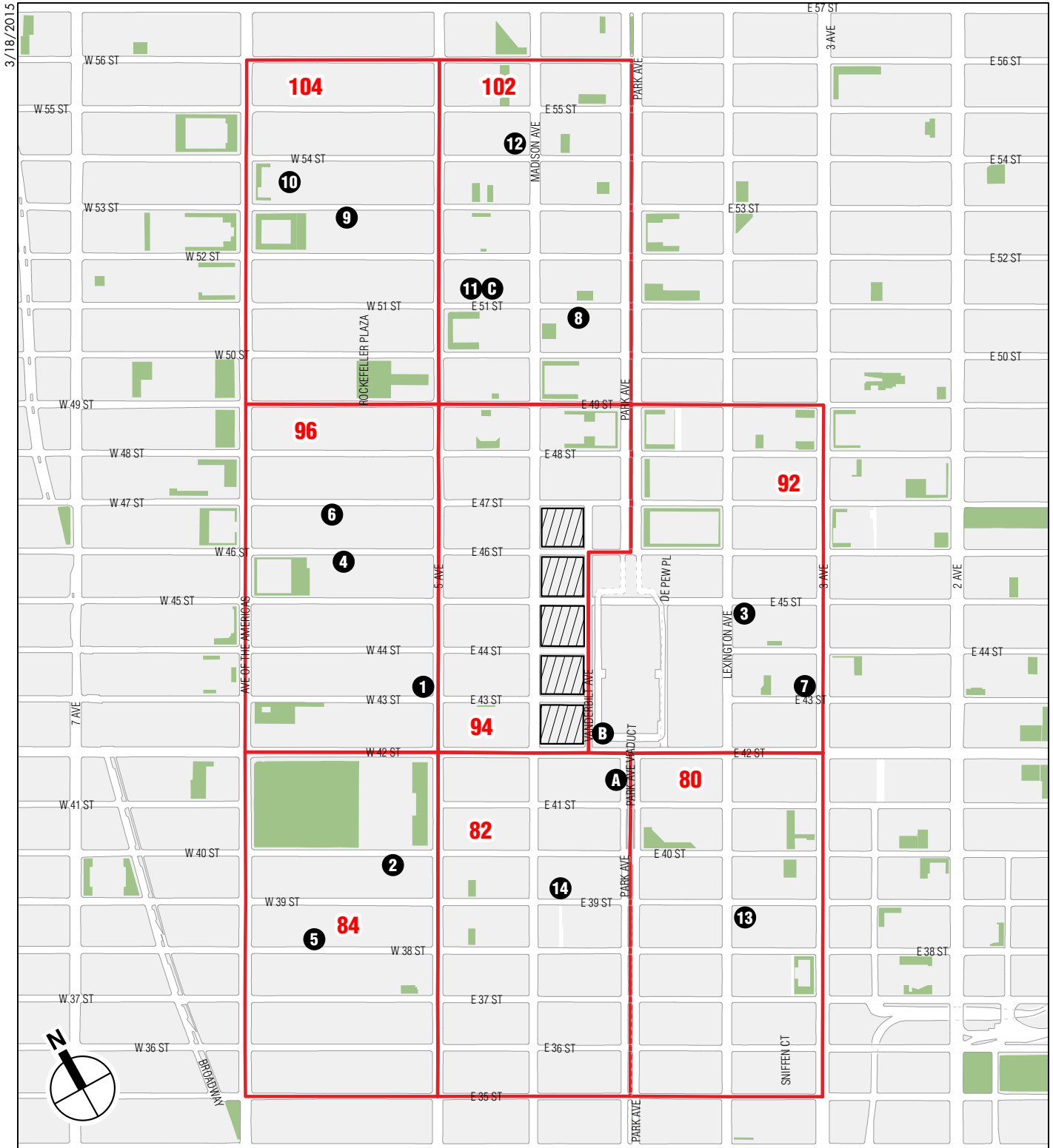
5. Construction of the International Gem Tower is substantially complete and the building is currently operating under a Temporary Certificate of Occupancy (TCO), but has yet to be fully occupied.

6. Construction of 325 Lexington Avenue is substantially complete, and the building is currently operating under a TCO, but has yet to be fully occupied.

Sources: *East Midtown Rezoning and Related Actions FEIS* (2013); *New York Public Library Central Library Plan Environmental Assessment Statement (EAS)* (2013); DCP; NYC Dept. of Buildings.

STUDY AREA OPEN SPACE RESOURCES

In addition to Pershing Square Plaza discussed in Chapter 4, "Open Space," a 0.07-acre public plaza is expected to be constructed with the John Pierce Residences project located at 11 East



Proposed Vanderbilt Corridor
 Non-Residential Study Area Census Tracts

1 No Build Project *
 *No Build Project #14 is new to the FEIS

Conceptual Open Space Analysis
 -No Build Projects
Figure 19-4

51st Street. In total, the two open space projects are expected to introduce 0.44 acres of passive open space, bringing the total open space within the study area to 16.01 acres, of which 15.55 acres are passive open space.

ADEQUACY OF OPEN SPACES

As shown in Table 19-6, with a total non-residential population of 371,019 and 15.55 acres of passive open space, the passive open space ratio within the study area would decrease incrementally in the 2021 No-Action condition but would remain at 0.04 acres of passive open space per 1,000 non-residents, below the City’s goal of 0.15 acres of passive open space per 1,000 non-residents.

Table 19-6
2021 No-Action Condition: Adequacy of Open Space Resources

Total Population	Open Space Acreage			Open Space Ratios per 1,000 People			Open Space Goals			
	Total	Active	Passive	Total	Active	Passive	Total	Active	Passive	
	Non-Residential (1/4-Mile) Study Area									
Non-Residents	371,019	16.01	0.46	15.55	0.04	0	0.04	N/A	N/A	0.15

Notes: Ratios in acres per 1,000 people.
Sources: DPR open space data base; East Midtown Rezoning and Related Actions FEIS; AKRF, Inc. field survey, April and July, 2014.

THE FUTURE WITH THE PROPOSED ACTIONS (2021)

STUDY AREA NON-RESIDENTIAL POPULATION

With the proposed actions, in 2021 it is assumed that the MTA site would be redeveloped with a 30 FAR building containing 939,412 gsf of commercial space and the One Vanderbilt site would be developed as described in Chapter 1, “Project Description.” As shown in Table 19-7, these two projects would introduce a total non-residential population of 14,611 (11,023 workers and 3,588 visitors).

Table 19-7
2021 With-Action Condition: Vanderbilt Corridor Population

Use	Floor Area	Workers ¹	Visitors
Block 1279, Lots 23-25, 48 (MTA)			
Office	444,655 gsf	3,657	=
Retail	25,051 gsf	75	=
Proposed One Vanderbilt development		7,291	3,588 ²
Total		11,023	3,588

Notes:
 1. Based on estimates of one worker per 250 gsf of office space, one worker per 333 gsf of retail or restaurant space, and one worker per 2.67 hotel rooms.
 2. See Chapter 4, “Open Space,” for estimate of visitors introduced by the proposed One Vanderbilt development’s observation deck.

In the 2021 No-Action condition the redevelopment of the One Vanderbilt site would result in the introduction of 2,796 workers to the Vanderbilt Corridor. Therefore, the incremental increase in the number of non-residents introduced by the projected development on the MTA site and the proposed One Vanderbilt development is 8,227 workers and 3,588 visitors. With the addition

Vanderbilt Corridor and One Vanderbilt

of these new non-residents, the 2021 study area non-residential population would increase to 385,630.

STUDY AREA OPEN SPACE RESOURCES

As described in Chapter 4, “Open Space,” as part of the proposed One Vanderbilt development, the portion of Vanderbilt Avenue located immediately to the east of the One Vanderbilt site (between East 42nd and East 43rd Streets) would be closed to vehicular traffic, except for emergency vehicles, and mapped as a public place, which would create a new resource with 0.28 acres of passive open space. The projected redevelopment of the MTA site would use either the Grand Central Public Realm Improvement Bonus special permit, the amended ZR Section 81-635 landmark transfer special permit, or a combination of these special permits, and may therefore include public realm improvements such as pedestrian plazas, similar to the proposed Vanderbilt Avenue public place, or indoor spaces similar to the arcades and atriums included in other large commercial buildings in the study area. While the projected development on the MTA site may introduce a new public open space resource, at the conceptual planning stage the type and size of the resource is unknown. Therefore, for the purposes of analysis, it is assumed that the only additional open space resource in the Vanderbilt Corridor resulting from the proposed actions would be the 0.28-acre Vanderbilt Avenue public place, and the study area would increase to 16.29 acres, of which 15.83 acres are passive open space.

ADEQUACY OF OPEN SPACES

As shown in Tables 19-8 and 19-9, with a total non-residential population of 385,630 and 15.83 acres of passive open space, the passive open space ratio within the study area would decrease by approximately 2.1 percent in the 2021 With-Action condition as compared with the 2021 No-Action condition, and would remain at 0.04 acres of passive open space per 1,000 non-residents, below the City’s goal of 0.15 acres of passive open space per 1,000 non-residents.

Table 19-8

2021 With-Action Condition: Adequacy of Open Space Resources

Total Population		Open Space Acreage			Open Space Ratios per 1,000 People			Open Space Goals		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Non-Residential (1/4-Mile) Study Area										
Non-Residents	385,630	16.29	0.46	15.83	0.04	0	0.04	N/A	N/A	0.15
Notes: Ratios in acres per 1,000 people										
Sources: DPR open space data base; <i>East Midtown Rezoning and Related Actions FEIS</i> ; AKRF, Inc. field survey, April and July, 2014										

Table 19-9

Open Space Ratios Summary

Ratio	City Goal (acres per 1,000 non-residents)	2033 No-Action Condition	2033 With-Action Condition	Percent Change
Passive	0.15	0.04	0.04	-2.06%

Although the passive open space ratio would remain below the City goals as indicated in the CEQR Technical Manual, it is recognized that these goals are not feasible for many areas of the City, particularly densely populated areas such as Midtown Manhattan, and they are not

considered impact thresholds. The CEQR Technical Manual indicates that if the study area exhibits a particularly low open space ratio, a decrease in the open space ratio of as little as 1 percent could be considered significant. Given the lack of open space resources in the East Midtown area, which was identified as a concern during the public review of the proposed East Midtown Rezoning, and the low open space ratio within the study area (approximately one-quarter of the City’s goal of 0.15 acres of passive open space per 1,000 non-residents), the decrease in the open space ratio of approximately 2.1 percent in the Vanderbilt Corridor in the 2021 With-Action condition may be considered a significant adverse impact.

A qualitative assessment of the potential impact of projected development in the Vanderbilt Corridor on open space resources is included below under the 2033 analysis.

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2033)

STUDY AREA NON-RESIDENTIAL POPULATION

Projected Development Sites

Absent the proposed actions, by 2033 two of the projected development sites (the MTA site and the Roosevelt Hotel site) are expected to be redeveloped with commercial buildings under the existing zoning regulations. As described in Chapter 4, “Open Space,” absent the proposed actions the One Vanderbilt site would also be redeveloped with a commercial building under the existing zoning regulations, which would introduce 2,796 new workers. As shown in **Table 19-10**, the redevelopment of the two projected development sites and the One Vanderbilt site is expected to introduce a total of 7,855 workers to the study area.

Table 19-10
2033 No-Action Condition: Vanderbilt Corridor Population

Use	Floor Area	Workers ¹
Block 1279, Lots 23-25, 48 (MTA)		
Office	444,655 gsf	1,779
Retail	25,051 gsf	75
Block 1281, Lot 21 (Roosevelt Hotel)		
Office	768,806 gsf	3,075
Retail	43,313 gsf	130
One Vanderbilt No-Action Building		2,796
Total		7,855
Note: 1. Based on estimates of one worker per 250 gsf of office space and one worker per 333 gsf of retail space.		

Study Area

In addition to the projects identified above in Table 19-5, the East Midtown Rezoning and Related Actions FEIS also identified several Projected Development Sites that are expected to be redeveloped by 2033 absent any changes to the zoning regulations; as analyzed in the FEIS, these No-Action redevelopment projects are expected to contain a total of 62,792 gsf of retail and 766 residential units. As shown on Table 19-11, the No-Action projects within the study area are expected to introduce a total of 4,641 workers and 3,704 visitors to the study area by 2033.

Table 19-11

2033 No-Action Condition: Population from Additional Projects in the Study Area

Map Ref. No. ¹	Project Name/Address	Development Program	Status/Build Year	Workers	Visitors
Development Projects					
2021 Projected Developments ²			2021	4,421	3,704
East Midtown No-Action Developments			2033	220	-
Total				4,461	3,704
Notes:					
1. See Figure 19-4 .					
2. See Table 19-5 .					
Sources: East Midtown Rezoning and Related Actions FEIS (2013); New York Public Library Central Library Plan Environmental Assessment Statement (EAS)(2013); DCP; NYC Dept. of Buildings.					

With the addition of the new workers from the No-Action redevelopment of the One Vanderbilt site, the MTA site, and the Roosevelt Hotel site (7,855), as well as the new workers (4,461) and visitors (3,704) from the additional projects expected to be complete by 2033, the non-residential population within the study area is expected to increase to 376,298.

ADEQUACY OF OPEN SPACES

As shown in **Table 19-12**, with a total non-residential population of 376,298 and 15.55 acres of passive open space, the passive open space ratio within the study area would decrease incrementally in the No-Action condition but would remain at 0.04 acres of passive open space per 1,000 non-residents, below the City’s goal of 0.15 acres of passive open space per 1,000 non-residents.

Table 19-12

2033 No-Action Condition: Adequacy of Open Space Resources

Total Population	Open Space Acreage			Open Space Ratios per 1,000 People			Open Space Goals			
	Total	Active	Passive	Total	Active	Passive	Total	Active	Passive	
Non-Residential (1/4-Mile) Study Area										
Non-Residents	376,298	16.01	0.46	15.55	0.04	0	0.04	N/A	N/A	0.15
Notes: Ratios in acres per 1,000 people.										
Sources: DPR open space data base; East Midtown Rezoning and Related Actions FEIS; AKRF, Inc. field survey, April and July, 2014.										

THE FUTURE WITH THE PROPOSED ACTIONS (2033)

STUDY AREA NON-RESIDENTIAL POPULATION

As shown in **Table 19-13**, the projected redevelopment of the Roosevelt Hotel site with a 30.0 FAR building would introduce 6,454 workers to the Vanderbilt Corridor. In addition, the projected conversion of the 52 Vanderbilt building into a 250-room hotel would introduce 94 workers and 445 visitors to the Vanderbilt Corridor. The redevelopment of the MTA site and the proposed One Vanderbilt development would introduce a total non-residential population of 14,611 (11,023 workers and 3,588 visitors) (the 2021 total). In total, the projected development in the Vanderbilt Corridor resulting from the proposed actions would introduce approximately 21,604 non-residents (17,571 workers and 4,033 visitors) to the study area by 2033.

Table 19-13

2033 With-Action Condition: Vanderbilt Corridor Population

Use	Floor Area	Workers ¹	Visitors
Block 1279, Lot 45 (52 Vanderbilt Avenue)			
Hotel	162,330 gsf (250 rooms)	94	445 ²
Block 1281, Lot 21 (Roosevelt Hotel)			
Office	1,580,924 gsf	6,324	-
Retail	43,313 gsf	130	-
Proposed One Vanderbilt <u>and MTA site</u> development (2021 total)		11,023	3,588
2033 Total		17,571	4,033
Notes:			
1. Based on estimates of one worker per 250 gsf of office space, one worker per 333 gsf of retail or restaurant space, and one worker per 2.67 hotel rooms.			
2. Based on estimated number of hotel guests, calculated by multiplying the number of hotel rooms by an occupancy rate of 89.2 percent and two guests per occupied room, following the calculations of the <i>East Midtown Rezoning and Related Actions FEIS</i> .			

As noted above, in the 2033 No-Action condition the redevelopment of the One Vanderbilt site, the MTA site, and the Roosevelt Hotel site with 15.0 FAR buildings would result in the introduction of 7,855 workers to the Vanderbilt Corridor. Therefore, the incremental increase in the number of non-residents introduced by the projected developments in the Vanderbilt Corridor and the proposed One Vanderbilt development is 9,716 workers and 4,033 visitors. With the addition of these new non-residents, the study area non-residential population would increase to 390,047.

STUDY AREA OPEN SPACE RESOURCES

As part of the proposed One Vanderbilt development, a public place with 0.28 acres of passive open space resource would be created on the portion of Vanderbilt Avenue located immediately to the east of the One Vanderbilt site (between East 42nd and East 43rd Streets). While the projected developments on the MTA site and the Roosevelt Hotel site may introduce new public open space resources, at the conceptual planning stage the type and size of the resource is unknown. Therefore, as in the 2021 With-Action condition, in the 2033 With-Action condition, the study area would increase to 16.29 acres, of which 15.83 acres are passive open space.

ADEQUACY OF OPEN SPACES

Quantitative Assessment

As shown in **Tables 19-14 and 19-15**, with a total non-residential population of 390,047 and 15.83 acres of passive open space, the passive open space ratio within the study area would decrease by approximately 1.8 percent in the 2033 With-Action condition as compared with the 2033 No-Action condition, and would remain at 0.04 acres of passive open space per 1,000 non-residents, below the City’s goal of 0.15 acres of passive open space per 1,000 non-residents.

Table 19-14

2033 With-Action Condition: Adequacy of Open Space Resources

Total Population		Open Space Acreage			Open Space Ratios per 1,000 People			Open Space Goals		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Non-Residential (1/4-Mile) Study Area										
Non-Residents	390,047	16.29	0.46	15.83	0.04	0	0.04	N/A	N/A	0.15
Notes:		Ratios in acres per 1,000 people								
Sources:		DPR open space data base; <i>East Midtown Rezoning and Related Actions FEIS</i> ; AKRF, Inc. field survey, April and July, 2014								

Table 19-15

Open Space Ratios Summary

Ratio	City Goal (acres per 1,000 non-residents)	2033 No-Action Condition	2033 With-Action Condition	Percent Change
Passive	0.15	0.04	0.04	-1.79%

The *CEQR Technical Manual* indicates that if the study area exhibits a particularly low open space ratio, a decrease in the open space ratio of as little as 1 percent could be considered significant. Similar to the 2021 With-Action condition, the decrease in the open space ratio of approximately 1.8 percent in the Vanderbilt Corridor in the 2033 With-Action condition may be considered a significant adverse impact.

Qualitative Assessment

As described in Chapter 4, “Open Space,” the proposed One Vanderbilt development, which includes the creation of a new open space resource, the Vanderbilt Avenue public place, would not result in a significant adverse open space impact. However, the introduction of a new non-residential population through the redevelopment of three additional projected development sites in combination with the proposed One Vanderbilt development may result in a decrease in the passive open space ratio that would be considered a significant adverse open space impact in both the 2021 and 2033 With-Action conditions. The projected development projects on the MTA and Roosevelt Hotel sites would use either the Grand Central Public Realm Improvement Bonus special permit, the amended ZR Section 81-635 landmark transfer special permit, or a combination of these special permits, and therefore may be required to provide on-site or off-site improvements to support pedestrian circulation. As part of the public and environmental review of those projects, it may be determined that on-site public open space resources such as a pedestrian plaza would provide the greatest public benefit for the Vanderbilt Corridor. As a result, those projected development sites may include additional open space resources to preclude a significant adverse impact. Additionally, other forms of support for area open space, such as funding for improvements to other resources as part of the improvements to the public realm, could be employed as partial or full mitigation for a significant adverse open space impact. As with the proposed One Vanderbilt development, the redevelopment of the three additional projected development sites within the Vanderbilt Corridor would be subject to environmental review, which would determine the full impacts of development on the MTA site, 52 Vanderbilt Avenue site, and Roosevelt Hotel site on open space.

F. HISTORIC AND CULTURAL RESOURCES

ARCHAEOLOGICAL RESOURCES

The study area for archaeological resources is the Vanderbilt Corridor and the site of the proposed public place. The New York City Landmarks Preservation Commission (LPC) was consulted and determined that the Vanderbilt Corridor and the site of the proposed public place do not have any archaeological significance. Therefore, no further consideration of archaeological resources was warranted.

ARCHITECTURAL RESOURCES

EXISTING CONDITIONS

As described in Chapter 6, “Historic and Cultural Resources” and shown on Figure 6-1, there are three architectural resources located on Blocks 1279 and 1281 of the Vanderbilt Corridor. These resources are:

- The Yale Club at 50 Vanderbilt Avenue on Block 1279 (#2 in Table 6-1, see view 3 of Figure 6-3). The Yale Club has been determined to appear eligible for designation as a New York City Landmark (NYCL).
- The Vanderbilt Concourse Building on the 52 Vanderbilt Avenue site (#3 in Table 6-1, see view 4 of Figure 6-3). The Vanderbilt Concourse Building has been determined to appear eligible for listing on the State and National Registers of Historic Places (S/NR).
- The Roosevelt Hotel on the Roosevelt Hotel site (#4 in Table 6-1, see Figure 6-4). The Roosevelt Hotel has been determined to appear both NYCL-eligible and S/NR eligible.

On the One Vanderbilt site, the Vanderbilt Avenue Building at 51 East 42nd Street has been determined to be S/NR-eligible (see Chapter 6, “Historic and Cultural Resources” for details).

There are numerous architectural resources located within the Vanderbilt Corridor study area as described in Chapter 6, “Historic and Cultural Resources” and shown on Figure 6-1.

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2021)

Block 1277—One Vanderbilt Site

The four buildings located on the One Vanderbilt site, including the S/NR-eligible Vanderbilt Avenue Building, will be demolished in the 2021 No-Action condition, and the site will be redeveloped with a 15 FAR office building. The No-Action building would not utilize excess development rights from the Bowery Savings Bank. In order to accommodate the No-Action building, the sewer line running underneath the site between East 43rd Street and Vanderbilt Avenue would be removed and re-pitched to flow to the west with a new connection into an existing Madison Avenue line. Some of this work would require construction in the Grand Central Terminal ceiling above the ramp at the southwest corner of the terminal to East 42nd Street and Vanderbilt Avenue and within the Grand Central Terminal parking garage, which is a contributing component to the S/NR-listed Terminal. Work affecting the ramp ceiling and the parking garage would be coordinated with MTA, and 317 Madison would undertake to protect historic materials during construction of the No-Action building. Further, 317 Madison has committed to preparing and implementing a CPP for work affecting NYCL and S/NR-listed portions of Grand Central Terminal.

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It is assumed in the 2021 No-Action condition that the MTA site, the Roosevelt Hotel site, the 52 Vanderbilt Avenue site, and the Yale Club would remain as in existing conditions, and thus there would be no direct or contextual effect to architectural resources relating to these sites.

THE FUTURE WITH THE PROPOSED ACTIONS (2021)

Block 1277—One Vanderbilt Site

Although the proposed One Vanderbilt development would remove the S/NR-eligible Vanderbilt Avenue Building at 51 East 42nd Street, this architectural resource would be removed in the 2021 No-Action condition and, therefore, the proposed One Vanderbilt development would not result in a significant adverse impact.

To avoid inadvertent construction-period damage to Grand Central Terminal (NYCL, S/NR, NHL), 317 Madison would develop and implement a CPP for the Terminal in consultation with LPC and MTA. CPPs would also be prepared and implemented in consultation with LPC for the Pershing Square Building (NYCL-eligible, S/NR-eligible) and the Socony-Mobil Building (NYCL, S/NR-eligible) to avoid inadvertent damage from the construction of adjacent off-site transit-related improvements.

It is not expected that the proposed One Vanderbilt development would result in any contextual impacts on architectural resources, as it would not adversely change the scale, visual prominence, or visual context of any building, structure, object, or landscape feature; or screen or eliminate publicly accessible views of any architectural resources that will not be screened or eliminated in the No-Action condition. While the shadows analysis presented in Chapter 5, “Shadows,” concluded that the proposed One Vanderbilt development would cast new shadows on the west windows of Grand Central Terminal’s main concourse and on Bryant Park (NYC Scenic Landmark, S/NR), these new shadows would be limited in extent, duration, and effects and would not result in any significant adverse shadow impacts.

Block 1279

In the 2021 With-Action condition it is projected that the MTA site would be redeveloped pursuant to the Grand Central Public Realm Improvement Bonus special permit, the amended ZR Section 81-635 landmark transfer special permit, or a combination of these special permits. Both the Yale Club and the Vanderbilt Concourse Building are contiguous with the MTA site and could potentially experience construction-related effects from ground-borne construction-period vibrations, falling debris, subsidence, collapse, or damage from construction machinery. The Roosevelt Hotel and the Brooks Brothers Store at 346 Madison Avenue also are located within 90 feet of the MTA site, close enough to construction activities to potentially experience construction-related effects. Pursuant to the environmental review that would be conducted for the redevelopment of the MTA site, it is expected that a CPP would be developed and implemented in consultation with LPC to avoid adverse construction-related impacts to these four architectural resources.

It is not expected that the development of a 30 FAR building on the MTA site would result in significant adverse contextual impacts on architectural resources, as the architectural resources in the study area largely comprise mid- to high-rise commercial buildings. However, this determination can only be made conclusively when a specific development proposal is assessed

and specific bulk and massing details are available. Such a determination would be identified during the environmental review that would be conducted for the redevelopment of the MTA site.

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2033)

Block 1277—One Vanderbilt Site

The four buildings located on the One Vanderbilt site, including the S/NR-eligible Vanderbilt Avenue Building, will be demolished in the No-Action condition (2021 and 2033), and the site will be redeveloped with a 15 FAR office building. See discussion above under “Historic and Cultural Resources: The Future Without the Proposed Actions (2021): Block 1277—One Vanderbilt Site.”

Block 1279

It is assumed in the 2033 No-Action condition that the MTA site could be redeveloped under the existing C5-3 and Special Midtown District regulations with a 15 FAR commercial building. The three buildings on the MTA site are not architectural resources.

Both the Yale Club and the Vanderbilt Concourse Building are contiguous with the MTA site and could potentially experience construction-related effects from ground-borne construction-period vibrations, falling debris, subsidence, collapse, or damage from construction machinery. Further, the following two architectural resources are located within 90 feet of the MTA site, close enough to construction activities to potentially experience construction-related effects: the Roosevelt Hotel, and the Brooks Brothers Store at 346 Madison Avenue (#17 on Table 6-1, S/NR-eligible). All of these adjacent architectural resources would be offered some protection from accidental damage through New York City Department of Building (DOB) controls that govern the protection of adjacent properties from construction activities under Building Code Section BC 3309: Protection of Adjoining Property. For all construction work, Building Code Section BC 3309 serves to protect all adjacent properties from excavation, filling, and foundation operations and from construction above the roof of the adjacent properties by requiring certain inspection and protection measures.

Block 1281

It is assumed in the 2033 No-Action condition that the Roosevelt Hotel site could be redeveloped under the existing C5-3 and Special Midtown District regulations with a 15 FAR commercial building. Redevelopment of this block would remove the NYCL-eligible and S/NR-eligible Roosevelt Hotel.

The following architectural resources are located within 90 feet of the Roosevelt Hotel site, close enough to construction activities to potentially experience construction-related effects from ground-borne construction-period vibrations, falling debris, subsidence, collapse, or damage from construction machinery: Yale Club; Pan Am Building at 200 Park Avenue (#6 on Table 6-1, NYCL-eligible); the westernmost Park Avenue Viaduct bridge over East 45th Street (#26 on Table 6-1, S/NR-eligible); New York Central Building (#27 on Table 6-1, NYCL, S/NR); and Postum Building at 250 Park Avenue (#29 on Table 6-1, NYCL-eligible, S/NR-eligible). All of these adjacent architectural resources would be offered some protection through the DOB controls described above governing the protection of adjacent properties from construction activities. The New York Central Building would be afforded additional protection through

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DOB *Technical Policy and Procedure Notice #10/88 (TPPN #10/88)*, which applies to NYCLs, properties within New York City Historic Districts, and NR-listed properties. *TPPN #10/88* supplements the standard building protections afforded by Building Code Section BC 3309 by requiring a monitoring program to reduce the likelihood of construction damage to adjacent NYCLs and NR-listed properties (within 90 feet) and to detect at an early stage the beginnings of damage so that construction procedures can be changed.

THE FUTURE WITH THE PROPOSED ACTIONS (2033)

Block 1277—One Vanderbilt Site

Although the proposed One Vanderbilt development would remove the S/NR-eligible Vanderbilt Avenue Building at 51 East 42nd Street, this architectural resource would be removed in the No-Action condition (2021 and 2033) and, therefore, the proposed One Vanderbilt development would not result in a significant adverse impact.

To avoid inadvertent construction-period damage to Grand Central Terminal (NYCL, S/NR, NHL), 317 Madison would develop and implement a CPP for the Terminal in consultation with LPC and MTA. CPPs would also be prepared and implemented in consultation with LPC for the Pershing Square Building (NYCL-eligible, S/NR-eligible) and the Socony-Mobil Building (NYCL, S/NR-eligible) to avoid inadvertent damage from the construction of adjacent off-site transit-related improvements.

It is not expected that the proposed One Vanderbilt development would result in any contextual impacts on architectural resources, as it would not adversely change the scale, visual prominence, or visual context of any building, structure, object, or landscape feature; or screen or eliminate publicly accessible views of any architectural resources that will not be screened or eliminated in the No-Action condition (2021 and 2033). While the shadows analysis presented in Chapter 5, “Shadows,” concluded that the proposed One Vanderbilt development would cast new shadows on the west windows of Grand Central Terminal’s main concourse and on Bryant Park (NYC Scenic Landmark, S/NR), these new shadows would be limited in extent, duration, and effects and would not result in any significant adverse shadow impacts.

Block 1279

In the 2033 With-Action condition it is projected that the MTA site would be redeveloped pursuant to the proposed zoning text amendment and the Vanderbilt Concourse Building on the 52 Vanderbilt Avenue site would be converted into a hotel. Conversion of the Vanderbilt Concourse Building could result in a significant adverse impact to the architectural resource if the exterior were to be adversely altered. Significant adverse impacts and potential mitigation measures would be identified during the environmental review for such a conversion, because developments on sites within the Vanderbilt Corridor pursuant to the proposed special permits would be subject to individual environmental review under the special permits.

The following architectural resources are located within 90 feet of the 52 Vanderbilt Avenue site, close enough to construction activities to potentially experience construction-related effects from conversion of the building to a hotel: Yale Club; Roosevelt Hotel; Pan Am Building; the westernmost Park Avenue Viaduct bridge over East 45th Street; and the New York Central Building. Pursuant to the environmental review that would be conducted for the conversion of the Vanderbilt Concourse Building, it is expected that a CPP would be developed and

implemented in consultation with LPC to avoid adverse construction-related impacts to these five architectural resources.

In addition, both the Yale Club and the Vanderbilt Concourse Building are contiguous with the MTA site and could potentially experience construction-related effects from ground-borne construction-period vibrations, falling debris, subsidence, collapse, or damage from construction machinery. The Roosevelt Hotel and the Brooks Brothers Store at 346 Madison Avenue also are located within 90 feet of the MTA site, close enough to construction activities to potentially experience construction-related effects. Pursuant to the environmental review that would be conducted for the redevelopment of the MTA site, it is expected that a CPP would be developed and implemented in consultation with LPC to avoid adverse construction-related impacts to these four architectural resources.

It is not expected that the development of a 30 FAR building on the MTA site would result in significant adverse contextual impacts on architectural resources, as the architectural resources in the study area largely comprise mid- to high-rise commercial buildings. However, this determination can only be made conclusively when a specific development proposal is assessed and specific bulk and massing details are available. Such a determination would be identified during the environmental review for that would be conducted for the redevelopment of the MTA site.

Block 1281

In the 2033 With-Action condition, the redevelopment of the Roosevelt Hotel site would remove the NYCL-eligible and S/NR-eligible Roosevelt Hotel; however, since the Roosevelt Hotel would be removed in the 2033 No-Action condition, the 2033 With-Action development would not result in a significant adverse impact.

The following architectural resources are located within 90 feet of the Roosevelt Hotel site, close enough to construction activities to potentially experience construction-related effects from ground-borne construction-period vibrations, falling debris, subsidence, collapse, or damage from construction machinery: Yale Club; Pan Am Building; the westernmost Park Avenue Viaduct bridge over East 45th Street; New York Central Building; and the Postum Building. Pursuant to the environmental review that would be conducted for the redevelopment of the Roosevelt Hotel site, it is expected that a CPP would be developed and implemented in consultation with LPC to avoid adverse construction-related impacts to these five architectural resources.

It is not expected that the development of a 30 FAR building on the Roosevelt Hotel site would result in significant adverse contextual impacts on architectural resources, as the architectural resources in the study area largely comprise mid- to high-rise commercial buildings. However, this determination can only be made conclusively when a specific development proposal is assessed and specific bulk and massing details are available. Such a determination would be identified during the environmental review for the specific redevelopment of the Roosevelt Hotel site.

G. URBAN DESIGN AND VISUAL RESOURCES

The use of the proposed zoning text amendment and special permit for the redevelopment of the three additional projected development Sites as well as the proposed One Vanderbilt

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development in the Vanderbilt Corridor would not result in any significant adverse urban design or visual resources impacts.

EXISTING CONDITIONS

Most buildings in the Vanderbilt Corridor are older, early 20th-century buildings ranging in height from seven to 47 stories, with most buildings in the 20- to 30-story range. Most buildings are faced in brick and stone, with large, glass window openings and storefronts at the ground floor. The One Vanderbilt site (Block 1277, Lots 20, 27, 46, and 52) is occupied by four commercial buildings constructed between 1913 and 1923 that range in height from 7 to 22 stories. Each building has ground-floor retail. The buildings on Block 1278, Lot 20 and Block 1282, Lot 21 have stone and glass curtain walls. The buildings on Blocks 1279, Lots 23-25, 28, 45, and 48 and Block 1281, Lot 21 date to the early 20th century and are ornamented with columns and pilasters, arched openings, rustication, cartouches, keystones, floral carvings, and projecting cornices. Most buildings have wide street frontages. Three blocks (Block 1278, Lot 20; Block 1281, Lot 21; and Block 1282, Lot 21) are occupied by single buildings. Block 1279 includes larger buildings with square footprints and two smaller buildings on narrow lots. For the most part, streetwalls are consistent throughout the Vanderbilt Corridor and buildings tend to rise flush from the sidewalk with setbacks at the upper floors. The two buildings on Block 1278, Lot 20 and Block 1282, Lot 21 each have setbacks above the base and culminate in a tower.

The buildings in the Vanderbilt Corridor and on the One Vanderbilt site contribute to the view corridors on Madison and Vanderbilt Avenues. The East 42nd Street view corridor includes the buildings on the One Vanderbilt site. These view corridors are characterized by the tall buildings forming a consistent, high streetwall that includes both older and newer buildings with large footprints and wide street frontages. Buildings have masonry façades and curtain walls of glass, steel, and stone. Longer views are available at intersections with the east-west streets, where longer east-west views include other buildings in the Vanderbilt Corridor and on the One Vanderbilt site, the study area, and more distant buildings outside the study area. There are no visual resources on the One Vanderbilt site or in the Vanderbilt Corridor as these buildings are not distinct buildings that are visually prominent.

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2021)

In the 2021 No-Action condition, the four buildings located on the One Vanderbilt site will be demolished, and it is expected that the 43,313-square-foot One Vanderbilt site will be redeveloped with a single office tower built to the maximum as-of-right density permitted under the existing C5-3 and Midtown Special District zoning regulations (15.0 FAR). The No-Action building would be approximately 678 feet tall and total approximately 811,034 gsf of space. The No-Action building would have a rectilinear massing and the tower portion of the building will have upper-floor setbacks. The 120-foot-tall base would be built to the lot lines and conform to the existing streetwall requirements. The No-Action building would not include a public transit hall within the building; however, the No-Action building would provide a replacement stairway connecting to the mezzanine level of the 42nd Street Shuttle station in accordance with the existing NYCT easement in order to maintain the access provided by the existing subway stair on the site. The No-Action building would not provide new additional pedestrian circulation improvements, as the floor area bonus generated by pedestrian improvements under the Grand Central Subdistrict of the Midtown Special District are only available through a separate discretionary approval (a City Planning Commission special permit). The No-Action building would have typical security bollards at the outer edge of the sidewalk surrounding the site. The

bollards will require a revocable consent from DOT and would also be subject to approval by the New York City Public Design Commission (PDC).

The 2021 No-Action condition does not include an amendment to the City Map to map Vanderbilt Avenue between East 42nd and East 43rd Streets as a public place. That section of Vanderbilt Avenue would, therefore, remain in its current condition as a street that is open to vehicles and no new public open space would be created. Therefore, in the 2021 No-Action condition, there would be no improvements to the pedestrian experience of this segment of Vanderbilt Avenue.

THE FUTURE WITH THE PROPOSED ACTIONS (2021)

In the 2021 With-Action condition, the proposed zoning text amendment could result in the redevelopment of the One Vanderbilt site and the MTA site with buildings with double the FAR that could be developed in the No-Action condition, resulting in substantially larger buildings. This assessment is limited because the height and form of the projected MTA site building is not known at this time. Therefore, further assessment would be required in the future under separate environmental reviews. However, the building that could be developed with the proposed zoning text amendment would be comparable to the scale and bulk of other existing large buildings in the 400-foot urban design and visual resources study area that characterize this area of East Midtown. With 65 stories, the proposed One Vanderbilt development would be taller than other buildings in the study area. However, the proposed One Vanderbilt development and the redevelopment of the MTA site would generally be consistent with the urban design character of Midtown which is famous for its tall building, with buildings in the study area ranging from 30 to 69 stories, and the Chrysler building at 77 stories (plus spire), which is located approximately 750 feet east of the proposed One Vanderbilt site.

The pedestrian experience of the building on the MTA site would be similar with either an FAR of 30.0 or the existing FAR, as pedestrians adjacent to or in close proximity to either site would experience views to the lower floors of a tall building on each site. The proposed One Vanderbilt development would have beneficial streetscape effects that would improve the pedestrian experience through: the building setback on East 42nd Street at the ground floor that would create a wider sidewalk; the building's angled façade on East 42nd Street that would open up views from the west to Grand Central Terminal; the building setback on Madison Avenue that would create a wider sidewalk; ground-floor and second-floor retail with glazing that would activate the adjacent sidewalks and provide visual interest to pedestrians; new public space within the building's northeast corner that would contribute to the pedestrian experience of the building as this amenity would be accessible to the public; and the Vanderbilt Avenue public place that would contribute to the urban design character of this segment of Vanderbilt Avenue and would provide a new public amenity for pedestrians to experience both the new building on the One Vanderbilt site and Grand Central Terminal immediately to the east.

Views from one to two blocks away from the proposed One Vanderbilt development and the MTA site could include the upper portions of these buildings; however, most of the longer views to these buildings would be obstructed or obscured by other existing intervening buildings, as this area is densely developed. More distant views would be similar to the pedestrian experience of other tall buildings in this area of Midtown. Therefore, in both the 2021 No-Action condition and the 2021 With-Action condition, there would be no significant adverse visual resources impacts.

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Visual resources in the study area are described below under “Urban Design and Visual Resources: The Future with the Proposed Actions (2033).” In both the 2021 No-Action condition and the 2021 With-Action condition, views to these visual resources could change from certain vantage points; however, views to these visual resources, though modified, would not be adversely affected, as views would remain available from many locations.

In contrast to the 2021 No-Action building that will be built to the sidewalk line with an approximately 120-foot-tall base, the proposed One Vanderbilt development would be set back from Madison Avenue by 7 feet from the property line, creating a wide sidewalk that would enhance views along this portion of the view corridor, including views to the One Vanderbilt development. On East 42nd Street, the building would angle back from the property line up to 10 feet toward Vanderbilt Avenue, and the building’s southeast corner would be further set back from East 42nd Street and from the public place. These design features would create more pedestrian space at the southeast corner of the development and open up views of the west side of Grand Central Terminal from vantage points on East 42nd Street. In contrast, the 2021 No-Action building would partially obstruct views to the terminal in views from East 42nd Street, as the No-Action building would have a 120-foot-tall base that would rise flush from the lot lines.

Therefore, the proposed One Vanderbilt development and the redevelopment of the MTA site—as compared with the 2021 No-Action condition—would not result in any significant adverse impacts to urban design or visual resources.

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2033)

In the 2033 No-Action condition, the buildings that could be developed on the three additional projected development sites would be comparable to the scale and bulk of other existing large buildings in the 400-foot urban design and visual resources study area that characterize this area of East Midtown. Pedestrians adjacent to or in close proximity to the projected development sites would experience views to the lower floors of a tall building on each site. Views from one to two blocks away from the projected development sites could include the upper portions of these buildings; however, most of the longer views to these buildings would be obstructed or obscured by other existing intervening buildings, as this area is densely developed. More distant views would be similar to the pedestrian experience of other tall buildings in this area of Midtown. Therefore, in the 2033 No-Action condition, there would be no significant adverse visual resources impacts from the new buildings on the projected development sites.

In the No-Action condition (2021 and 2033), the four buildings located on the One Vanderbilt site would be demolished, and it is expected that the 43,313-sf One Vanderbilt site would be redeveloped with a single office tower built to the maximum as-of-right density permitted under the existing C5-3 and Midtown Special District zoning regulations (15.0 FAR). The No-Action building (2021 and 2033) would be approximately 678 feet tall and total approximately 811,034 gsf of space. The No-Action building would have a rectilinear massing and the tower portion of the building will have upper-floor setbacks. The 120-foot-tall base would be built to the lot lines and conform to the existing streetwall requirements. The No-Action building would not include a public transit hall within the building; however, the No-Action building would provide a replacement stairway connecting to the mezzanine level of the 42nd Street Shuttle station in accordance with the existing NYCT easement in order to maintain the access provided by the existing subway stair on the site. The No-Action building would not provide new additional pedestrian circulation improvements, as the floor area bonus generated by pedestrian improvements under the Grand Central Subdistrict of the Midtown Special District are only

available through a separate discretionary approval (a City Planning Commission special permit). The No-Action building would have typical security bollards at the outer edge of the sidewalk surrounding the site. The bollards will require a revocable consent from DOT and would also be subject to PDC approval.

The 2033 No-Action condition does not include an amendment to the City Map to map Vanderbilt Avenue between East 42nd and East 43rd Streets as a public place. That section of Vanderbilt Avenue would, therefore, remain in its current condition as a street that is open to vehicles and no new public open space would be created. Therefore, in the 2033 No-Action condition, there would be no improvements to the pedestrian experience of this segment of Vanderbilt Avenue.

THE FUTURE WITH THE PROPOSED ACTIONS (2033)

In the 2033 With-Action condition, the proposed zoning text amendment could result in the redevelopment of the projected development sites within the Vanderbilt Corridor with buildings with an FAR twice as much as what could be developed in the 2033 No-Action condition, resulting in substantially larger buildings. This assessment is limited because the heights and forms of the projected buildings are not known at this time. Therefore, further assessment in the future would be required under separate environmental reviews. However, the buildings that could be developed with the proposed zoning text amendment would be comparable to the scale and bulk of other existing large buildings in the 400-foot urban design and visual resources study area that characterize this area of East Midtown. With 65 stories, the proposed One Vanderbilt development would be taller than other buildings in the study area. However, the proposed One Vanderbilt development and the redevelopment of the three additional projected development sites within the Vanderbilt Corridor would generally be consistent with the urban design character of Midtown which is famous for its tall building, with buildings in the study area ranging from 30 to 69 stories, and the Chrysler building at 77 stories (plus spire), which is located approximately 750 feet east of the proposed One Vanderbilt site.

The pedestrian experience of the buildings on the projected development sites would be similar with either an FAR of 30.0 or 15.0, as pedestrians adjacent to or in close proximity to either site would experience views to the lower floors of a tall building on each site. The proposed One Vanderbilt development would have beneficial streetscape effects that would improve the pedestrian experience through: the building setback on East 42nd Street at the ground floor that would create a wider sidewalk; the building's angled façade on East 42nd Street that would open up views from the west to Grand Central Terminal; the building setback on Madison Avenue that would create a wider sidewalk; ground-floor and second-floor retail with glazing that would activate the adjacent sidewalks and provide visual interest to pedestrians; new public space within the building's northeast corner that would contribute to the pedestrian experience of the building as this amenity would be accessible to the public; and the Vanderbilt Avenue public place that would contribute to the urban design character of this segment of Vanderbilt Avenue and would provide a new public amenity for pedestrians to experience both the new building on the One Vanderbilt site and Grand Central Terminal immediately to the east.

Views from one to two blocks away from the proposed One Vanderbilt development and either of the projected development sites could include the upper portions of these buildings; however, most of the longer views to these buildings would be obstructed or obscured by other existing intervening buildings, as this area is densely developed. More distant views would be similar to the pedestrian experience of other tall buildings in this area of Midtown. Therefore, in both the

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2033 No-Action condition and with the proposed zoning text amendment, there would be no significant adverse visual resources impacts.

In the 2033 No-Action condition, it is also assumed that the 162,330-square-foot building at 52 Vanderbilt Avenue on Block 1279 (Lot 45) would remain in its current built form and would remain predominantly an office building. In contrast, with the proposed zoning text amendment and special permit for hotel use, the building at 52 Vanderbilt Avenue could be converted from an office building to a hotel. The change in use that could occur on this site with the zoning text amendment and special permit would not adversely affect urban design characteristics of this building or the surrounding study area, nor would it affect any visual resources or view corridors. Therefore, no significant adverse urban design or visual resources impacts would occur as a result of the proposed actions.

As established in the *East Midtown Rezoning and Related Actions FEIS* and as described in Chapter 7, “Urban Design and Visual Resources,” visual resources in the study area include the Frederick F. French Building at 547-551 Fifth Avenue, Grand Central Terminal, the Helmsley Building at 230 Park Avenue, and the MetLife (former PanAm) Building at 200 Park Avenue. The Chrysler Building at 395-405 Lexington Avenue is a visual resource located approximately 750 feet east of the proposed One Vanderbilt site and is visible from certain vantage points within the study area. Views to these visual resources are generally limited to vantage points within one to two blocks, due to existing tall intervening buildings. In both the 2033 No-Action condition and the 2033 With-Action condition, views to these visual resources could change from certain vantage points; however, views to these visual resources, though modified, would not be adversely affected, as views would remain available from many locations.

In contrast to the No-Action building that will be built to the sidewalk line with an approximately 120-foot-tall base, the proposed One Vanderbilt development would be set back from Madison Avenue by 7 feet from the property line, creating a wide sidewalk that would enhance views along this portion of the view corridor, including views to the One Vanderbilt development. On East 42nd Street, the building would angle back from the property line up to 10 feet toward Vanderbilt Avenue, and the building’s southeast corner would be further set back from East 42nd Street and from the public place. These design features would create more pedestrian space at the southeast corner of the development and open up views of the west side of Grand Central Terminal from vantage points on East 42nd Street. In contrast, the No-Action building would partially obstruct views to the terminal in views from East 42nd Street, as the No-Action building would have a 120-foot-tall base that would rise flush from the lot lines.

Therefore, the proposed One Vanderbilt development and the redevelopment of the other Vanderbilt Corridor sites—as compared with the 2033 No-Action condition—would not result in any significant adverse impacts to urban design or visual resources.

H. HAZARDOUS MATERIALS

The potential for hazardous materials on the One Vanderbilt site was evaluated based on Phase I Environmental Site Assessment (ESA) reports and a Subsurface (Phase II) Investigation. The Phase I found a potential for subsurface contamination related to on-site petroleum storage, historical railroad use of the site, and nearby off-site uses. Given the age of the buildings, asbestos-containing materials (ACMs), lead-based paint (LBP), and polychlorinated biphenyls (PCBs) may be present in the existing structures. To reduce the potential for human or environmental exposure during and following construction, an (E) designation for hazardous

materials will be assigned to the One Vanderbilt site that will be administered by the New York City Mayor's Office of Environmental Remediation (OER). Based on the findings of the existing sampling, a RAP and associated CHASP would be prepared for implementation during construction. In addition, during demolition, regulatory requirements pertaining to ACMs, LBP, and PCBs would be followed. Following completion of the work required by the RAP/CHASP, 317 Madison would submit documentation to DEP demonstrating that the work was satisfactorily completed.

Data gathered for the *East Midtown Rezoning and Related Actions FEIS* identified the potential for subsurface contamination at Blocks 1279 (historical railroad use, adjacent to the historical Grand Central depot, and nearby petroleum storage/spills and hazardous waste generators) and 1281 (historical railroad car storage, petroleum storage, a reported petroleum spill and hazardous waste generation on site, and adjacent to historical Grand Central depot, and nearby petroleum storage/spills and hazardous waste generators). As such, prior to any redevelopment of these blocks under the proposed actions, the assessment for potential impacts would be similar to that required for the proposed One Vanderbilt development, and it is therefore likely that (E) designations would be placed on these blocks as part of their environmental review requiring a "Phase II" investigation and subsequent RAP and CHASP. In addition, regulatory requirements relating to ACMs, LBP, and PCBs would be followed.

With these above-described measures, the anticipated redevelopment of the projected development sites pursuant to the proposed actions is not expected to result in any significant adverse impacts related to hazardous materials.

I. WATER AND SEWER INFRASTRUCTURE

This section evaluates the potential for the proposed One Vanderbilt development and additional development in the Vanderbilt Corridor facilitated by the proposed actions to result in significant adverse impacts on the City's water supply, as well as its wastewater and stormwater conveyance and treatment infrastructure. The analysis follows the methodology described in Chapter 9, "Water and Sewer Infrastructure," in accordance with the guidelines of the *CEQR Technical Manual*.

This analysis finds that, while the proposed One Vanderbilt development and the redevelopment of the projected development sites would result in an increase in the sanitary flow from the Vanderbilt Corridor, and therefore an increase in the overall wastewater flow, sewer conveyance near the Vanderbilt Corridor and the treatment capacity at the Newtown Creek wastewater treatment plant (WWTP) is sufficient to handle increased wastewater flow resulting from the proposed actions. Therefore, there would be no significant adverse impacts on wastewater treatment or stormwater conveyance infrastructure.

EXISTING CONDITIONS

CONVEYANCE SYSTEM

The One Vanderbilt site and the three additional projected development sites in the Vanderbilt Corridor are located in a portion of Manhattan that is served by a combined sewer. The three additional projected development sites generally use the same sewer lines as the One Vanderbilt site: lines running west along East 45th Street and East 44th Street connect to a line running south along Madison Avenue. From Madison Avenue, flow is directed to the line running east

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across East 43rd Street and south underneath the One Vanderbilt site. The three additional projected development sites are located in the NCM-037 catchment area, which directs flow to Regulator NC-M45 and combined sewer overflow (CSO) to outfall NCM-037, located at the foot of East 41st Street.¹ Wastewater from the One Vanderbilt Site and the three additional projected development sites is treated at the Newtown Creek WWTP. The maximum permitted capacity for the Newtown Creek WWTP is 310 million gallons per day (mgd), and the average monthly flow over the past 12 months is 215 mgd,² well below the maximum permitted capacity.

SANITARY FLOWS

For purposes of analysis, the amount of sanitary sewage is estimated as all water demand generated by the existing buildings on the One Vanderbilt site and the three additional projected development sites excepting water used by air conditioning, which is typically not discharged to the sewer system. As shown in **Table 19-16**, the existing buildings on the four sites generate an estimated 368,400 gallons per day (gpd) of daily sanitary sewage and have a total estimated water demand of 666,452 gpd.

Table 19-16
Existing Water Consumption and Sewage Generation

Use	Floor Area/Units	Rate*	Consumption (gpd)
Block 1279, Lots 23-25, 48 (MTA)			
Commercial Office	352,171 gsf	0.10 gpd/sf domestic	35,217
		0.17 gpd/sf air conditioning	59,869
Retail	10,950 gsf	0.24 gpd/sf domestic	2,628
		0.17 gpd/sf air conditioning	1,862
Block 1279, Lot 45 (52 Vanderbilt Avenue)			
Commercial Office	152,830 gsf	0.10 gpd/sf domestic	15,283
		0.17 gpd/sf air conditioning	25,981
Retail	9,500 gsf	0.24 gpd/sf domestic	2,280
		0.17 gpd/sf air conditioning	1,615
Block 1281, Lot 21 (Roosevelt Hotel)			
Hotel	1,015 rooms	120 gpd/room/occupant domestic**	243,600
	598,248 gsf	0.17 gpd/sf air conditioning	101,702
One Vanderbilt Site			
Commercial Office	583,569	0.10 gpd/sf domestic	58,357
		0.17 gpd/sf air conditioning	99,207
Retail	45,978	0.24 gpd/sf domestic	11,035
		0.17 gpd/sf air conditioning	7,816
Total Water Supply Demand			666,452
Total Sewage Generation			368,400
Notes: *Rates from <i>CEQR Technical Manual</i> , Table 13-2. **Assumes two occupants per room			

¹ According to DEP records, a portion of the Roosevelt Hotel site on Block 1281 is located in subcatchment area NCM-036 utilizing a line running east along East 46th Street. However, because the site is developed with one building for which site connection records are not available, and the majority of the site is located in the NCM-037 subcatchment area, for the purposes of analysis it is assumed that all wastewater and stormwater from the Roosevelt Hotel site is discharged into subcatchment area NCM-037.

² 12-month period through June 2014.

STORMWATER FLOWS

For the purposes of analysis, it is assumed that the full lot area of each Vanderbilt Corridor site (120,782 square feet total, or 2.77 acres) is covered by rooftop, and the portion of Vanderbilt Avenue located between East 42nd and East 43rd Streets that would be designated as a public place as part of the proposed actions (12,820 square feet) is covered with pavement. **Table 19-17** summarizes the surfaces and surface areas, as well as the weighted runoff coefficient (the fraction of precipitation that becomes surface runoff for each surface type).

Table 19-17
Existing Surface Coverage

Affected CSO Outfall	Surface Type	Roof	Pavement and Walkways	Other	Grass and Soft Scape	Total
NCM-037	Area (percent)	90%	10%	0%	0%	100%
	Surface Area (sq. ft.)	120,782 *	12,820-	-	-	133,602
	Runoff Coefficient**	1.00	0.85	0.85	0.20	0.99
Notes: *Includes lot area of the One Vanderbilt site (43,313 sq. ft.), MTA site (25,051 sq. ft.), 52 Vanderbilt Avenue (9,105 sq. ft.) and the Roosevelt Hotel (43,313 sq. ft.) **Weighted Runoff Coefficient calculations based on the DEP Flow Volume Calculation Matrix provided in the <i>CEQR Technical Manual</i> , retrieved June, 2014.						

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2021)

CONVEYANCE SYSTEM

See Chapter 9, “Water and Sewer Infrastructure,” for a description of changes to the conveyance system in the Vanderbilt Corridor in the No-Action condition.

SANITARY FLOWS

Absent the proposed actions, the four Vanderbilt Corridor sites are expected to generate 382,715 gpd of daily sanitary sewage and have a total water demand of 696,137 gpd in the 2021 No-Action condition (see **Table 19-18**).

STORMWATER FLOWS

While the One Vanderbilt site would be redeveloped in the 2021 No-Action condition, for analysis purposes it is assumed that the new building would occupy the full lot area of the site, similar to the existing building. Similarly, the portion of Vanderbilt Avenue to be designated as a public place will remain fully paved area. Therefore, the surface area of the One Vanderbilt site and the three additional projected development sites would remain fully rooftop area. The surface areas and the weighted runoff coefficient would remain as shown in **Table 19-17**.

THE FUTURE WITH THE PROPOSED ACTIONS (2021)

SANITARY FLOWS

As shown on **Table 19-19**, in the 2021 With-Action condition, the four Vanderbilt Corridor sites are expected to generate 523,511 gpd of daily sanitary sewage and have a total water demand of 1,060,709 gpd.

Table 19-18
2021 No-Action Water Consumption and Sewage Generation

<u>Use</u>	<u>Floor Area/Units</u>	<u>Rate*</u>	<u>Consumption (gpd)</u>
Block 1279, Lots 23-25, 48 (MTA)			
<u>Commercial Office</u>	<u>352,171 gsf</u>	<u>0.10 gpd/sf domestic</u>	<u>35,217</u>
		<u>0.17 gpd/sf air conditioning</u>	<u>59,869</u>
<u>Retail</u>	<u>10,950 gsf</u>	<u>0.24 gpd/sf domestic</u>	<u>2,628</u>
		<u>0.17 gpd/sf air conditioning</u>	<u>1,862</u>
Block 1279, Lot 45 (52 Vanderbilt Avenue)			
<u>Commercial Office</u>	<u>152,830 gsf</u>	<u>0.10 gpd/sf domestic</u>	<u>15,283</u>
		<u>0.17 gpd/sf air conditioning</u>	<u>25,981</u>
<u>Retail</u>	<u>9,500 gsf</u>	<u>0.24 gpd/sf domestic</u>	<u>2,280</u>
		<u>0.17 gpd/sf air conditioning</u>	<u>1,615</u>
Block 1281, Lot 21 (Roosevelt Hotel)			
<u>Hotel</u>	<u>1,015 rooms</u>	<u>120 gpd/room/occupant domestic**</u>	<u>243,600</u>
	<u>598,248 gsf</u>	<u>0.17 gpd/sf air conditioning</u>	<u>101,702</u>
One Vanderbilt Site			
<u>Commercial Office</u>	<u>636,312</u>	<u>0.10 gpd/sf domestic</u>	<u>63,631</u>
		<u>0.17 gpd/sf air conditioning</u>	<u>108,173</u>
<u>Retail</u>	<u>83,648</u>	<u>0.24 gpd/sf domestic</u>	<u>20,076</u>
		<u>0.17 gpd/sf air conditioning</u>	<u>14,220</u>
Total Water Supply Demand			696,137
Total Sewage Generation			382,715
Notes: * Rates from <i>CEQR Technical Manual</i> , Table 13-2.			
**Assumes two occupants per room.			

Table 19-19
2021 With-Action Water Consumption and Sewage Generation

<u>Use</u>	<u>Floor Area/Units</u>	<u>Rate*</u>	<u>Consumption (gpd)</u>
Block 1279, Lots 23-25, 48 (MTA)			
<u>Commercial Office</u>	<u>914,361</u>	<u>0.10 gpd/sf domestic</u>	<u>91,436</u>
		<u>0.17 gpd/sf air conditioning</u>	<u>155,441</u>
<u>Retail</u>	<u>25,051</u>	<u>0.24 gpd/sf domestic</u>	<u>6,012</u>
		<u>0.17 gpd/sf air conditioning</u>	<u>4,259</u>
Block 1279, Lot 45 (52 Vanderbilt Avenue)			
<u>Commercial Office</u>	<u>152,830 gsf</u>	<u>0.10 gpd/sf domestic</u>	<u>15,283</u>
		<u>0.17 gpd/sf air conditioning</u>	<u>25,981</u>
<u>Retail</u>	<u>9,500 gsf</u>	<u>0.24 gpd/sf domestic</u>	<u>2,280</u>
		<u>0.17 gpd/sf air conditioning</u>	<u>1,615</u>
Block 1281, Lot 21 (Roosevelt Hotel)			
<u>Hotel</u>	<u>1,015 rooms</u>	<u>120 gpd/room/occupant domestic**</u>	<u>243,600</u>
	<u>598,248 gsf</u>	<u>0.17 gpd/sf air conditioning</u>	<u>101,702</u>
One Vanderbilt Site			
<u>Commercial Office</u>	<u>1,325,000</u>	<u>0.10 gpd/sf domestic</u>	<u>132,500</u>
		<u>0.17 gpd/sf air conditioning</u>	<u>225,250</u>
<u>Retail</u>	<u>135,000</u>	<u>0.24 gpd/sf domestic</u>	<u>32,400</u>
		<u>0.17 gpd/sf air conditioning</u>	<u>22,950</u>
Total Water Supply Demand			1,060,709
Total Sewage Generation			523,511
Notes: * Rates from <i>CEQR Technical Manual</i> , Table 13-2.			
**Assumes two occupants per room.			

The Vanderbilt Corridor is not located in an area that experiences low water pressure, and the anticipated commercial redevelopment of the One Vanderbilt and MTA sites would generate an

incremental water demand of 364,572 gpd as compared with the 2021 No-Action condition. While this would represent an increase in demand on the New York City water supply system, it does not meet the CEQR Technical Manual threshold requiring a detailed analysis. It is expected that there would be adequate water service to meet the incremental water demand, and that there would be no significant adverse impacts on the City’s water supply.

The incremental sanitary sewage in the 2021 With-Action condition, as compared with the 2021 No-Action condition, would be 140,796 gpd. This incremental increase in sewage generation is approximately 0.07 percent of the average daily flow at the Newtown Creek WWTP (215 mgd) and would not result in an exceedance of the plant’s permitted capacity of 310 mgd. In addition, new and converted buildings are required to utilize low-flow plumbing fixtures in accordance with the New York City Plumbing Code (Local Law 33 of 2007), which would reduce overall sanitary flow to the WWTP. Therefore, the additional development in the Vanderbilt Corridor that could result from the proposed actions would not result in a significant adverse impact to the City’s sanitary sewage conveyance and treatment system.

STORMWATER FLOWS

The projected redevelopment of the MTA site would use either the Grand Central Public Realm Improvement Bonus special permit, the amended ZR Section 81-635 landmark transfer special permit, or a combination of these special permits, and may therefore include additional pedestrian circulation space or open space in order to meet the public space improvement requirement. This public space could contain paved and/or landscaped surface area, and would reduce the rooftop surface area on the site, potentially resulting in a lower weighted runoff coefficient. However, for the purposes of analysis, it is assumed that the full surface area of the MTA site would remain rooftop space, as in existing conditions. The proposed One Vanderbilt development would include 2,171 square feet of paved surface area for widened sidewalk areas, with the remaining 41,142 square feet on the site remaining rooftop space. The proposed One Vanderbilt public place and widened sidewalk areas would have a total of 14,991 square feet of paved surface area, and thus the weighted runoff coefficient would decrease slightly from the 2021 No-Action condition. Therefore, in the 2021 With-Action condition, the surface area of the One Vanderbilt site and the three additional projected development sites and the weighted runoff coefficient would decrease slightly (see Table 19-20).

**Table 19-20
2021 With Action Surface Coverage**

Affected CSO Outfall	Surface Type	Roof	Pavement and Walkways	Other	Grass and Soft Scope	Total
NCM-037	Area (percent)	89%	11%	0%	0%	100%
	Surface Area (sq. ft.)	118,611*	14,991	=	=	133,602
	Runoff Coefficient**	1.00	0.85	0.85	0.20	0.98
Notes: *Includes roof area of the One Vanderbilt site (41,142 sq. ft.), MTA site (25,051 sq. ft.), 52 Vanderbilt Avenue (9,105 sq. ft.) and the Roosevelt Hotel (43,313 sq. ft.) **Weighted Runoff Coefficient calculations based on the DEP Flow Volume Calculation Matrix provided in the CEQR Technical Manual, retrieved June, 2014.						

The DEP Flow Volume Calculation Matrix was completed for the existing conditions and the 2021 With-Action condition for the Vanderbilt Corridor, using the sanitary and stormwater flow calculations described above. The calculations from the Flow Volume Calculation Matrix help to determine the change in wastewater flow volumes to the combined sewer system from existing to 2021 With-Action conditions, and include four rainfall volume scenarios with varying durations. The summary tables of the Flow Volume Calculation Matrix are included in Table 19-21.

Table 19-21

DEP Flow Volume Matrix: Existing and 2021 With-Action Volume Comparison

<u>Rainfall Volume (in.)</u>	<u>Rainfall Duration (hr.)</u>	<u>Runoff Volume to Direct Drainage (MG)</u>	<u>Runoff Volume to CSS (MG)*</u>	<u>Sanitary Volume to CSS (MG)</u>	<u>Total Volume to CSS (MG)</u>	<u>Runoff Volume to River (MG)</u>	<u>Runoff Volume to CSS (MG)*</u>	<u>Sanitary Volume to CSS (MG)</u>	<u>Total Volume to CSS (MG)</u>	<u>Increased Total Volume to CSS (MG)*</u>
NCM-037		Existing				With-Action				NCM-037 Increment
		133,602 sq. ft. (3.07 acres)**				133,602 sq. ft. (3.07 acres)**				
0.00	3.80	0.00	0.00	0.06	0.06	0.00	0.00	0.08	0.08	0.02
0.40	3.80	0.00	0.03	0.06	0.09	0.00	0.03	0.08	0.12	0.03
1.20	11.30	0.00	0.10	0.17	0.27	0.00	0.10	0.25	0.34	0.07
2.50	19.50	0.00	0.21	0.30	0.50	0.00	0.20	0.43	0.63	0.13
Notes:										
* Assumes no on-site detention or BMPs for purposes of calculations										
** Includes lot area of the One Vanderbilt site (43,313 sq. ft.) and the Vanderbilt Avenue public place (12,820 sq. ft.), MTA site (25,051 sq. ft.), 52 Vanderbilt Avenue (9,105 sq. ft.), and the Roosevelt Hotel (43,313 sq. ft.)										
CSS = Combined Sewer System; MG = Million Gallons										

As shown in **Table 19-21**, CSO flow to outfall NCM-037 would increase incrementally in all rainfall volume scenarios. The increase in flow is attributable entirely to the increase in sanitary flow resulting from the increased commercial density on the One Vanderbilt and MTA sites.

The Flow Volume Matrix calculations do not reflect the use of any sanitary and stormwater source control best management practices (BMPs) to reduce sanitary flow and stormwater runoff volumes to the combined sewer system. All new developments or alterations requiring a connection to the sewer system are subject to DEP regulations regarding stormwater release as part of the site connection approval process. Specifically, new developments would be required to incorporate stormwater BMPs in order to achieve the required stormwater release rate. These BMPs may include on-site stormwater detention systems such as green roofs or seepage basins.

The incorporation of appropriate sanitary flow and stormwater source control BMPs that would be required as part of the site connection approval process, with the review and approval of DEP, would reduce the overall volume of sanitary sewer discharge and stormwater runoff as well as the peak stormwater runoff rate from the additional developments within the Vanderbilt Corridor. Sewer conveyance near the Vanderbilt Corridor and the treatment capacity at the Newtown Creek WWTP is sufficient to handle wastewater flow resulting from the additional development resulting from the proposed actions; therefore, there would be no significant adverse impacts on wastewater treatment or stormwater conveyance infrastructure.

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2033)

CONVEYANCE SYSTEM

See Chapter 9, “Water and Sewer Infrastructure,” for a description of changes to the conveyance system in the Vanderbilt Corridor in the No-Action condition.

SANITARY FLOWS

In 2033 absent the proposed actions, the One Vanderbilt site and the projected development sites are expected to generate 239,024 gpd of daily sanitary sewage and have a total water demand of 606,923 gpd in the 2033 No-Action condition (see **Table 19-22**).

Table 19-22
2033 No-Action Water Consumption and Sewage Generation

Use	Floor Area/Units	Rate*	Consumption (gpd)
Block 1279, Lots 23-25, 48 (MTA)			
Commercial Office	444,655 gsf	0.10 gpd/sf domestic	44,466
		0.17 gpd/sf air conditioning	75,591
Retail	25,051 gsf	0.24 gpd/sf domestic	6,012
		0.17 gpd/sf air conditioning	4,259
Block 1279, Lot 45 (52 Vanderbilt Avenue)			
Commercial Office	152,830 gsf	0.10 gpd/sf domestic	15,283
		0.17 gpd/sf air conditioning	25,981
Retail	9,500 gsf	0.24 gpd/sf domestic	2,280
		0.17 gpd/sf air conditioning	1,615
Block 1281, Lot 21 (Roosevelt Hotel)			
Commercial Office	768,806	0.10 gpd/sf domestic	76,881
		0.17 gpd/sf air conditioning	130,697
Retail	43,313	0.24 gpd/sf domestic	10,395
		0.17 gpd/sf air conditioning	7,363
One Vanderbilt Site			
Commercial Office	636,312	0.10 gpd/sf domestic	63,631
		0.17 gpd/sf air conditioning	108,173
Retail	83,648	0.24 gpd/sf domestic	20,076
		0.17 gpd/sf air conditioning	14,220
Total Water Supply Demand			606,923
Total Sewage Generation			239,024
Notes: * Rates from <i>CEQR Technical Manual</i> , Table 13-2.			

STORMWATER FLOWS

While the One Vanderbilt site and two of the projected development sites in the Vanderbilt Corridor would be redeveloped with new commercial buildings in the 2033 No-Action condition, for analysis purposes it is assumed that the new buildings would occupy the full lot areas of the three sites, similar to the existing buildings. Similarly, the portion of Vanderbilt Avenue to be designated as a public place will remain fully paved area. Therefore, the surface area of the One Vanderbilt site and the three additional projected development sites would remain fully rooftop area. The surface areas and the weighted runoff coefficient would remain as shown in **Table 19-20**.

THE FUTURE WITH THE PROPOSED ACTIONS (2033)

SANITARY FLOWS

As shown on **Table 19-23**, in the 2033 With-Action condition, the four sites are expected to generate 490,835 gpd of daily sanitary sewage and have a total water demand of 1,202,451 gpd.

The Vanderbilt Corridor is not located in an area that experiences low water pressure, and the anticipated commercial redevelopment of the One Vanderbilt, MTA, and Roosevelt Hotel sites and the conversion of 52 Vanderbilt Avenue into a hotel would generate an incremental water demand of 595,528 gpd as compared with the 2033 No-Action condition. While this would represent an increase in demand on the New York City water supply system, it does not meet the *CEQR Technical Manual* threshold requiring a detailed analysis. It is expected that there would be adequate water service to meet the incremental water demand, and that there would be no significant adverse impacts on the City’s water supply.

Table 19-23

2033 With-Action Water Consumption and Sewage Generation

Use	Floor Area/Units	Rate*	Consumption (gpd)
Block 1279, Lots 23-25, 48 (MTA)			
Commercial Office	914,361 gsf	0.10 gpd/sf domestic	91,436
		0.17 gpd/sf air conditioning	155,441
Retail	25,051 gsf	0.24 gpd/sf domestic	6,012
		0.17 gpd/sf air conditioning	4,259
Block 1279, Lot 45 (52 Vanderbilt Avenue)			
Hotel	250 rooms	120 gpd/room/occupant domestic**	60,000
	162,330 gsf	0.17 gpd/sf air conditioning	27,596
Block 1281, Lot 21 (Roosevelt Hotel)			
Commercial Office	1,580,924 gsf	0.10 gpd/sf domestic	158,092
		0.17 gpd/sf air conditioning	268,757
Retail	43,313 gsf	0.24 gpd/sf domestic	10,395
		0.17 gpd/sf air conditioning	7,363
One Vanderbilt Site			
Commercial Office	1,325,000	0.10 gpd/sf domestic	132,500
		0.17 gpd/sf air conditioning	225,250
Retail	135,000	0.24 gpd/sf domestic	32,400
		0.17 gpd/sf air conditioning	22,950
Total Water Supply Demand			1,202,451
Total Sewage Generation			490,835
Notes:			
* Rates from <i>CEQR Technical Manual</i> , Table 13-2.			
** Assumes two occupants per room			

The incremental sanitary sewage generated from the proposed One Vanderbilt development and the projected development sites, as compared with the 2033 No-Action condition, would be 251,811 gpd. This incremental increase in sewage generation is approximately 0.12 percent of the average daily flow at the Newtown Creek WWTP (215 mgd) and would not result in an exceedance of the plant’s permitted capacity of 310 mgd. In addition, new and converted buildings are required to utilize low-flow plumbing fixtures in accordance with the New York City Plumbing Code (Local Law 33 of 2007), which would reduce overall sanitary flow to the WWTP. Therefore, the additional development in the Vanderbilt Corridor that could result from the proposed actions would not result in a significant adverse impact to the City’s sanitary sewage conveyance and treatment system.

STORMWATER FLOWS

As described in Chapter 1, “Project Description,” the proposed actions include a text amendment to create the Grand Central Public Realm Improvement Bonus special permit. The projected redevelopment of the MTA and Roosevelt Hotel sites would utilize either this special permit, the amended ZR Section 81-635 landmark transfer special permit, or a combination of these special permits, and thus may include additional pedestrian circulation space (such as widened sidewalks similar to those included in the proposed One Vanderbilt building) or open space in order to meet the public space improvement requirement. These public spaces would contain paved and/or landscaped surface area, and would reduce the rooftop surface area on each site, potentially resulting in a lower weighted runoff coefficient. However, for the purposes of analysis, it is assumed that the full surface area of both the MTA and Roosevelt Hotel sites would remain rooftop space, as in existing conditions. The projected conversion of 52 Vanderbilt Avenue into a hotel would not affect the surface area of the site, which would remain fully rooftop area. The proposed One Vanderbilt development would include 2,171 square feet of paved surface area for widened sidewalk areas, with the remaining 41,142 square feet on the site remaining rooftop space. The proposed One Vanderbilt public place and widened

sidewalk areas would have a total of 14,991 square feet of paved surface area, and thus the weighted runoff coefficient would decrease slightly from the 2033 No-Action condition. Therefore, in the 2033 With-Action condition, the surface area of the One Vanderbilt site and the three additional projected development sites and the weighted runoff coefficient would decrease slightly (see **Table 19-24**).

Table 19-24
Existing Surface Coverage

Affected CSO Outfall	Surface Type	Roof	Pavement and Walkways	Other	Grass and Soft Scape	Total
NCM-037	Area (percent)	89%	11%	0%	0%	100%
	Surface Area (sq. ft.)	118,611*	14,991	-	-	133,602
	Runoff Coefficient**	1.00	0.85	0.85	0.20	0.98
Notes: *Includes roof area of the One Vanderbilt site (41,142 sq. ft.), MTA site (25,051 sq. ft.), 52 Vanderbilt Avenue (9,105 sq. ft.) and the Roosevelt Hotel (43,313 sq. ft.) **Weighted Runoff Coefficient calculations based on the DEP Flow Volume Calculation Matrix provided in the <i>CEQR Technical Manual</i> , retrieved June, 2014.						

The DEP Flow Volume Calculation Matrix was completed for the existing conditions and the One Vanderbilt site and the three additional projected development sites in the Vanderbilt Corridor (the With-Action condition), using the sanitary and stormwater flow calculations described above. The calculations from the Flow Volume Calculation Matrix help to determine the change in wastewater flow volumes to the combined sewer system from existing to With-Action conditions, and include four rainfall volume scenarios with varying durations. The summary tables of the Flow Volume Calculation Matrix are included in **Table 19-25**.

Table 19-25
DEP Flow Volume Matrix: Existing and 2033 With-Action Volume Comparison

Rainfall Volume (in.)	Rainfall Duration (hr.)	Runoff Volume to Direct Drainage (MG)	Runoff Volume to CSS (MG)*	Sanitary Volume to CSS (MG)	Total Volume to CSS (MG)	Runoff Volume to River (MG)	Runoff Volume to CSS (MG)*	Sanitary Volume to CSS (MG)	Total Volume to CSS (MG)	Increased Total Volume to CSS (MG)*
NCM-037		Existing 133,602 sq. ft. (3.07 acres)**				With-Action 133,602 sq. ft. (3.07 acres)**				NCM-037 Increment
0.00	3.80	0.00	0.00	0.06	0.06	0.00	0.00	0.08	0.08	0.02
0.40	3.80	0.00	0.03	0.06	0.09	0.00	0.03	0.08	0.11	0.02
1.20	11.30	0.00	0.10	0.17	0.27	0.00	0.10	0.23	0.33	0.06
2.50	19.50	0.00	0.21	0.30	0.50	0.00	0.20	0.40	0.60	0.10
Notes: * Assumes no on-site detention or BMPs for purposes of calculations ** Includes lot area of the One Vanderbilt site (43,313 sq. ft.) and the Vanderbilt Avenue public place (12,820 sq. ft.), MTA site (25,051 sq. ft.), 52 Vanderbilt Avenue (9,105 sq. ft.), and the Roosevelt Hotel (43,313 sq. ft.) CSS = Combined Sewer System; MG = Million Gallons										

As shown in **Table 19-25**, CSO flow to outfall NCM-037 would increase incrementally in all rainfall volume scenarios. The increase in flow is attributable entirely to the increase in sanitary flow resulting from the increased commercial density on the One Vanderbilt site and the three additional projected development sites.

The Flow Volume Matrix calculations do not reflect the use of any sanitary and stormwater source control best management practices (BMPs) to reduce sanitary flow and stormwater runoff volumes to the combined sewer system. All new developments or alterations requiring a connection to the sewer system are subject to DEP regulations regarding stormwater release as part of the site connection approval process. Specifically, new developments would be required to incorporate stormwater BMPs in order to achieve the required stormwater release rate. These BMPs may include on-site stormwater detention systems such as green roofs or seepage basins.

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The incorporation of appropriate sanitary flow and stormwater source control BMPs that would be required as part of the site connection approval process, with the review and approval of DEP, would reduce the overall volume of sanitary sewer discharge and stormwater runoff as well as the peak stormwater runoff rate from the additional developments within the Vanderbilt Corridor. Sewer conveyance near the Vanderbilt Corridor and the treatment capacity at the Newtown Creek WWTP is sufficient to handle wastewater flow resulting from the additional development resulting from the proposed actions; therefore, there would be no significant adverse impacts on wastewater treatment or stormwater conveyance infrastructure.

J. SOLID WASTE AND SANITATION SERVICES

This section discusses the solid waste generation of the four sites in the Vanderbilt Corridor anticipated to be redeveloped as a result of the proposed actions, based on standard waste generation rates provided in the *CEQR Technical Manual*.

This analysis finds that the increase in solid waste generation within the Vanderbilt Corridor resulting from the proposed actions would not overburden the City’s solid waste management capacity and would not have significant adverse impacts on solid waste and sanitation services.

EXISTING CONDITIONS

The One Vanderbilt site and the three additional projected development sites in the Vanderbilt Corridor are currently developed with commercial uses. **Table 19-26** summarizes the existing solid waste generation of these sites, which totals 100,902 pounds (50.5 tons) per week.

**Table 19-26
Existing Conditions: Solid Waste Generation**

Use	Floor Area	Employees ¹	Solid Waste Generation Rate (pounds per employee per week) ²	Solid Waste Generation (pounds per week)
Block 1279, Lots 23-25, 48 (MTA)				
Office	352,171 gsf	1,409	13	18,317
Retail	10,950 gsf	33	79	2,607
Block 1279, Lot 45 (52 Vanderbilt Avenue)				
Office	152,830 gsf	611	13	7,943
Retail	9,500 gsf	29	79	2,291
Block 1281, Lot 21 (Roosevelt Hotel)				
Hotel	598,248 gsf (1,015 rooms)	380	75	28,500
One Vanderbilt Site				
Office	583,569	2,334	13	30,342
Retail	45,978	138	79	10,902
Total				100,902
Notes:				
1. Based on estimates of one worker per 250 gsf of office space, one worker per 333 gsf of retail space, and one worker per 380 hotel rooms.				
2. See Table 14-1 of the <i>CEQR Technical Manual</i> .				

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2021)

Absent the proposed actions, by 2021 the solid waste generation in the Vanderbilt Corridor would increase to 112,572 pounds (56.3 tons) per week (see **Table 19-27**).

Table 19-27
2021 No-Action Condition: Solid Waste Generation

<u>Use</u>	<u>Floor Area¹</u>	<u>Employees²</u>	<u>Solid Waste Generation Rate (pounds per employee per week)³</u>	<u>Solid Waste Generation (pounds per week)</u>
Block 1279, Lots 23-25, 48 (MTA)				
Office	352,171 gsf	1,409	13	18,317
Retail	10,950 gsf	33	79	2,607
Block 1279, Lot 45 (52 Vanderbilt Avenue)				
Office	152,830 gsf	611	13	7,943
Retail	9,500 gsf	29	79	2,291
Block 1281, Lot 21 (Roosevelt Hotel)				
Hotel	598,248 gsf (1,015 rooms)	380	75	28,500
One Vanderbilt Site				
Office	636,312	2,545	13	33,085
Retail	83,648	251	79	19,829
Total				112,572
Notes:				
1. See Table 19-1.				
2. Based on estimates of one worker per 250 gsf of office space, one worker per 333 gsf of retail space, and one worker per 2.67 hotel rooms.				
3. See Table 14-1 of the CEQR Technical Manual.				

THE FUTURE WITH THE PROPOSED ACTIONS (2021)

With the proposed actions in 2021, the solid waste generation in the Vanderbilt Corridor would be 226,962 pounds (113.5 tons) per week (see Table 19-28). Therefore, as a result of the proposed actions in 2021, the solid waste generation in the Vanderbilt Corridor would increase by 114,390 pounds (57.2 tons) per week as compared with the No-Action condition.

Conservatively assuming 12 tons per truck, the 57.2 additional tons of solid waste per week on the Vanderbilt Corridor resulting from the proposed actions would require approximately five additional truck trips per week. This minimal increase would not overburden existing commercial solid waste handling services. Therefore, the developments anticipated to occur in the Vanderbilt Corridor as a result of the proposed actions in 2021 would not overburden the City’s solid waste management capacity and would not have significant adverse impacts on solid waste and sanitation services.

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2033)

Absent the proposed actions in 2033, the solid waste generation in the Vanderbilt Corridor would increase to 142,445 pounds (71.2 tons) per week (see Table 19-29).

THE FUTURE WITH THE PROPOSED ACTIONS (2033)

In the future with the proposed actions in 2033, the solid waste generation in the Vanderbilt Corridor would be 295,703 pounds (147.9 tons) per week. Therefore, as a result of the proposed actions, the solid waste generation in the Vanderbilt Corridor would increase by 153,258 pounds (76.7 tons) per week as compared with the No-Action condition in 2033 (see Table 19-30).

Table 19-28

2021 With-Action Condition: Solid Waste Generation

Use	Floor Area ¹	Employees ²	Solid Waste Generation Rate (pounds per employee per week) ³	Solid Waste Generation (pounds per week)
Block 1279, Lots 23-25, 48 (MTA Building)				
Office	914,361 gsf	3,657	13	47,541
Retail	25,051 gsf	75	79	5,925
Block 1279, Lot 45 (52 Vanderbilt Avenue)				
Office	152,830 gsf	611	13	7,943
Retail	9,500 gsf	29	79	2,291
Block 1281, Lot 21 (Roosevelt Hotel)				
Hotel	598,248 gsf (1,015 rooms)	380	75	28,500
One Vanderbilt Site				
Office	1,079,000 gsf	4,316	13	56,108
Retail	53,000 gsf	159	79	12,561
Restaurant	27,000 gsf	81	251	20,331
Trading Floor	246,000 gsf	2,460	13	31,980
Observation Deck/Rooftop Amenity Space	55,000 gsf	275	79	21,725
Total				226,962
Notes:				
1. See Table 19-1.				
2. Based on estimates of one worker per 250 gsf of office space, one worker per 333 gsf of retail or restaurant space, one worker per 100 gsf of trading floor space, one worker per 200 gsf of observation deck/rooftop amenity space, and one worker per 2.67 hotel rooms.				
2. See Table 14-1 of the <i>CEQR Technical Manual</i> .				

Table 19-29

2033 No-Action Condition: Solid Waste Generation

Use	Floor Area ¹	Employees ²	Solid Waste Generation Rate (pounds per employee per week) ³	Solid Waste Generation (pounds per week)
Block 1279, Lots 23-25, 48 (MTA)				
Office	444,655 gsf	1,779	13	23,127
Retail	25,051	75	79	5,925
Block 1279, Lot 45 (52 Vanderbilt Avenue)				
Office	152,830 gsf	611	13	7,943
Retail	9,500 gsf	29	79	2,291
Block 1281, Lot 21 (Roosevelt Hotel)				
Office	768,806 gsf	3,075	13	39,975
Retail	43,313 gsf	130	79	10,270
One Vanderbilt Site				
Office	636,312	2,545	13	33,085
Retail	83,648	251	79	19,829
Total				142,445
Notes:				
1. See Table 19-1.				
2. Based on estimates of one worker per 250 gsf of office space, one worker per 333 gsf of retail space, and one worker per 2.67 hotel rooms.				
2. See Table 14-1 of the <i>CEQR Technical Manual</i> .				

Table 19-30
2033 With-Action Condition: Solid Waste Generation

Use	Floor Area ¹	Employees ²	Solid Waste Generation Rate (pounds per employee per week) ³	Solid Waste Generation (pounds per week)
Block 1279, Lots 23-25, 48 (MTA Building)				
Office	914,361 gsf	3,657	13	47,541
Retail	25,051 gsf	75	79	5,925
Block 1279, Lot 45 (52 Vanderbilt Avenue)				
Hotel	162,330 gsf (250 rooms)	94	75	7,050
Block 1281, Lot 21 (Roosevelt Hotel)				
Office	1,580,924 gsf	6,324	13	82,212
Retail	43,313 gsf	130	79	10,270
One Vanderbilt Site				
Office	1,079,000 gsf	4,316	13	56,108
Retail	53,000 gsf	159	79	12,561
Restaurant	27,000 gsf	81	251	20,331
Trading Floor	246,000 gsf	2,460	13	31,980
Observation Deck/Rooftop Amenity Space	55,000 gsf	275	79	21,725
Total				295,703
Notes:	1. See Table 19-1. 2. Based on estimates of one worker per 250 gsf of office space, one worker per 333 gsf of retail or restaurant space, one worker per 100 gsf of trading floor space, one worker per 200 gsf of observation deck/rooftop amenity space, and one worker per 2.67 hotel rooms. 2. See Table 14-1 of the <i>CEQR Technical Manual</i> .			

Conservatively assuming 12 tons per truck, the 76.7 additional tons of solid waste per week on the Vanderbilt Corridor resulting from the proposed actions would require approximately seven additional truck trips per week. This minimal increase would not overburden existing commercial solid waste handling services. Therefore, the developments anticipated to occur in the Vanderbilt Corridor as a result of the proposed actions in 2033 would not overburden the City’s solid waste management capacity and would not have significant adverse impacts on solid waste and sanitation services.

K. ENERGY

As recommended by the *CEQR Technical Manual*, this section projects the amount of energy consumption required by the development anticipated to occur in the Vanderbilt Corridor as a result of the proposed actions. This analysis finds that the increase in energy consumption is a negligible change that would not overburden the electrical generation and transmission system, therefore the development anticipated to occur in the Vanderbilt Corridor as a result of the proposed actions would not result in significant adverse impacts on energy.

EXISTING CONDITIONS

Table 19-31 summarizes the existing energy consumption of the One Vanderbilt site and the three additional projected development sites in the Vanderbilt Corridor, which totals 379,227 million British Thermal Units (BTUs) per year.

Table 19-31
Existing Conditions: Energy Consumption

Use	Floor Area ¹	Energy Consumption (Million BTUs/year) ²
Block 1279, Lots 23-25, 48 (MTA)		
Office	352,171 gsf	76,175
Retail	10,950 gsf	2,368
Block 1279, Lot 45 (52 Vanderbilt Avenue)		
Office	152,830 gsf	33,057
Retail	9,500 gsf	2,055
Block 1281, Lot 21 (Roosevelt Hotel)		
Hotel	598,248 gsf (1,015 rooms)	129,401
One Vanderbilt Site		
Office	583,569	126,226
Retail	45,978	9,945
Total		379,227
Notes:		
1. See Table 19-1 .		
2. Energy consumption for office, retail, and hotel uses are all based on the annual commercial consumption rate of 216.3 Thousand BTUs (MBtus) per square foot from Table 15-1 of the <i>CEQR Technical Manual</i> .		

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2021)

With the redevelopment of the One Vanderbilt site under existing zoning, the energy consumption of the One Vanderbilt site and the three additional projected development sites in the Vanderbilt Corridor would increase to 398,783 million BTUs per year (see **Table 19-32**).

Table 19-32
2021 No-Action Condition: Energy Consumption

Use	Floor Area ¹	Energy Consumption (Million BTUs/year) ²
Block 1279, Lots 23-25, 48 (MTA)		
Office	352,171 gsf	76,175
Retail	10,950 gsf	2,368
Block 1279, Lot 45 (52 Vanderbilt Avenue)		
Office	152,830 gsf	33,057
Retail	9,500 gsf	2,055
Block 1281, Lot 21 (Roosevelt Hotel)		
Hotel	598,248 gsf (1,015 rooms)	129,401
One Vanderbilt Site		
Office	636,312	137,634
Retail	83,648	18,093
Total		398,783
Notes:		
1. See Table 19-1 .		
2. Energy consumption for office, retail, and hotel uses are all based on the annual commercial consumption rate of 216.3 Thousand BTUs (MBtus) per square foot from Table 15-1 of the <i>CEQR Technical Manual</i> .		

THE FUTURE WITH THE PROPOSED ACTIONS (2021)

With the proposed One Vanderbilt development and the anticipated redevelopment of the MTA site with a 30 FAR commercial building, the energy consumption in the Vanderbilt Corridor would be 724,748 million BTUs per year (see **Table 19-33**). Therefore, as a result of the proposed actions in 2021, the energy consumption in the Vanderbilt Corridor would increase by 325,964 million BTUs per year as compared with the No-Action condition.

The incremental increase in energy consumption in the Vanderbilt Corridor as a result of the proposed actions in 2021 would be considered a negligible change, compared with the annual electrical consumption within Con Ed’s New York City and Westchester County service area. In addition, as a condition of the special permits for the Grand Central Public Realm Improvement Bonus or landmark transfer bonus, developments in the Vanderbilt Corridor would be required to meet energy performance standards that would likely result in a reduction of energy consumption per square foot of space. Therefore, the development anticipated to occur in the Vanderbilt Corridor as a result of the proposed actions in 2021 would not result in significant adverse impacts on energy.

**Table 19-33
2021 With-Action Condition: Energy Consumption**

Use	Floor Area¹	Energy Consumption (Million BTUs/year)²
Block 1279, Lots 23-25, 48 (MTA Building)		
Office	914,361 gsf	197,776
Retail	25,051 gsf	5,419
Block 1279, Lot 45 (52 Vanderbilt Avenue)		
Office	152,830 gsf	33,057
Retail	9,500 gsf	2,055
Block 1281, Lot 21 (Roosevelt Hotel)		
Hotel	598,248 gsf (1,015 rooms)	129,401
One Vanderbilt Site		
Commercial ³	1,803,500	390,097
Total		724,748
Notes:		
1. See <u>Table 19-1</u> .		
2. Energy consumption for office, retail, and hotel uses are all based on the annual commercial consumption rate of 216.3 MBTUs per square foot from <u>Table 15-1 of the CEQR Technical Manual</u> .		
3. Energy consumption of the proposed One Vanderbilt development is based on the annual commercial consumption rate of 216.3 MBTUs per square foot for all uses (office, trading floor, retail, restaurant, observation deck/rooftop amenity space, circulation, mechanical, core, back-of-house, and loading areas).		

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2033)

As shown in **Table 19-34**, with the redevelopment of the One Vanderbilt site and the MTA and Roosevelt Hotel sites under existing zoning, the energy consumption of the One Vanderbilt site and the three additional projected development sites in the Vanderbilt Corridor would increase to 468,099 million BTUs per year in the 2033 No-Action condition.

THE FUTURE WITH THE PROPOSED ACTIONS (2033)

With the proposed One Vanderbilt development, the anticipated redevelopment of the MTA and Roosevelt Hotel sites with 30 FAR commercial buildings, and the conversion of the building at 52 Vanderbilt Avenue to hotel use, the energy consumption on the One Vanderbilt site and the three additional projected development sites in the Vanderbilt Corridor would be 979,727 million BTUs per year in the 2033 With-Action condition, as shown in **Table 19-35**. Therefore, as a result of the proposed actions, the energy consumption in the Vanderbilt Corridor would increase by 511,628 million BTUs per year as compared with the 2033 No-Action condition.

Table 19-34

2033 No-Action Condition: Energy Consumption

Use	Floor Area ¹	Energy Consumption (Million BTUs/year) ²
Block 1279, Lots 23-25, 48 (MTA)		
Office	444,655	96,179
Retail	25,051	5,419
Block 1279, Lot 45 (52 Vanderbilt Avenue)		
Office	152,830 gsf	33,057
Retail	9,500 gsf	2,055
Block 1281, Lot 21 (Roosevelt Hotel)		
Office	768,806	166,293
Retail	43,313	9,369
One Vanderbilt Site		
Office	636,312	137,634
Retail	83,648	18,093
Total		468,099
Notes:		
1. See Table 19-1 .		
2. Energy consumption for office, retail, and hotel uses are all based on the annual commercial consumption rate of 216.3 Thousand BTUs (MBtus) per square foot from Table 15-1 of the <i>CEQR Technical Manual</i> .		

Table 19-35

2033 With-Action Condition: Energy Consumption

Use	Floor Area ¹	Energy Consumption (Million BTUs/year) ²
Block 1279, Lots 23-25, 48 (MTA Building)		
Office	914,361 gsf	197,776
Retail	25,051 gsf	5,419
Block 1279, Lot 45 (52 Vanderbilt Avenue)		
Hotel	162,330 gsf (250 rooms)	35,112
Block 1281, Lot 21 (Roosevelt Hotel)		
Office	1,580,924 gsf	341,954
Retail	43,313 gsf	9,369
One Vanderbilt Site		
Commercial ³	1,803,500	390,097
Total		979,727
Notes:		
1. See Table 19-1 .		
2. Energy consumption for office, retail, and hotel uses are all based on the annual commercial consumption rate of 216.3 MBtus per square foot from Table 15-1 of the <i>CEQR Technical Manual</i> .		
3. Energy consumption of the proposed One Vanderbilt development is based on the annual commercial consumption rate of 216.3 MBtus per square foot for all uses (office, trading floor, retail, restaurant, observation deck/rooftop amenity space, circulation, mechanical, core, back-of-house, and loading areas).		

Within New York City, electricity is generated and delivered to most users by Consolidated Edison (Con Edison) as well as a number of independent power companies. Compared with the approximately 353 trillion BTUs of energy consumed annually within Con Edison’s New York City and Westchester County service area, the incremental increase in energy consumption in the Vanderbilt Corridor as a result of the proposed actions in 2033 would be considered a negligible change (approximately 0.14 percent of Con Edison’s annual consumption). In addition, as a condition of the special permits for the Grand Central Public Realm Improvement Bonus or landmark transfer bonus, developments in the Vanderbilt Corridor would be required

to meet energy performance standards that would likely result in a reduction of energy consumption per square foot of space. Therefore, the development anticipated to occur in the Vanderbilt Corridor as a result of the proposed actions in 2033 would not result in significant adverse impacts on energy.

L. TRANSPORTATION

This section evaluates the potential transportation-related impacts in 2021 and 2033 associated with development afforded by the proposed zoning text amendment within the Vanderbilt Corridor.

2021

To address the potential transportation-related impacts in 2021, cumulative trip generation estimates using the same travel demand assumptions presented in Chapter 10, “Transportation,” were prepared for a reasonable worst-case development scenario on the One Vanderbilt site (Block 1277), as well as the projected development on the MTA site. Table 19-36 provides a summary of the development program assumptions for the two blocks under the 2021 No-Action and With-Action conditions, as well as the development increments that would be subject to the impact analyses presented below. The resulting trip estimates from these development program assumptions are presented in Tables 19-37 to 19-39.

Table 19-36
2021 Vanderbilt Corridor Development Program Comparison

Use	2021 No-Action As-of-Right Development		2021 With-Action under Proposed Actions		Development Increments Subject to Impact Analysis	
	Block 1277 (AOR)	Block 1279 (Existing)	Block 1277	Block 1279	Block 1277	Block 1279
Office (gsf)	636,312	352,171	1,079,000	914,361	442,688	562,190
Trading Floor (gsf)	0	0	246,000	0	246,000	0
Local Retail (gsf)	20,912	10,950	13,000	25,051	-7,910	14,101
Destination Retail (gsf)	62,736	0	40,000	0	-22,740	0
Restaurant (gsf)	0	0	27,000	0	27,000	0
Roof-top Amenity (gsf)	0	0	55,000	0	55,000	0

Table 19-37
2021 Vanderbilt Corridor No-Action Trip Generation Summary

Peak Hour	In/Out	Person Trips							Vehicle Trips						
		Auto	Taxi	Subway	City Bus	Tour Bus	Walk	Railroad	Total	In/Out	Auto	Taxi	Tour Bus	Delivery	Total
AM	In	158	56	1,039	320	0	237	406	2,216	In	137	40	0	17	194
	Out	13	6	62	23	0	96	18	218	Out	11	40	0	17	68
	Total	171	62	1,101	343	0	333	424	2,434	Total	148	80	0	34	262
MD	In	56	63	153	123	0	1,593	0	1,988	In	44	55	0	18	117
	Out	55	64	152	128	0	1,656	0	2,055	Out	44	55	0	18	117
	Total	111	127	305	251	0	3,249	0	4,043	Total	88	110	0	36	234
PM	In	33	19	132	51	0	316	29	580	In	25	54	0	3	82
	Out	197	74	1,244	388	0	472	471	2,846	Out	167	54	0	3	224
	Total	230	93	1,376	439	0	788	500	3,426	Total	192	108	0	6	306
Saturday	In	44	33	105	66	0	744	0	992	In	27	24	0	0	51
	Out	40	29	95	59	0	653	0	876	Out	24	24	0	0	48
	Total	84	62	200	125	0	1,397	0	1,868	Total	51	48	0	0	99

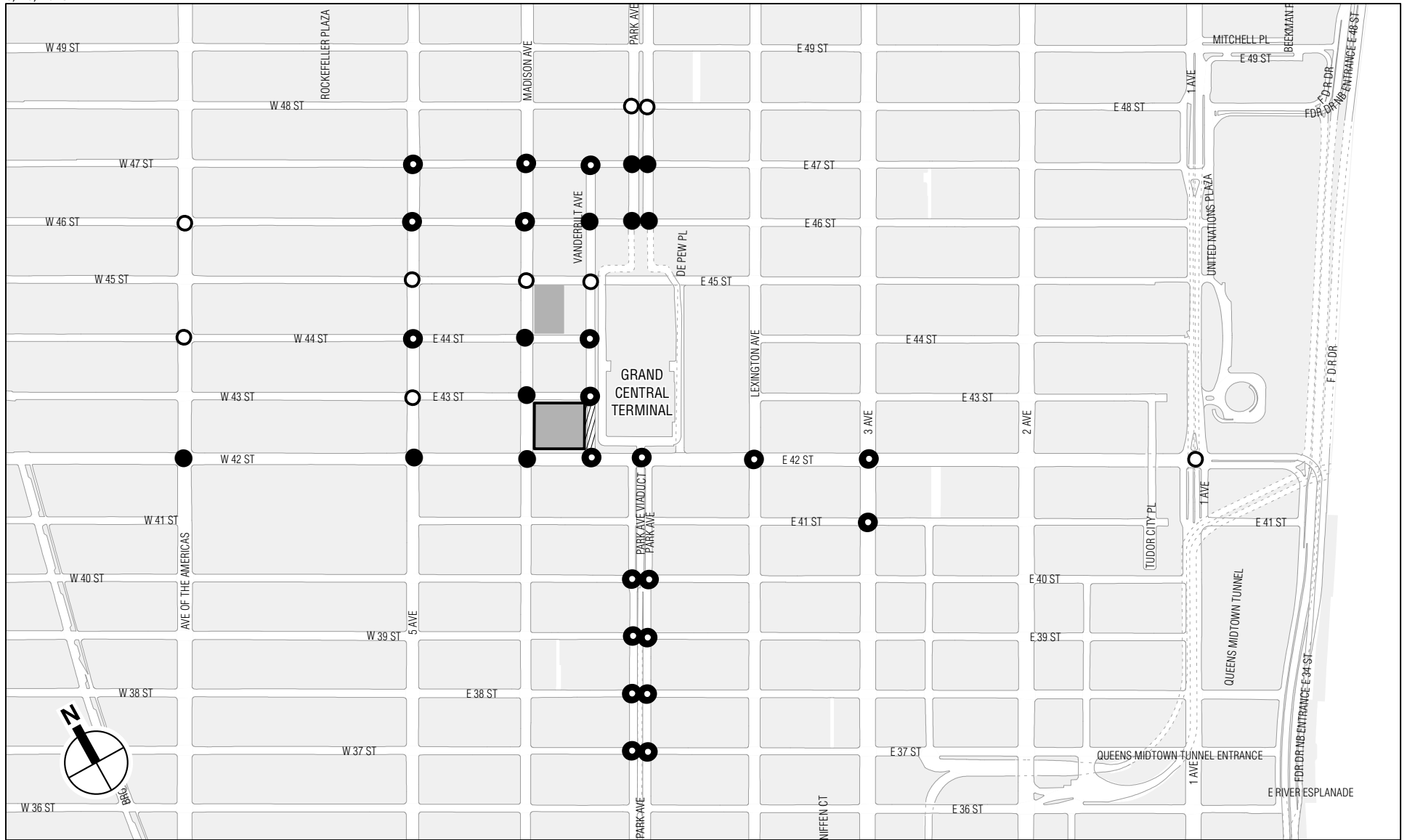
Table 19-38
2021 Vanderbilt Corridor With-Action Trip Generation Summary

Peak Hour	Person Trips								Vehicle Trips						
	In/Out	Auto	Taxi	Subway	City Bus	Tour Bus	Walk	Railroad	Total	In/Out	Auto	Taxi	Tour Bus	Delivery	Total
AM	In	524	161	3,198	981	218	759	1,366	7,207	In	453	108	5	34	600
	Out	23	29	224	102	178	313	61	930	Out	18	108	5	34	165
	Total	547	190	3,422	1,083	396	1,072	1,427	8,137	Total	471	216	10	68	765
MD	In	97	143	399	280	198	3,171	33	4,321	In	71	115	5	40	231
	Out	97	147	404	291	198	3,322	33	4,492	Out	73	115	5	40	233
	Total	194	290	803	571	396	6,493	66	8,813	Total	144	230	10	80	464
PM	In	255	250	395	109	0	545	136	1,690	In	106	177	0	7	290
	Out	652	242	3,478	1,027	0	839	1,489	7,727	Out	523	177	0	7	707
	Total	907	492	3,873	1,136	0	1,384	1,625	9,417	Total	629	354	0	14	997
Saturday	In	261	272	327	127	0	1,254	84	2,325	In	106	132	0	5	243
	Out	125	136	208	89	0	1,011	31	1,600	Out	56	132	0	5	193
	Total	386	408	535	216	0	2,265	115	3,925	Total	162	264	0	10	436

Table 19-39
2021 Vanderbilt Corridor Trip Increments

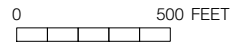
Peak Hour	Person Trips								Vehicle Trips						
	In/Out	Auto	Taxi	Subway	City Bus	Tour Bus	Walk	Railroad	Total	In/Out	Auto	Taxi	Tour Bus	Delivery	Total
AM	In	366	105	2,159	661	218	522	960	4,991	In	316	68	5	17	406
	Out	10	23	162	79	178	217	43	712	Out	7	68	5	17	97
	Total	376	128	2,321	740	396	739	1,003	5,703	Total	323	136	10	34	503
MD	In	41	80	246	157	198	1,578	33	2,333	In	27	60	5	22	114
	Out	42	83	252	163	198	1,666	33	2,437	Out	29	60	5	22	116
	Total	83	163	498	320	396	3,244	66	4,770	Total	56	120	10	44	230
PM	In	222	231	263	58	0	229	107	1,110	In	81	123	0	4	208
	Out	455	168	2,234	639	0	367	1,018	4,881	Out	356	123	0	4	483
	Total	677	399	2,497	697	0	596	1,125	5,991	Total	437	246	0	8	691
Saturday	In	217	239	222	61	0	510	84	1,333	In	79	108	0	5	192
	Out	85	107	113	30	0	358	31	724	Out	32	108	0	5	145
	Total	302	346	335	91	0	868	115	2,057	Total	111	216	0	10	337

Compared with the trip increments analyzed in Chapter 10, “Transportation,” the redevelopment of the projected development sites within the Vanderbilt Corridor pursuant to the proposed actions would result in 29 to 146 more incremental vehicle trips and 630 to 1,930 more incremental person trips during the analysis peak hours. Correspondingly, there would be up to 712 more incremental subway trips and 226 more incremental bus trips during peak hours. As a result, the transportation study areas needed to address potential impacts from these projected trip increments would be larger than those described in the Chapter 10, “Transportation.” As shown in **Figure 19-5**, the traffic study area considered for this conceptual analysis would include 40 intersections (as compared with the 31 intersections analyzed in Chapter 10, “Transportation”). For transit, the number of subway station elements and the subway lines included in the line-haul analysis remained the same as those assessed for the One Vanderbilt development; and incremental bus trips would still be sufficiently distributed to not warrant a detailed bus line-haul analysis. With regard to pedestrians, as shown in **Figure 19-6**, 16 sidewalks, 31 corners, and 17 crosswalks were selected for analysis (as compared with 11 sidewalks, 15 corners, and 9 crosswalks analyzed in Chapter 10, “Transportation”).



- 2021 One Vanderbilt Development Site
- 2021 Vanderbilt Corridor Development Sites
- Proposed Public Place

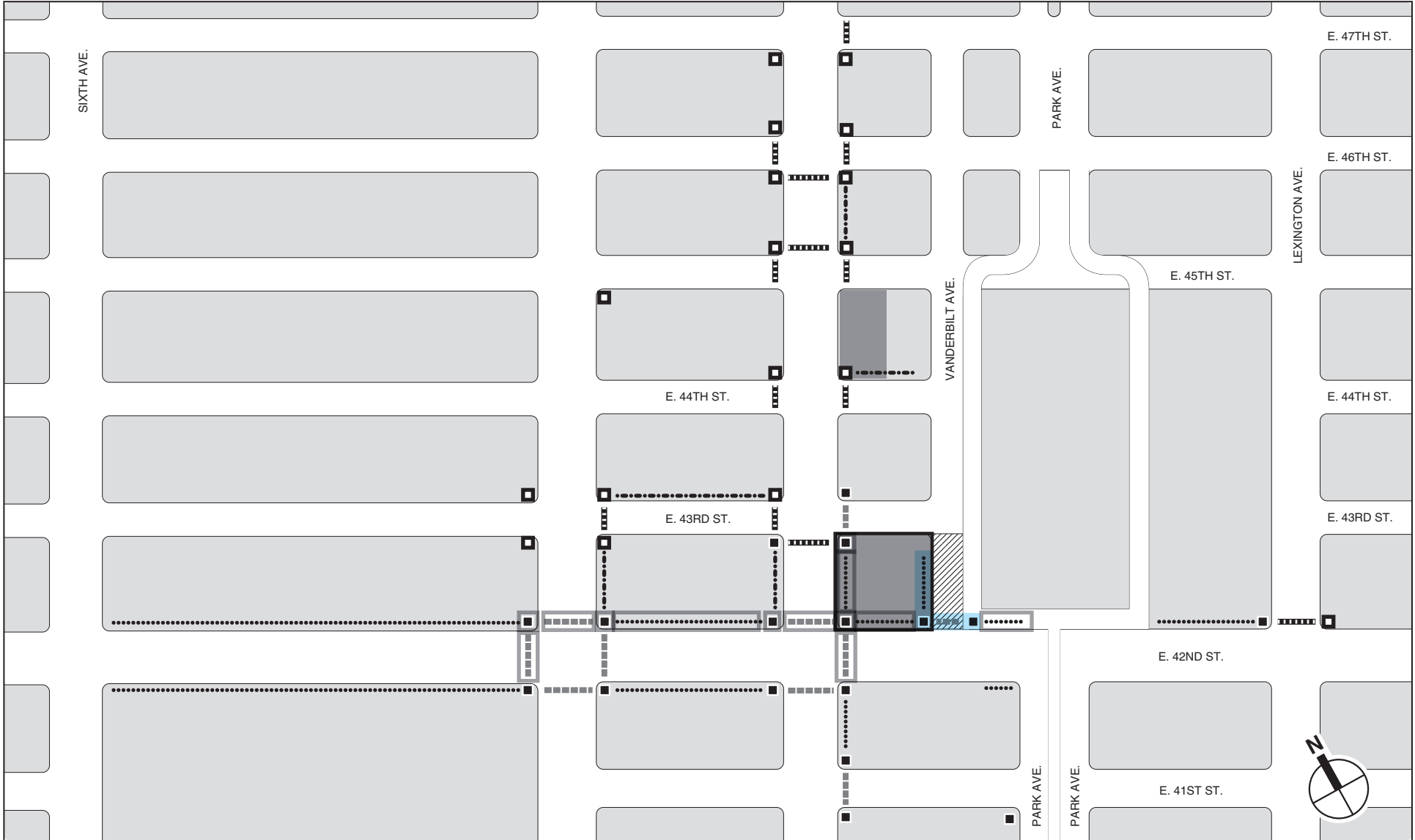
- 2021 Vanderbilt Corridor Traffic Analysis Location - Weekday Only
- 2021 One Vanderbilt and 2021 Vanderbilt Corridor Traffic Analysis Location – Weekday Only
- 2021 One Vanderbilt and 2021 Vanderbilt Corridor Traffic Analysis Location – Weekday and Saturday



Vanderbilt Corridor and One Vanderbilt

This figure is new to the FEIS

**2021 Vanderbilt Corridor
Traffic Analysis Locations
Figure 19-5**



- | | | | |
|--|--|------------------------------|--|
| 2021 Vanderbilt Corridor Development Sites | 2021 One Vanderbilt and 2021 Vanderbilt Corridor Analysis Location | Crosswalk (weekday/Saturday) | 2021 Vanderbilt Corridor Analysis Location – Weekday Only |
| One Vanderbilt Development Site | Crosswalk (weekday) | Corner (weekday/Saturday) | Crosswalk |
| Proposed Public Place | Corner (weekday) | Corner (weekday/Saturday) | Corner |
| | Sidewalk (weekday) | Sidewalk (weekday/Saturday) | Sidewalk |
| | >200 Net-Incremental Pedestrian Trips in at Least One Peak Hour. Not Included in Analysis Locations Due to Proposed Public Place | | |



2021 Vanderbilt Corridor
Pedestrian Analysis Locations
Figure 19-6

Overall, with greater incremental trip-making attributed to the redevelopment of the MTA site, the 2021 With-Action condition for this conceptual analysis would yield more significant adverse transportation-related impacts. As detailed in Chapter 10, "Transportation," the completion of the One Vanderbilt site (Block 1277) in 2021 is expected to result in significant adverse impacts at 17 traffic intersections; and 11 pedestrian elements, including 1 impacted sidewalk, 4 impacted corner reservoirs, and 6 impacted crosswalks. Improvement measures were explored to mitigate these impacts to the extent practicable (see Chapter 18, "Mitigation"). Of the above, significant adverse impacts at 4 intersections and potentially several of the 11 pedestrian elements could be unmitigatable. For transit, similar to the analysis results in Chapter 10, "Transportation," two elements at the Grand Central-42nd Street subway station would incur deterioration in service levels in exceedance of the CEQR impact threshold. However, these impacts, when viewed in the context of the transit station improvements as a whole that are part of the proposed One Vanderbilt development, are not considered significant. In comparison, the proposed One Vanderbilt development, together with the projected redevelopment of the MTA site pursuant to the proposed actions in 2021 would result in significant adverse impacts at 24 traffic intersections, 24 pedestrian elements, including 2 impacted sidewalks, 9 impacted corner reservoirs, and 13 impacted crosswalks.

Some of these impacts could be mitigated with the same or similar improvement measures identified in Chapter 18, "Mitigation." Others, including those identified to be unmitigatable for the development of the One Vanderbilt site in 2021, would similarly be unmitigatable under the 2021 Vanderbilt Corridor With-Action condition. As the development of the MTA site becomes more defined, it will be studied as part of a separate environmental review, for which more details on the predicted impacts and associated mitigation measures would be determined. Similarly, more updated crash data would be analyzed at such time to assess vehicular and pedestrian safety at the relevant intersections. It should also be noted that the potential future development of the MTA site would use either the Grand Central Public Realm Improvement Bonus, the amended ZR Section 81-635 landmark transfer special permit, or a combination of these special permits, and thus may be required to provide funding for additional transit-related improvements, which have not been defined at this time and were conservatively not assumed in this conceptual analysis.

Regarding parking, with the same inventory of available parking resources, future parking utilization with the proposed One Vanderbilt development, together with the projected redevelopment of the MTA site, is expected to increase to 65 and 99 percent during the weekday morning and midday peak periods, respectively, and to remain at 65 and 19 percent during the evening and overnight peak periods, respectively, in the ¼-mile off-street parking study area. Since these occupancy levels are within the area's parking capacity, the proposed Vanderbilt Corridor development in 2021 is not expected to result in the potential for a parking shortfall or a significant adverse parking impact.

BASELINE TRANSPORTATION DATA AND ANALYSIS METHODOLOGY

As discussed in Chapter 10, "Transportation," baseline conditions for the One Vanderbilt project transportation study areas were developed using data collected in 2013 and 2014, supplemented by traffic/transit/pedestrian volumes and analyses presented in the 2013 *East Midtown Rezoning and Related Action FEIS*. For the 2021 conceptual analyses, future background conditions depicted in Chapter 10, "Transportation," and data developed for the larger *East Midtown Rezoning and Related Actions FEIS* transportation networks were used to develop the 2021 No-Action condition. For the limited locations where the 2021 projected trip increments from the

Vanderbilt Corridor and One Vanderbilt

One Vanderbilt project and the redevelopment of the MTA site would exceed CEQR analysis thresholds and at which relevant baseline data/analyses are not available, they have been excluded for this conceptual analysis. Similarly, since the Saturday peak hour was not studied as part of the *East Midtown Rezoning and Related Action FEIS* and Saturday peak hour trip increments for the Vanderbilt Corridor projected developments would not be substantially greater than those for the One Vanderbilt project, the Saturday study areas analyzed in Chapter 10, “Transportation,” were not expanded for this conceptual analysis. While additional transit improvements may be required as part of the future applicant’s potential use of the special permit mechanisms for the MTA site, they were conservatively not assumed in the 2021 conceptual analyses. These analyses also assume the same transportation network changes and make use of the same detailed analysis methodologies described in Chapter 10, “Transportation.”

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2021)

The 2021 conceptual future transportation networks were developed using the methodology described above and analyzed for traffic, transit, and pedestrian service levels. The results of these analyses, as well as discussions of future No-Action parking conditions, are provided below.

Traffic

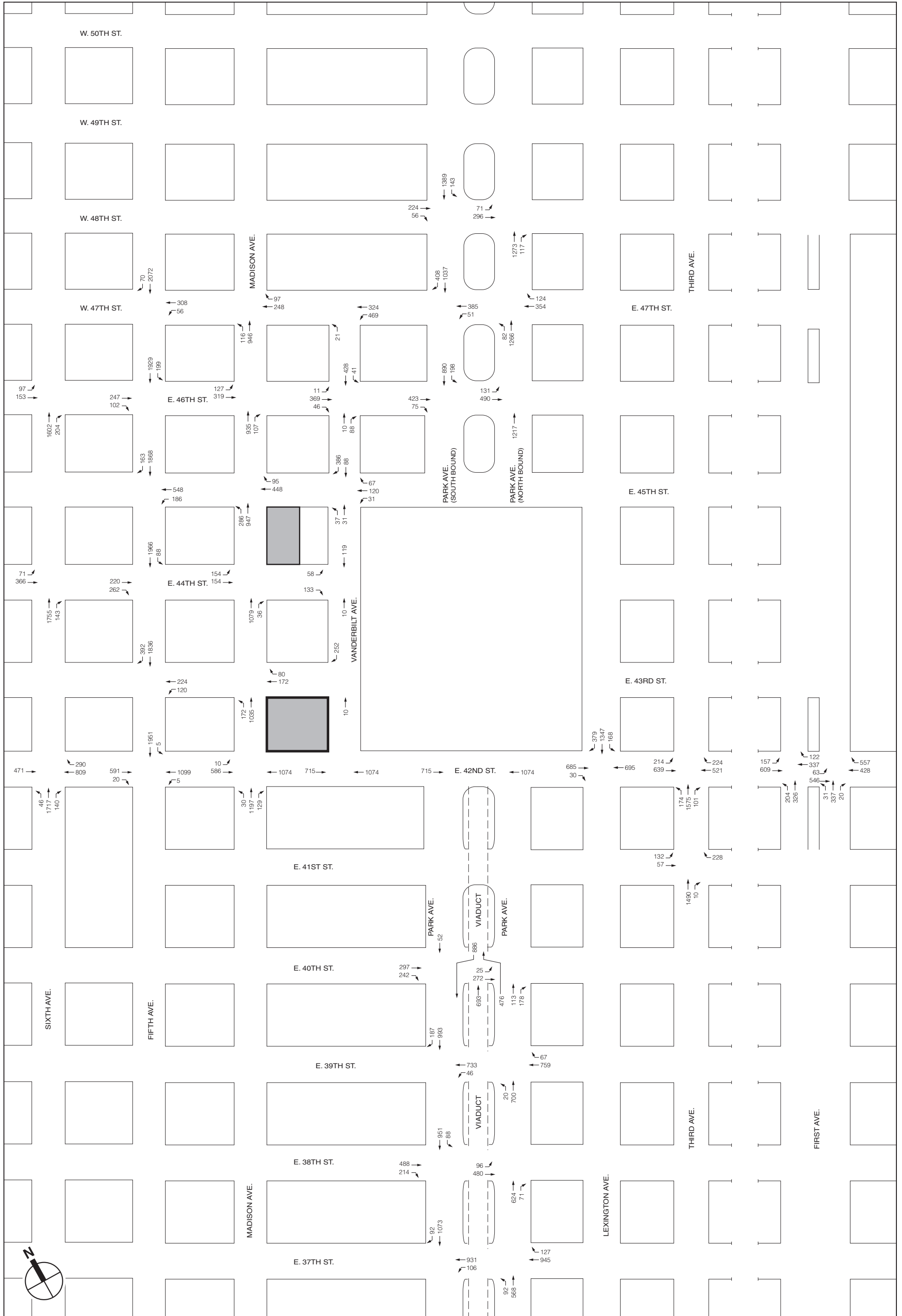
The 2021 Vanderbilt Corridor No-Action traffic volumes for the weekday AM, midday, PM, and Saturday peak hours are presented in **Figures 19-7 to 19-10**. A summary of the 2021 Vanderbilt Corridor No-Action traffic analysis results is presented in **Table 19-40**. Details on levels-of-service, volume-to-capacity (v/c) ratios, and average delays are compiled in **Appendix F**.

Table 19-40
Summary of 2021 Vanderbilt Corridor No-Action Traffic Analysis Results

Level of Service	Analysis Peak Hours			
	Weekday AM	Weekday Midday	Weekday PM	Saturday
<i>Signalized Intersections</i>				
<u>Lane Groups at LOS A/B/C</u>	<u>79</u>	<u>84</u>	<u>86</u>	<u>31</u>
<u>Lane Groups at LOS D</u>	<u>24</u>	<u>21</u>	<u>22</u>	<u>3</u>
<u>Lane Groups at LOS E</u>	<u>10</u>	<u>9</u>	<u>6</u>	<u>0</u>
<u>Lane Groups at LOS F</u>	<u>14</u>	<u>9</u>	<u>15</u>	<u>0</u>
<u>Total</u>	<u>127</u>	<u>123</u>	<u>129</u>	<u>34</u>
<u>Lane Groups with v/c ≥ 0.90</u>	<u>32</u>	<u>24</u>	<u>31</u>	<u>0</u>
<i>Unsignalized Intersections</i>				
<u>Lane Groups at LOS A/B/C</u>	<u>8</u>	<u>7</u>	<u>8</u>	<u>0</u>
<u>Lane Groups at LOS D</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>Lane Groups at LOS E</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>Lane Groups at LOS F</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>
<u>Total</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>0</u>
<u>Lane Groups with v/c ≥ 0.90</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Notes: LOS = Level-of-Service; v/c = volume-to-capacity ratio				

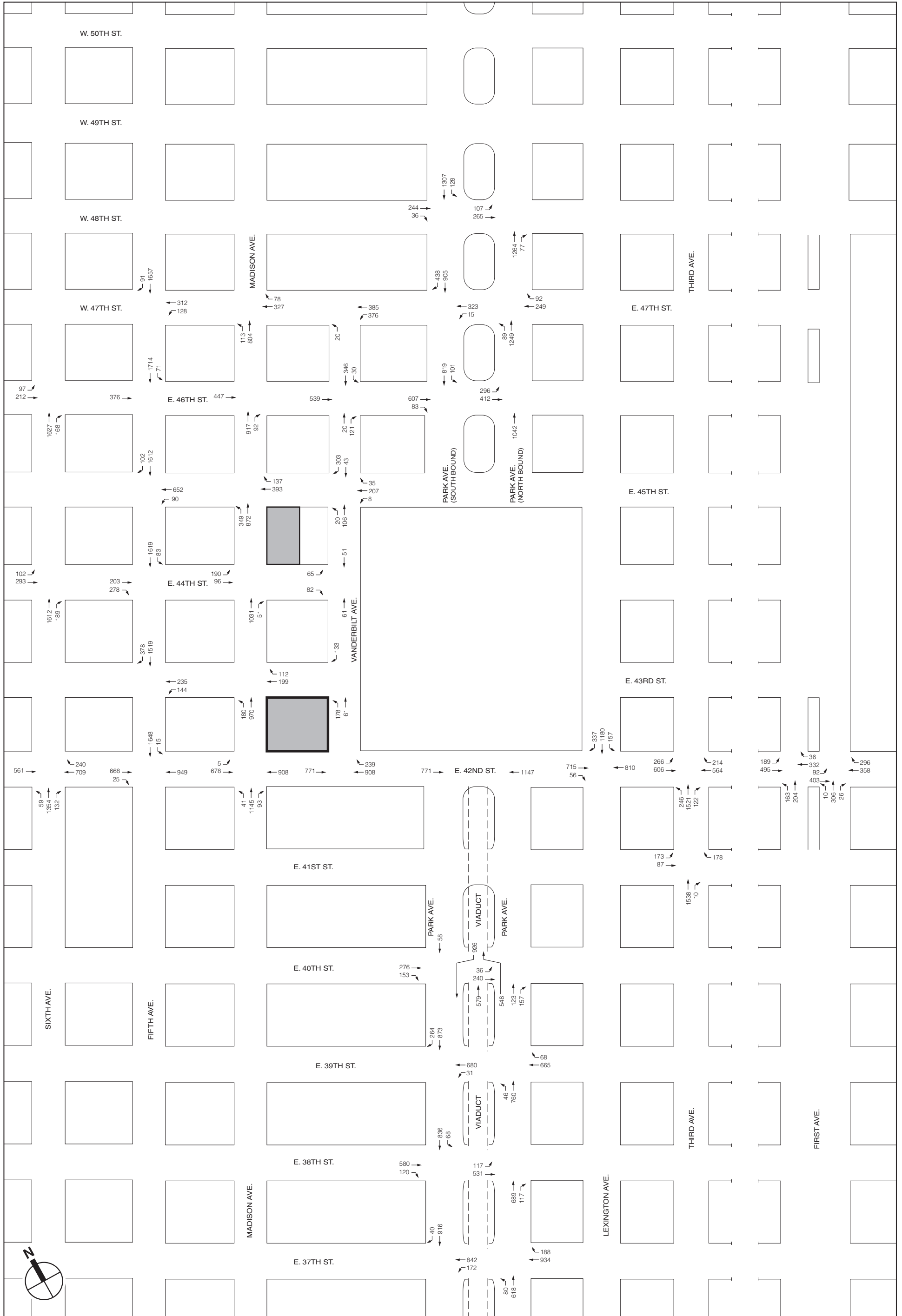
Transit

The 2021 conceptual analysis accounts for the same transit study area analyzed in Chapter 10, “Transportation.” Hence, the 2021 Vanderbilt Corridor No-Action transit analysis findings are the same as those presented for the 2021 One Vanderbilt No-Action condition in Chapter 10, “Transportation.”



NOT TO SCALE

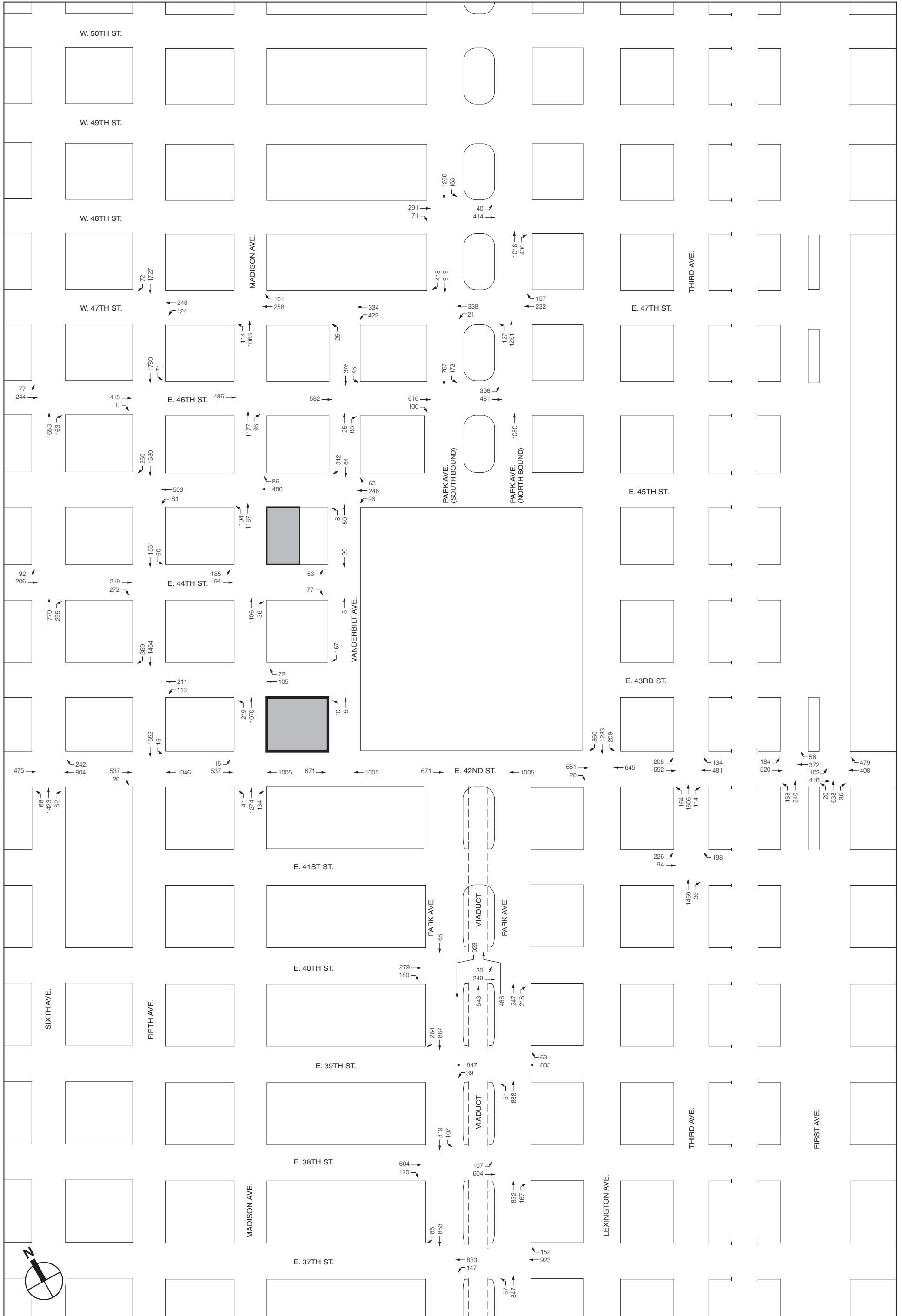
2021 Vanderbilt Corridor No-Action Traffic Volumes
Weekday AM Peak Hour
Figure 19-7



One Vanderbilt Development Site
 2021 Vanderbilt Corridor Development Sites

NOT TO SCALE

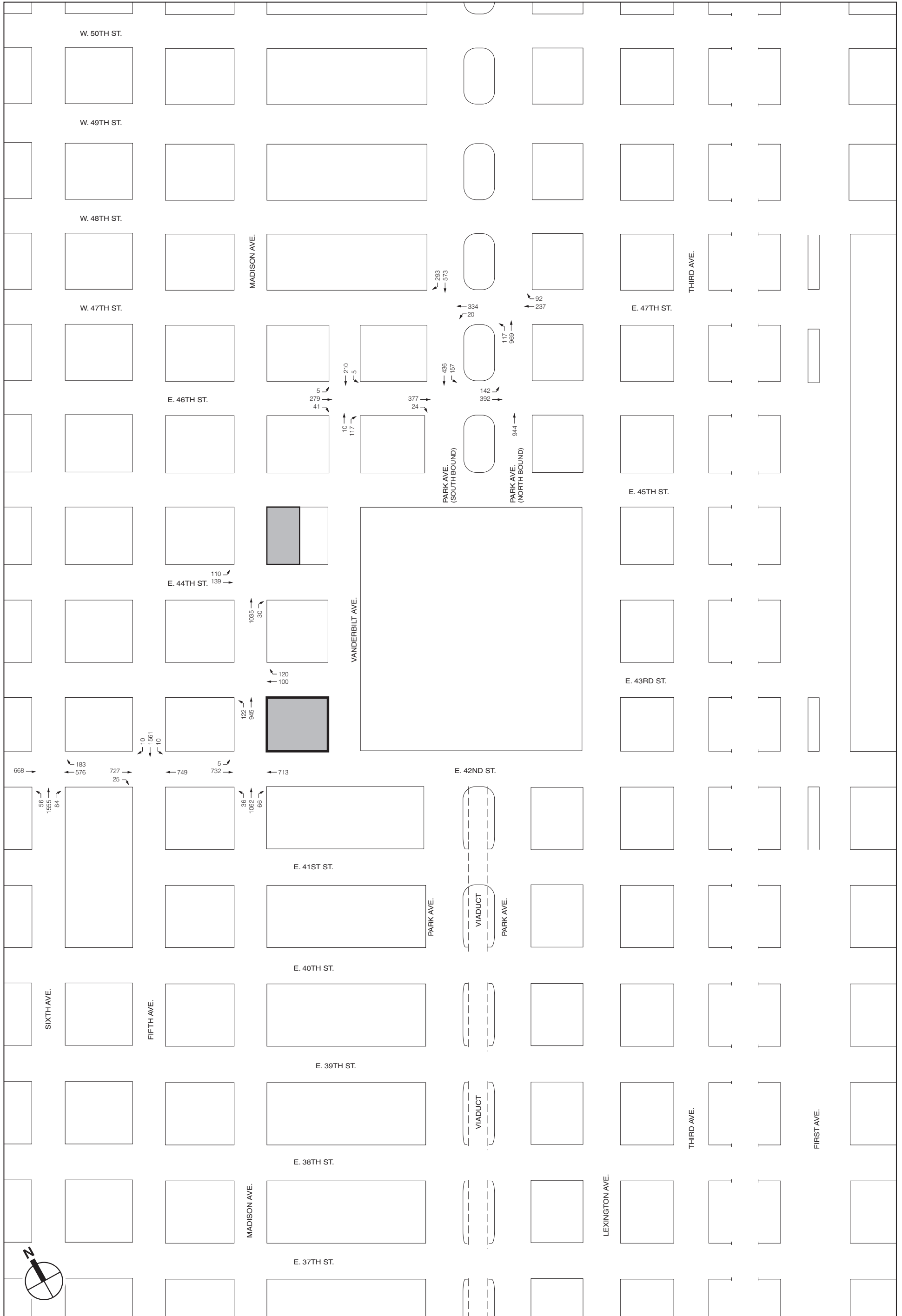
2021 Vanderbilt Corridor No-Action Traffic Volumes
 Weekday Midday Peak Hour
Figure 19-8



One Vanderbilt Development Site
 2021 Vanderbilt Corridor Development Sites

NOT TO SCALE

2021 Vanderbilt Corridor No-Action Traffic Volumes
 Weekday PM Peak Hour
Figure 19-9



 One Vanderbilt Development Site
 2021 Vanderbilt Corridor Development Sites

NOT TO SCALE

2021 Vanderbilt Corridor No-Action Traffic Volumes
 Saturday Peak Hour
Figure 19-10

Pedestrians

The 2021 Vanderbilt Corridor No-Action pedestrian volumes for the weekday AM, midday, PM, and Saturday peak hours are presented in **Figures 19-11 to 19-14**. A summary of the 2021 Vanderbilt Corridor No-Action pedestrian analysis results is presented in **Table 19-41**. Details on pedestrian service levels at study area sidewalks, corner reservoirs, and crosswalks are compiled in **Appendix F**.

Parking

The 2021 Vanderbilt Corridor No-Action parking analysis findings are the same as those presented for the 2021 One Vanderbilt No-Action condition in Chapter 10, “Transportation.”

Table 19-41
Summary of 2021 Vanderbilt Corridor No-Action Pedestrian Analysis Results

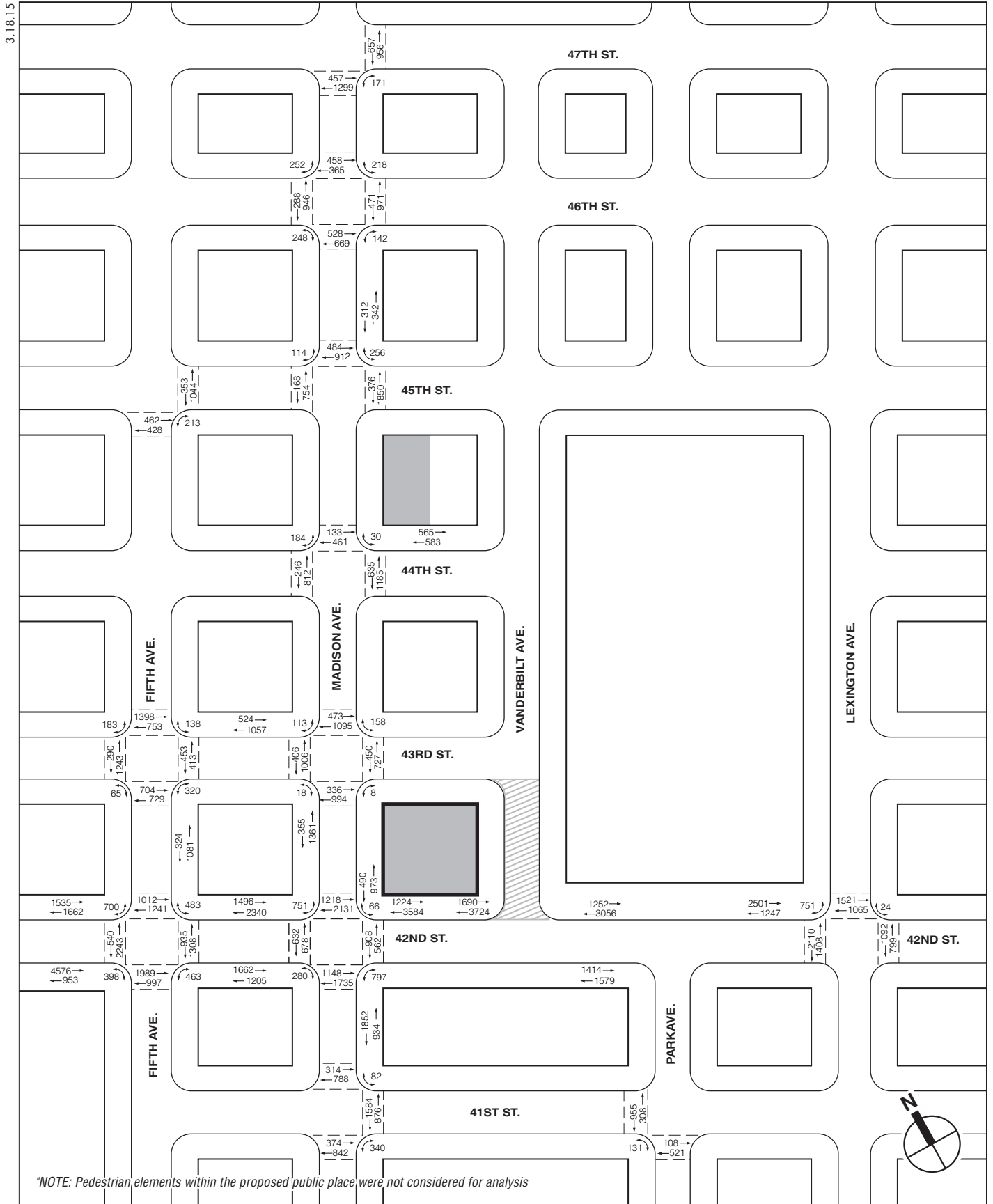
Level of Service	Analysis Peak Hours			
	Weekday AM	Weekday Midday	Weekday PM	Saturday
Sidewalks				
Sidewalks at LOS A/B/C	10	13	8	2
Sidewalks at LOS D	6	3	8	3
Sidewalks at LOS E	0	0	0	0
Sidewalks at LOS F	0	0	0	0
Total	16	16	16	5
Corner Reservoirs				
Corners at LOS A/B/C	26	25	21	4
Corners at LOS D	2	5	6	1
Corners at LOS E	3	2	4	0
Corners at LOS F	1	0	1	0
Total	32	32	32	5
Crosswalks				
Crosswalks at LOS A/B/C	11	12	6	2
Crosswalks at LOS D	8	6	8	1
Crosswalks at LOS E	4	5	9	1
Crosswalks at LOS F	0	0	0	0
Total	23	23	23	4
Notes: LOS = Level-of-Service				

THE FUTURE WITH THE PROPOSED ACTIONS (2021)

The cumulative trip increments associated with the redevelopment of the MTA site and the proposed One Vanderbilt development by 2021 were overlaid onto the 2021 Vanderbilt Corridor No-Action transportation network to assess their potential impacts on the area’s roadway network, transit system, and pedestrian facilities. The results of these analyses, as well as assessments of how the incremental trips may affect parking supply and utilization, are presented below.

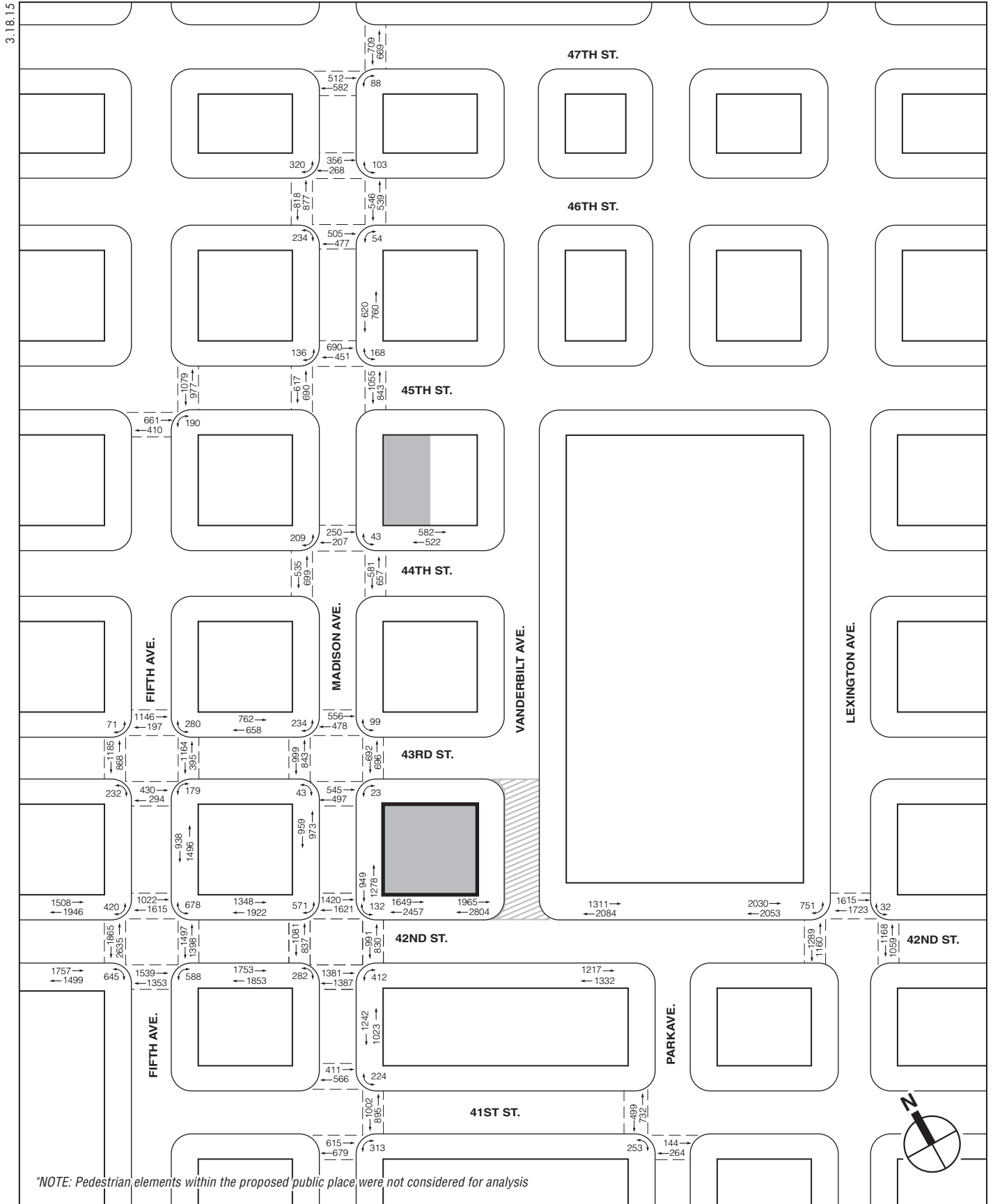
Traffic

The 2021 Vanderbilt Corridor With-Action traffic volumes for the weekday AM, midday, PM, and Saturday peak hours are presented in **Figures 19-15 to 19-18**. A summary of the 2021 Vanderbilt Corridor With-Action traffic analysis results is presented in **Table 19-42**. Details on levels-of-service, volume-to-capacity (v/c) ratios, and average delays, as well as the peak hour incremental traffic volumes, are compiled in **Appendix F**.



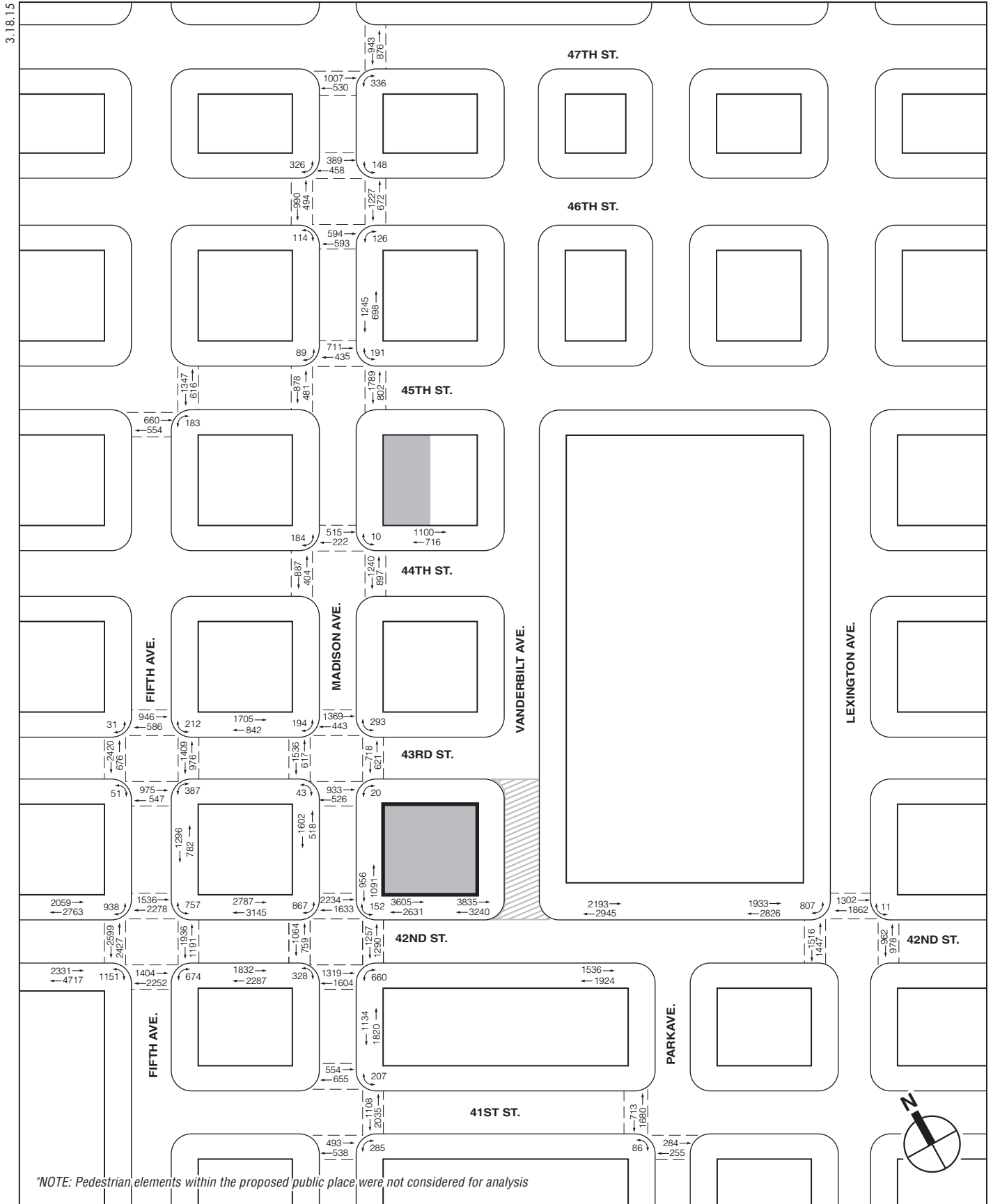
-  One Vanderbilt Development Site
-  2021 Vanderbilt Corridor Development Sites
-  Proposed Public Place

2021 Vanderbilt Corridor No-Action Pedestrian Volumes
 Weekday AM Peak Hour
Figure 19-11



-  One Vanderbilt Development Site
-  2021 Vanderbilt Corridor Development Sites
-  Proposed Public Place

2021 Vanderbilt Corridor No-Action Pedestrian Volumes
 Weekday Midday Peak Hour
Figure 19-12



One Vanderbilt Development Site

2021 Vanderbilt Corridor Development Sites

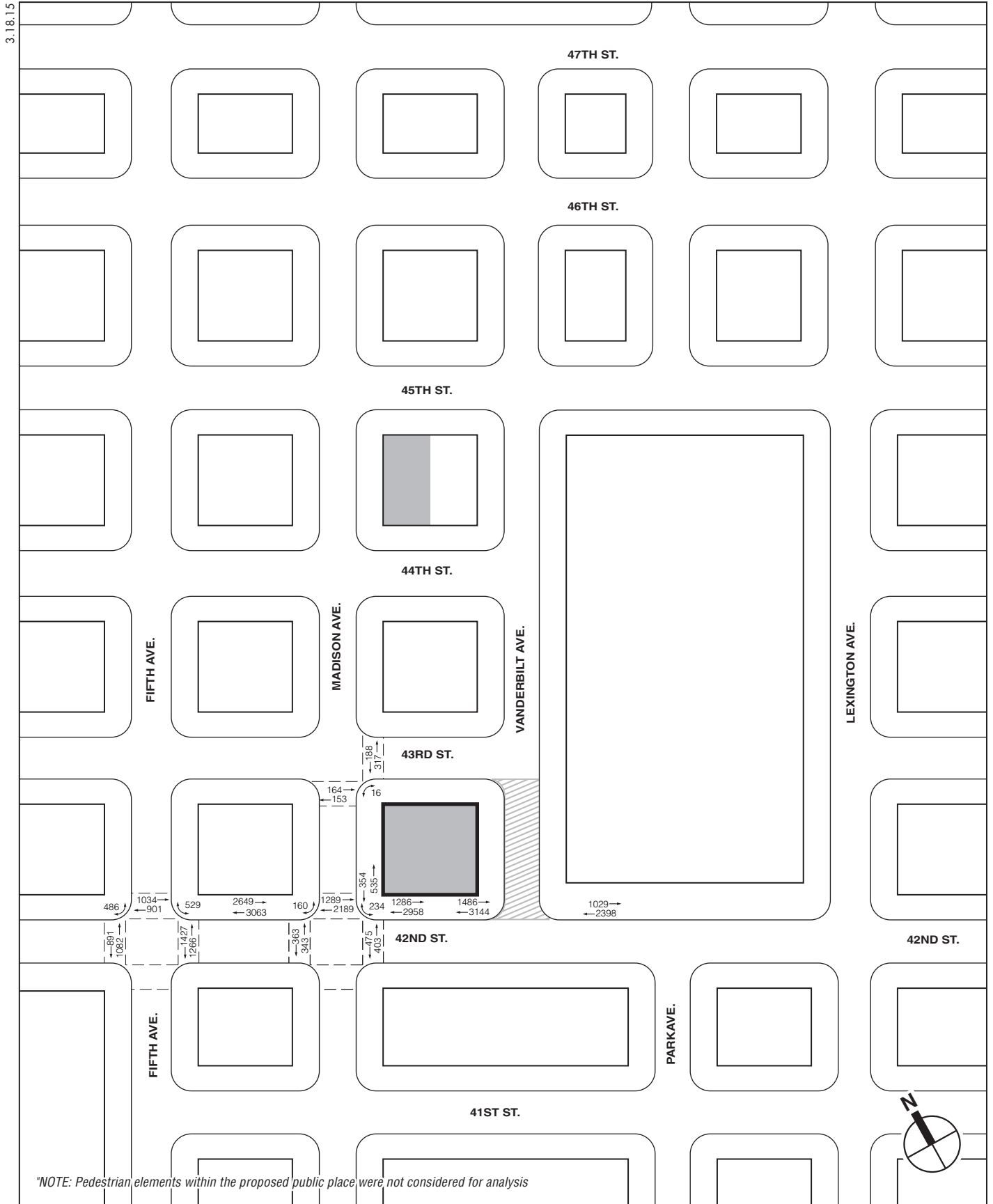
Proposed Public Place

2021 Vanderbilt Corridor No-Action Pedestrian Volumes
Weekday PM Peak Hour

Figure 19-13

Vanderbilt Corridor and One Vanderbilt

This figure is new to the FEIS

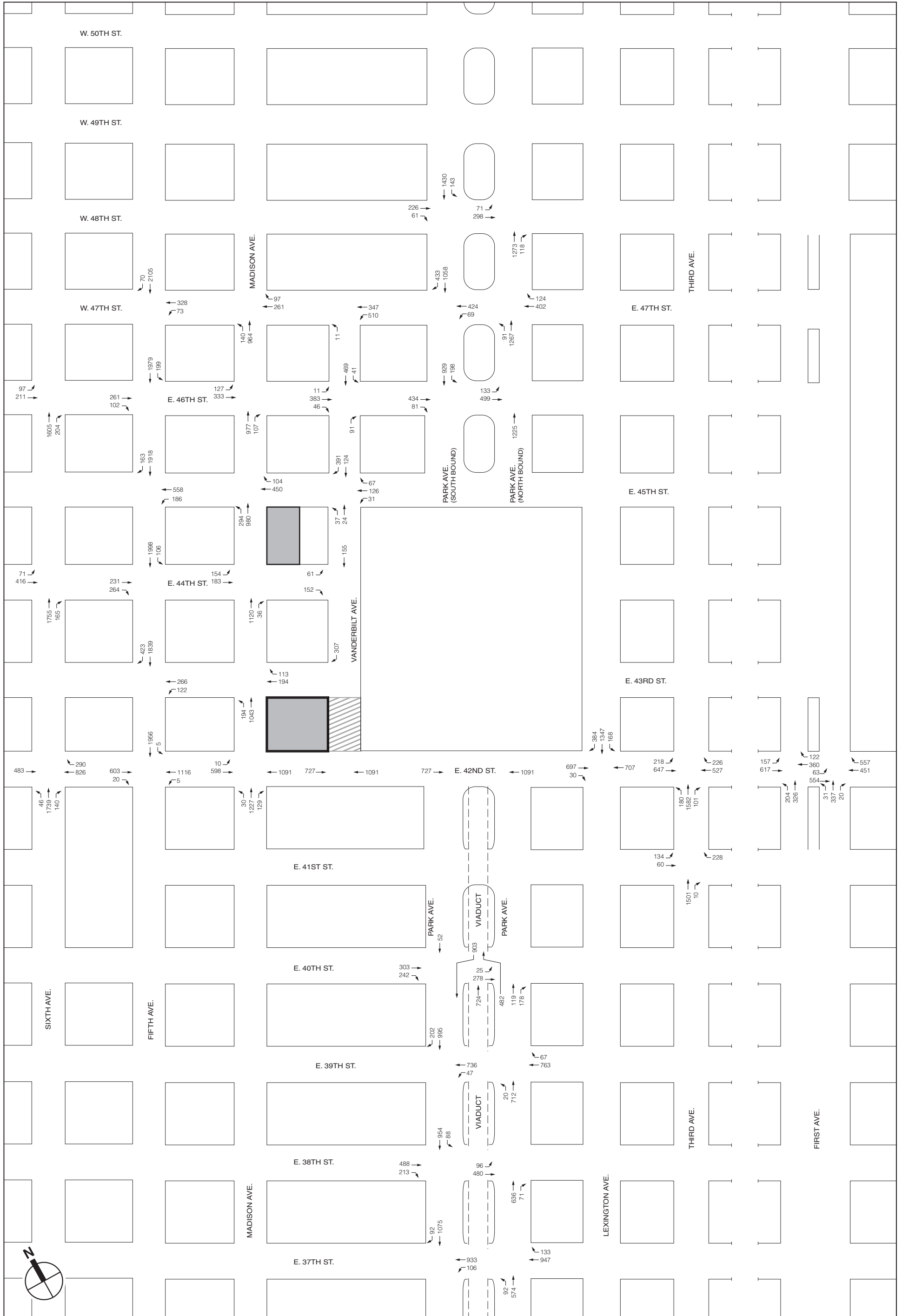


-  One Vanderbilt Development Site
-  2021 Vanderbilt Corridor Development Sites
-  Proposed Public Place



NOT TO SCALE

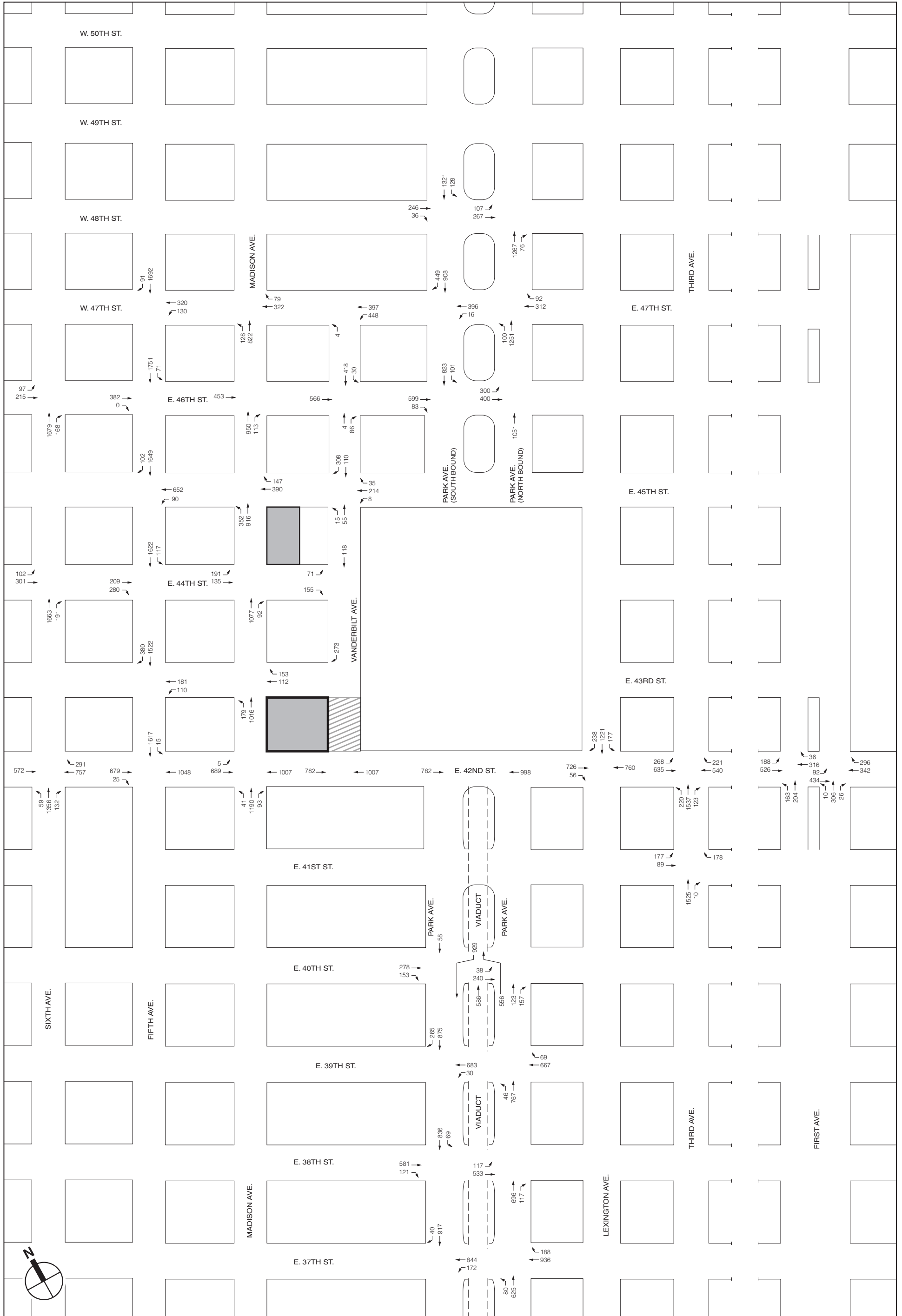
2021 Vanderbilt Corridor No-Action Pedestrian Volumes
Saturday Peak Hour
Figure 19-14



-  One Vanderbilt Development Site
-  2021 Vanderbilt Corridor Development Sites
-  Proposed Public Place

NOT TO SCALE

2021 Vanderbilt Corridor With-Action Traffic Volumes
 Weekday AM Peak Hour
Figure 19-15

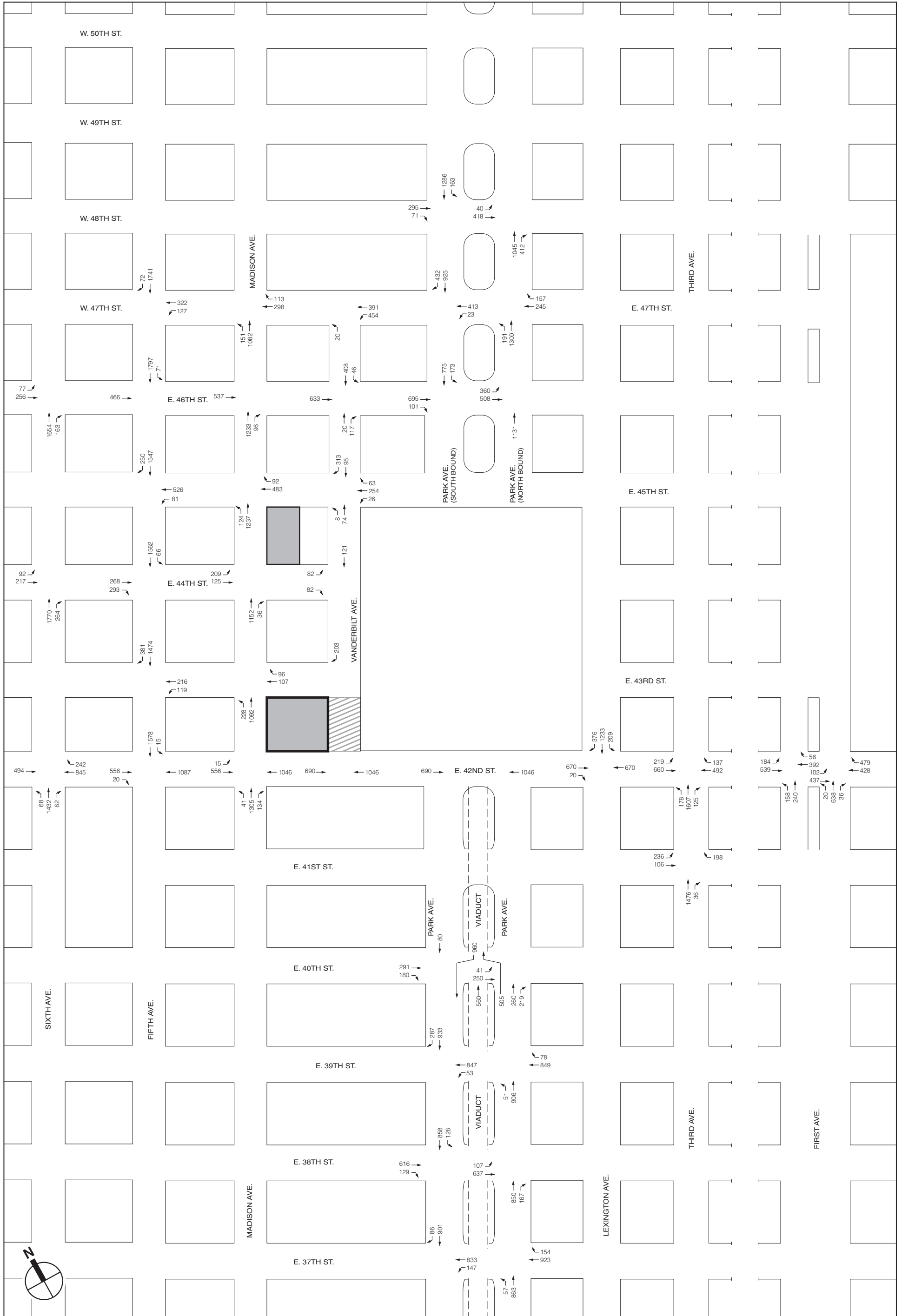


-  One Vanderbilt Development Site
-  2021 Vanderbilt Corridor Development Sites
-  Proposed Public Place

NOT TO SCALE

2021 Vanderbilt Corridor With-Action Traffic Volumes
 Weekday Midday Peak Hour
Figure 19-16

Vanderbilt Corridor and One Vanderbilt
This figure is new to the FEIS



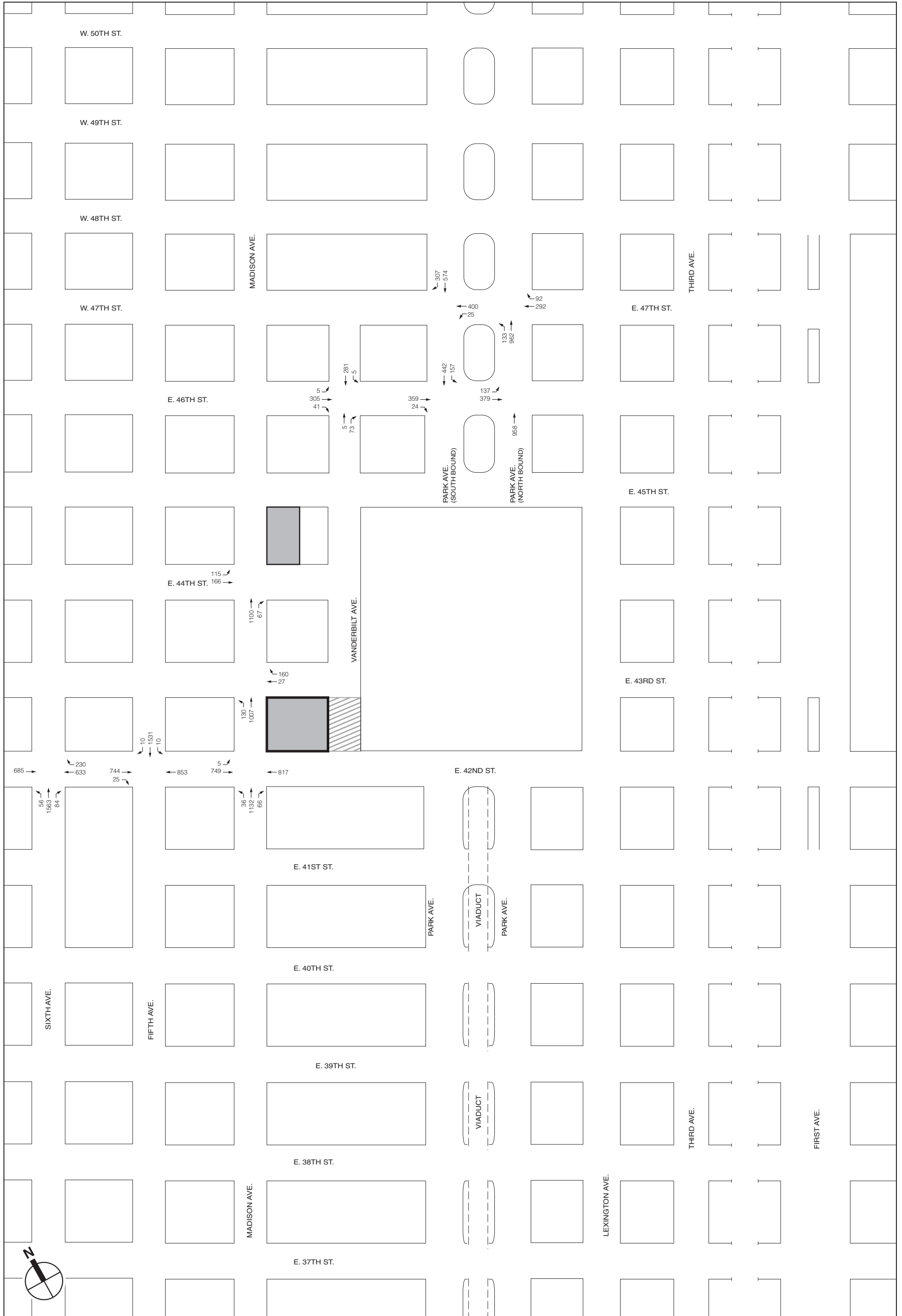
- One Vanderbilt Development Site
- 2021 Vanderbilt Corridor Development Sites
- Proposed Public Place

NOT TO SCALE

2021 Vanderbilt Corridor With-Action Traffic Volumes
 Weekday PM Peak Hour
Figure 19-17

Vanderbilt Corridor and One Vanderbilt

This figure is new to the FEIS



-  One Vanderbilt Development Site
-  2021 Vanderbilt Corridor Development Sites
-  Proposed Public Place

NOT TO SCALE

2021 Vanderbilt Corridor With-Action Traffic Volumes
Saturday Peak Hour
Figure 19-18

Table 19-42

Summary of 2021 Vanderbilt Corridor With-Action Traffic Analysis Results

Level of Service	Analysis Peak Hours			
	Weekday AM	Weekday Midday	Weekday PM	Saturday
Signalized Intersections				
Lane Groups at LOS A/B/C	78	85	81	29
Lane Groups at LOS D	22	20	25	4
Lane Groups at LOS E	8	10	5	1
Lane Groups at LOS F	19	8	18	0
Total	127	123	129	34
Lane Groups with v/c ≥ 0.90	35	25	33	2
Unsignalized Intersections ⁽¹⁾				
Lane Groups at LOS A/B/C	6	6	6	0
Lane Groups at LOS D	0	0	0	0
Lane Groups at LOS E	0	0	0	0
Lane Groups at LOS F	0	0	0	0
Total	6	6	6	0
Lane Groups with v/c ≥ 0.90	0	0	0	0
Notes: LOS = Level-of-Service; v/c = volume-to-capacity ratio				
(1) As described in Chapter 10, "Transportation," due to the proposed configuration changes along Vanderbilt Avenue under the With-Action condition, the overall number of lane groups at the analyzed unsignalized intersections would be reduced from 8 under the No-Action to 6 under the With-Action.				

With greater incremental trip-making, the proposed One Vanderbilt development, together with the projected redevelopment of the MTA site pursuant to the proposed actions in 2021, would result in significant adverse impacts at 24 traffic intersections, as compared with 17 impacted intersections identified for the One Vanderbilt project in 2021. The additional impacted intersections are as follows.

1. First Avenue and East 42nd Street;
2. Park Avenue (southbound) and East 48th Street;
3. Vanderbilt Avenue and East 45th Street;
4. Madison Avenue and East 47th Street;
5. Fifth Avenue and 45th Street;
6. Fifth Avenue and 43rd Street; and
7. Sixth Avenue and West 44th Street

Some of these impacts could be mitigated with the same or similar improvement measures identified in Chapter 18, "Mitigation." Others, including those identified to be unmitigatable for the development of the One Vanderbilt site in 2021, would similarly be unmitigatable. As the development program for the MTA site becomes more defined, it will be studied as part of a separate environmental review, for which more details on the predicted impacts and associated mitigation measures would be determined.

For the 17 impacted intersections identified for the proposed One Vanderbilt development in 2021, greater trip-making in 2021 from the proposed One Vanderbilt development, together with the redevelopment of the MTA site, would result in worsened impacts. A review of the mitigation needs for the greater 2021 impacts with the redevelopment of the MTA site was conducted to determine if the measures identified to mitigate 2021 impacts with only the development of the One Vanderbilt building would still be effective in mitigating the impacts identified for these locations with the additional redevelopment of the MTA site. This review, as summarized in **Table 19-43**, showed that the same or similar measures identified to mitigate the

2021 One Vanderbilt impacts could be adopted to mitigate the 2021 One Vanderbilt plus the MTA site redevelopment impacts at all intersections.

Table 19-43

2021 Vanderbilt Corridor Required Mitigation at 2021 One Vanderbilt Impacted Traffic Intersections

<u>Significantly Impacted Intersections</u>	<u>2021 One Vanderbilt Mitigation Measures</u>	<u>2021 Vanderbilt Corridor Required Mitigation Measures</u>
<u>Third Avenue and East 42nd Street</u>	<u>Unmitigated</u>	<u>Same – Unmitigated</u>
<u>Third Avenue and East 41st Street</u>	<u>Shift signal timing (1 second)</u>	<u>Similar mitigation: shift signal timing (2 seconds)</u>
<u>Lexington Avenue and East 42nd Street</u>	<u>Unmitigated</u>	<u>Same – Unmitigated</u>
<u>Park Avenue (SB) and East 47th Street</u>	<u>Shift signal timing (1 second)</u>	<u>Same mitigation</u>
<u>Park Avenue (NB) and East 40th Street</u>	<u>Restripe and shift signal timing (1 second)</u>	<u>Similar mitigation: restripe and shift signal timing (2 seconds)</u>
<u>Park Avenue (SB) and East 40th Street</u>	<u>Restripe and shift signal timing (1 second)</u>	<u>Similar mitigation: restripe and shift signal timing (2 seconds)</u>
<u>Park Avenue (NB) and East 39th Street</u>	<u>Shift signal timing (1 to 2 seconds)</u>	<u>Same mitigation</u>
<u>Vanderbilt Avenue and East 46th Street</u>	<u>Shift signal timing (1 second)</u>	<u>Similar mitigation: shift signal timing (2 seconds)</u>
<u>Vanderbilt Avenue and East 42nd Street</u>	<u>Shift signal timing (1 to 2 seconds)</u>	<u>Same mitigation</u>
<u>Madison Avenue and East 44th Street</u>	<u>Restripe and shift signal timing (1 second)</u>	<u>Similar mitigation: Restripe and shift signal timing (2 seconds)</u>
<u>Madison Avenue and East 43rd Street</u>	<u>Shift signal timing (1 to 2 seconds)</u>	<u>Similar mitigation: shift signal timing (1 to 4 seconds)</u>
<u>Madison Avenue and East 42nd Street</u>	<u>Unmitigated</u>	<u>Same – Unmitigated</u>
<u>Fifth Avenue and 47th Street</u>	<u>Shift signal timing (1 second)</u>	<u>Same mitigation</u>
<u>Fifth Avenue and 46th Street</u>	<u>Shift signal timing (1 second)</u>	<u>Same mitigation</u>
<u>Fifth Avenue and 44th Street</u>	<u>Restripe and shift signal timing (1 second)</u>	<u>Same mitigation</u>
<u>Fifth Avenue and 42nd Street</u>	<u>Unmitigated</u>	<u>Same – Unmitigated</u>
<u>Sixth Avenue and West 42nd Street</u>	<u>Shift signal timing (4 seconds)</u>	<u>Same mitigation</u>

Transit

Summaries of the 2021 Vanderbilt Corridor With-Action transit analysis results are presented in **Tables 19-44 and 19-45**. Details on service levels at station analysis elements are compiled in **Appendix F**. This analysis finding does not account for the fact that the potential future redevelopment of the MTA site may be required to provide funding for additional transit-related improvements. Similar to the 2021 With-Action transit analysis, two station elements would be expected to deteriorate to levels in exceedance of the CEQR impact threshold. However, when viewed in the context of the subway station improvements that are part of the proposed One Vanderbilt development, the deteriorations in service levels at a few stairways are not considered significant adverse impacts.

Table 19-44

Summary of 2021 Vanderbilt Corridor With-Action Transit Analysis Results
Grand Central-42nd Street Station

Level of Service	Analysis Peak Hours	
	AM Peak Hour	PM Peak Hour
Stairs at LOS A/B/C	24	28
Stairs at LOS D	9	6
Stairs at LOS E	3	2
Stairs at LOS F	0	0
Total	36	36
Escalators at LOS A/B/C	6	5
Escalators at LOS D	2	3
Escalators at LOS E	0	0
Escalators at LOS F	0	0
Total	8	8
Fare Array Area at LOS A/B/C	13	13
Fare Array Area at LOS D	0	0
Fare Array Area at LOS E	0	0
Fare Array Area at LOS F	0	0
Total	13	13

Notes: LOS = Level-of-Service

Table 19-45

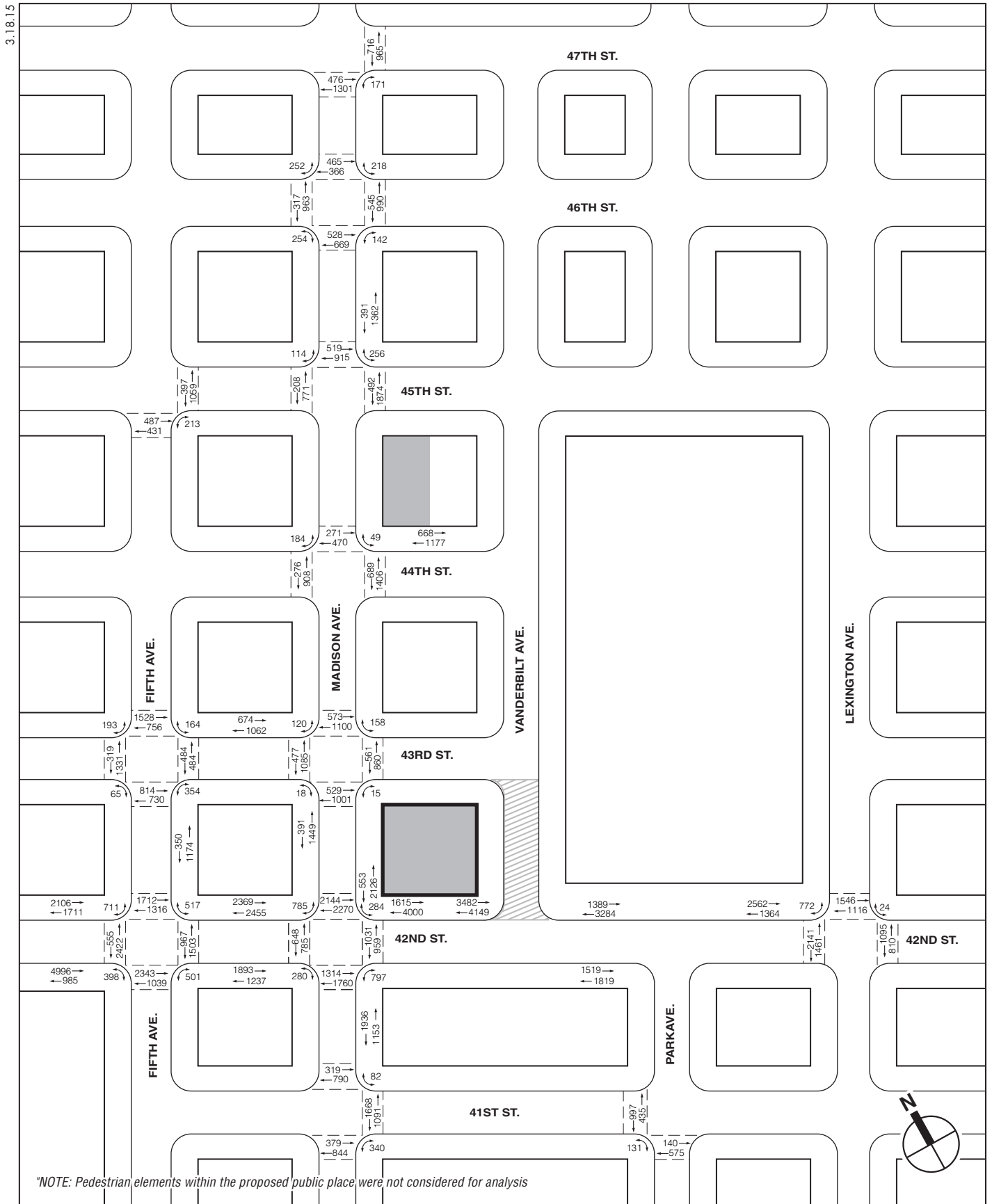
Summary of 2021 Vanderbilt Corridor With-Action Transit Analysis Results
42nd Street-Bryant Park Station

Level of Service	Analysis Peak Hours	
	AM Peak Hour	PM Peak Hour
Stairs at LOS A/B/C	3	3
Stairs at LOS D	0	0
Stairs at LOS E	0	0
Stairs at LOS F	0	0
Total	3	3
Fare Array Area at LOS A/B/C	1	1
Fare Array Area at LOS D	0	0
Fare Array Area at LOS E	0	0
Fare Array Area at LOS F	0	0
Total	1	1

Notes: LOS = Level-of-Service

Pedestrians

The 2021 Vanderbilt Corridor With-Action pedestrian volumes for the weekday AM, midday, PM, and Saturday peak hours are presented in **Figures 19-19 to 19-22**. A summary of the 2021 Vanderbilt Corridor With-Action pedestrian analysis results is presented in **Table 19-46**. Details on pedestrian service levels at study area sidewalks, corner reservoirs, and crosswalks, as well as the peak hour incremental pedestrian volumes, are compiled in **Appendix F**.



One Vanderbilt Development Site

2021 Vanderbilt Corridor Development Sites

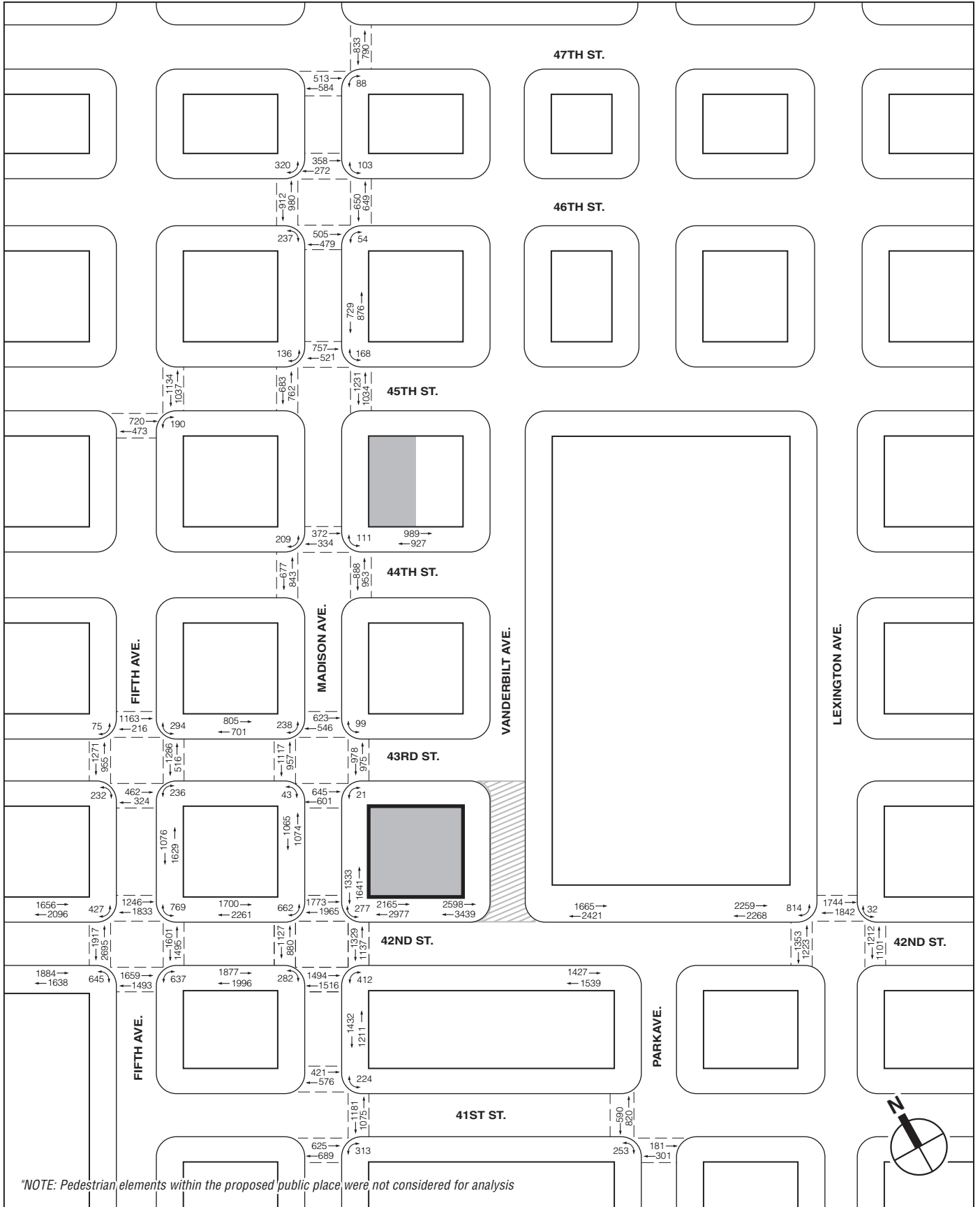
Proposed Public Place

2021 Vanderbilt Corridor With-Action Pedestrian Volumes Weekday AM Peak Hour

Figure 19-19

Vanderbilt Corridor and One Vanderbilt

This figure is new to the FEIS



"NOTE: Pedestrian elements within the proposed public place were not considered for analysis

One Vanderbilt Development Site

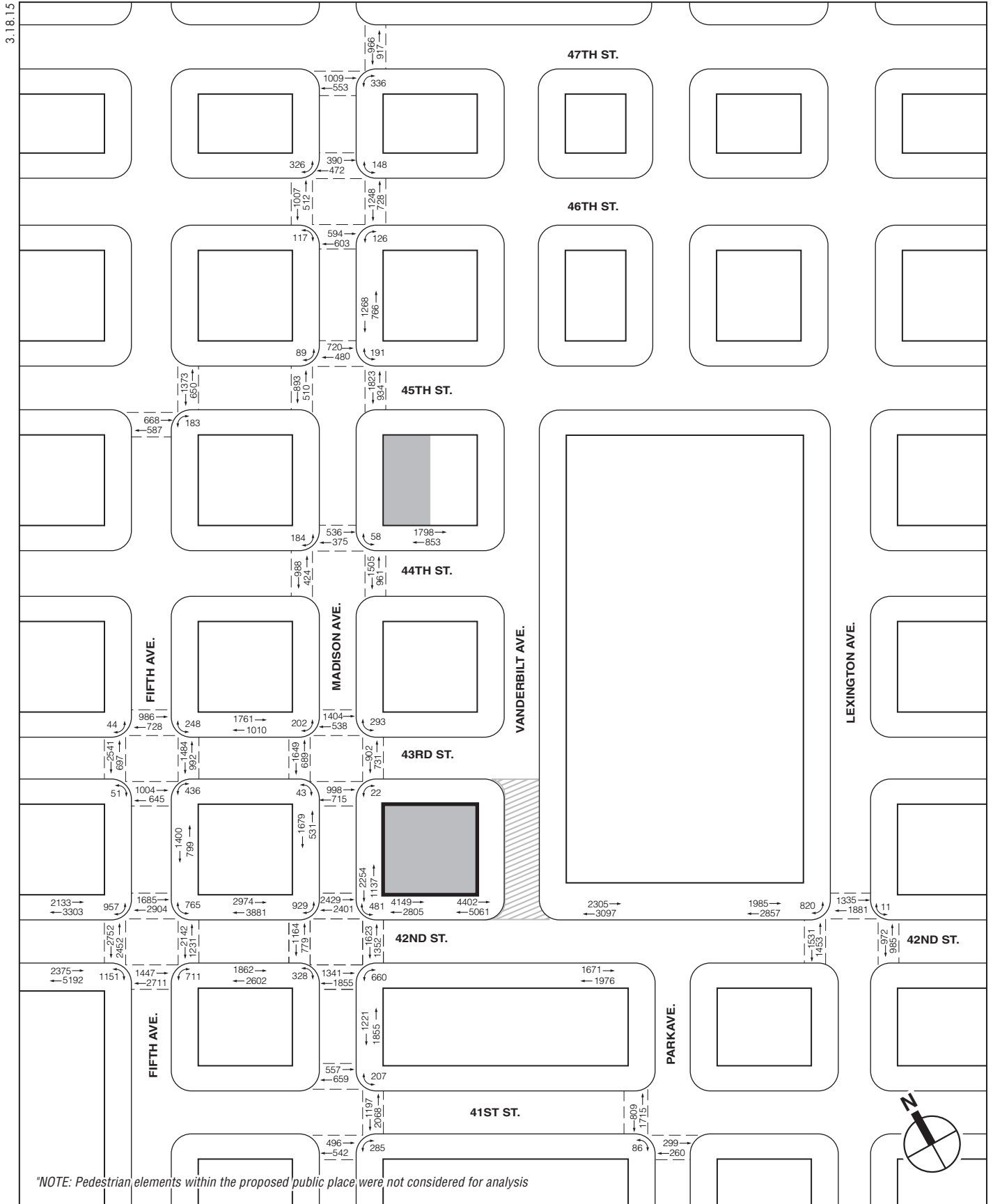
2021 Vanderbilt Corridor Development Sites

Proposed Public Place

NOT TO SCALE

2021 Vanderbilt Corridor With-Action Pedestrian Volumes Weekday Midday Peak Hour

Figure 19-20



One Vanderbilt Development Site

2021 Vanderbilt Corridor Development Sites

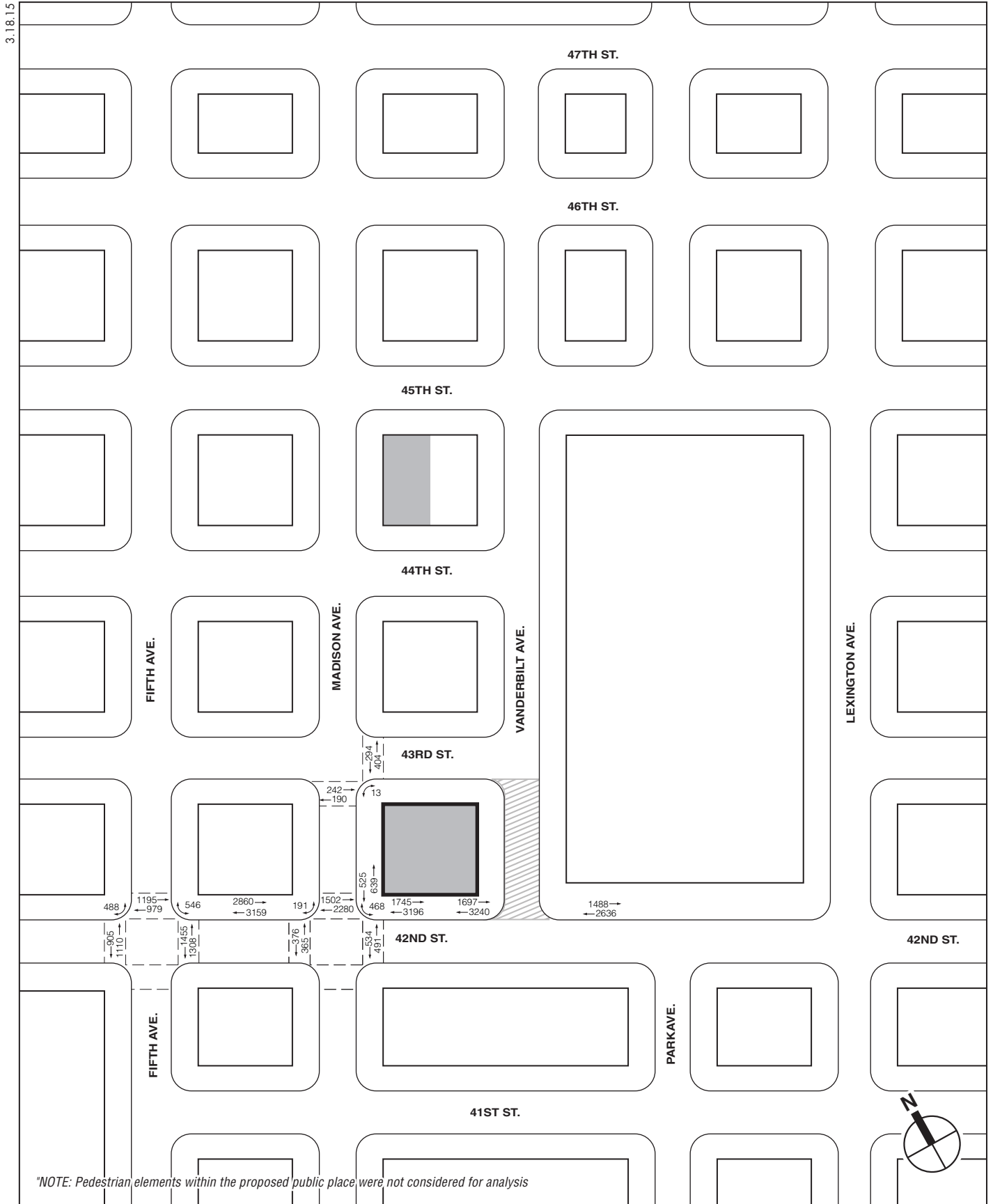
Proposed Public Place

2021 Vanderbilt Corridor With-Action Pedestrian Volumes Weekday PM Peak Hour

Figure 19-21

Vanderbilt Corridor and One Vanderbilt

This figure is new to the FEIS



One Vanderbilt Development Site

2021 Vanderbilt Corridor Development Sites

Proposed Public Place

NOT TO SCALE

2021 Vanderbilt Corridor With-Action Pedestrian Volumes
Saturday Peak Hour
Figure 19-22

Table 19-46

Summary of 2021 Vanderbilt Corridor With-Action Pedestrian Analysis Results

Level of Service	Analysis Peak Hours			
	Weekday AM	Weekday Midday	Weekday PM	Saturday
Sidewalks				
Sidewalks at LOS A/B/C	10	14	8	3
Sidewalks at LOS D	6	2	6	2
Sidewalks at LOS E	0	0	2	0
Sidewalks at LOS F	0	0	0	0
Total	16	16	16	5
Corner Reservoirs				
Corners at LOS A/B/C	25	23	22	5
Corners at LOS D	3	5	5	0
Corners at LOS E	3	3	4	0
Corners at LOS F	1	1	1	0
Total	32	32	32	5
Crosswalks				
Crosswalks at LOS A/B/C	11	8	5	2
Crosswalks at LOS D	8	9	9	1
Crosswalks at LOS E	4	6	8	1
Crosswalks at LOS F	0	0	1	0
Total	23	23	23	4
Notes: LOS = Level-of-Service				

With greater incremental trip-making, the proposed One Vanderbilt development, together with the projected redevelopment of the MTA site pursuant to the proposed actions in 2021, would result in significant adverse pedestrian impacts at 2 sidewalks, 9 corners, and 13 crosswalks, as compared with 1 impacted sidewalk, 4 impacted corners, and 6 impacted crosswalks identified for the One Vanderbilt project in 2021. The additional impacted pedestrian elements are as follows.

Sidewalks

- North sidewalk of East 43rd Street between Fifth Avenue and Madison Avenue.

Corners

- Southeast corner of Madison Avenue and East 41st Street;
- Northwest corner of Madison Avenue and East 43rd Street;
- Northeast corner of Madison Avenue and East 45th Street.
- Northeast corner of Lexington Avenue and East 42nd Street; and
- Northwest corner of Lexington Avenue and East 42nd Street

Crosswalks

- South crosswalk of Madison Avenue and East 43rd Street;
- West crosswalk of Madison Avenue and East 43rd Street;
- East crosswalk of Madison Avenue and East 43rd Street;
- East crosswalk of Fifth Avenue and 44th Street;
- North crosswalk of Madison Avenue and East 45th Street;
- East crosswalk of Madison Avenue and East 45th Street; and
- North crosswalk of Lexington Avenue and East 42nd Street.

Some of these impacts could be mitigated with the same or similar improvement measures identified in Chapter 18, "Mitigation." Others, including those identified to be unmitigatable for

Vanderbilt Corridor and One Vanderbilt

the development of the One Vanderbilt site in 2021, would similarly be unmitigatable. As the development program for the MTA site becomes more defined, it will be studied as part of a separate environmental review, for which more details on the predicted impacts and associated mitigation measures would be determined.

For the 1 impacted sidewalk, 4 impacted corners, and 6 impacted crosswalks identified for the proposed One Vanderbilt development in 2021, greater trip-making in 2021 from the proposed One Vanderbilt development, together with the redevelopment of the MTA site, would result in worsened impacts. A review of the mitigation needs for the greater 2021 impacts with the redevelopment of the MTA site was conducted to determine if the measures identified to mitigate 2021 impacts with only development of the One Vanderbilt building would still be effective in mitigating the impacts identified for these locations with the additional redevelopment of the MTA site. This review, as summarized in **Table 19-47**, showed that the 2021 One Vanderbilt plus the MTA site redevelopment impacts could be mitigated with the same or similar measures identified to mitigate the 2021 One Vanderbilt impacts, with the exception of one location—the northeast corner of Madison Avenue and East 43rd Street—for which other mitigation measures would be needed to supplement or replace what has been proposed to address the 2021 One Vanderbilt impacts at this location. If no such measures can be found, then the significant adverse pedestrian impacts at this location would remain unmitigated. At the time of implementation, if some or all of these pedestrian mitigation measures are deemed infeasible and no alternative mitigation measures can be identified; those impacts would be unmitigated.

Table 19-47
2021 Vanderbilt Corridor Required Mitigation at 2021 One Vanderbilt Impacted Pedestrian Locations

<u>Significantly Impacted Locations</u>		<u>2021 One Vanderbilt Proposed Mitigation Measures</u>	<u>2021 Vanderbilt Corridor Required Mitigation Measures</u>
<u>Intersection</u>	<u>Pedestrian Element</u>		
<u>Sidewalks</u>			
<u>Fifth Avenue and 42nd Street</u>	<u>North Sidewalk of East 42nd Street between Madison Avenue and Fifth Avenue</u>	<u>Reconstruct newsstand kiosk to narrower width (1.0-foot reduction)</u>	<u>Same mitigation</u>
<u>Corners</u>			
<u>Madison Avenue and East 43rd Street</u>	<u>Northeast Corner</u>	<u>Relocate trash can and signal pole</u>	<u>Need additional or different mitigation; potentially unmitigated</u>
	<u>Southwest Corner</u>	<u>Extend East 43rd Street curb by 0.5-foot (6-foot widening per DOT standards)</u>	<u>Same mitigation</u>
<u>Madison Avenue and East 42nd Street</u>	<u>Northwest Corner</u>	<u>Extend Madison Avenue curb by 1.0-foot (8-foot widening per DOT standards)</u>	<u>Same mitigation</u>
<u>Madison Avenue and East 41st Street</u>	<u>Northeast Corner</u>	<u>Relocate trash can</u>	<u>Same mitigation</u>
<u>Crosswalks</u>			
<u>Fifth Avenue and 42nd Street</u>	<u>North Crosswalk</u>	<u>Widen by 4 feet</u>	<u>Same mitigation</u>
	<u>South Crosswalk</u>	<u>Widen by 0.5 foot</u>	<u>Similar mitigation; widen by 1.5 feet</u>
<u>Madison Avenue and East 42nd Street</u>	<u>North Crosswalk</u>	<u>Widen by 5 feet</u>	<u>Same mitigation</u>
	<u>South Crosswalk</u>	<u>Widen by 0.5 foot</u>	<u>Same mitigation</u>
	<u>East Crosswalk</u>	<u>Widen by 1.5 feet</u>	<u>Same mitigation</u>
<u>Madison Avenue and East 41st Street</u>	<u>East Crosswalk</u>	<u>Shift signal timing (2 seconds)</u>	<u>Same mitigation</u>

Parking

The proposed One Vanderbilt development, together with the projected redevelopment of the MTA site pursuant to the proposed actions, would result in an increase in area parking demand. With the same inventory of available parking resources, the 2021 Vanderbilt Corridor With-Action public parking utilization is expected to increase to 65 and 99 percent during the weekday morning and midday peak periods, respectively, and to remain at 65 and 19 percent during the evening and overnight peak periods, respectively, in the 1/4-mile off-street parking study area. Since these occupancy levels are within the area’s parking capacity, the proposed Vanderbilt Corridor development is not expected to result in the potential for a parking shortfall or a significant adverse parking impact.

2033 CONCEPTUAL ANALYSIS

Similar to the 2021 conceptual analysis, cumulative trip generation estimates using the same travel demand assumptions presented in Chapter 10, “Transportation,” were prepared for a reasonable worst-case development scenario on the One Vanderbilt site (Block 1277), as well as the three additional projected development sites on Block 1279 and Block 1281. **Table 19-48** provides a summary of the development program assumptions for the three blocks under the future No-Action and With-Action conditions, as well as the development increments that would be subject to the impact analyses presented below. The resulting trip estimates from these development program assumptions are presented in **Tables 19-49 to 19-51**.

Table 19-48

2033 Vanderbilt Corridor Development Program Comparison

Use	Future No-Action As-of-Right Development			Future With-Action under Proposed Actions			Development Increments Subject to Impact Analysis		
	Block 1277	Block 1279	Block 1281	Block 1277	Block 1279	Block 1281	Block 1277	Block 1279	Block 1281
Office (gsf)	636,312	597,485	768,806	1,079,000	914,361	1,580,924	442,688	316,876	812,118
Trading Floor (gsf)	0	0	0	246,000	0	0	246,000	0	0
Hotel (rooms)	0	0	0	0	250	0	0	250	0
Local Retail (gsf)	20,912	34,551	43,313	13,000	25,051	43,313	-7,910	-9,500	0
Destination Retail (gsf)	62,736	0	0	40,000	0	0	-22,740	0	0
Restaurant (gsf)	0	0	0	27,000	0	0	27,000	0	0
Roof-top Amenity (gsf)	0	0	0	55,000	0	0	55,000	0	0

Table 19-49

2033 Vanderbilt Corridor No-Action Trip Generation Summary

Peak Hour	In/Out	Person Trips							Vehicle Trips						
		Auto	Taxi	Subway	City Bus	Tour Bus	Walk	Railroad	Total	In/Out	Auto	Taxi	Tour Bus	Delivery	Total
AM	In	312	110	2,085	644	0	499	820	4,470	In	269	77	0	34	380
	Out	23	12	114	45	0	229	35	458	Out	17	77	0	34	128
	Total	335	122	2,199	689	0	728	855	4,928	Total	286	154	0	68	508
MD	In	102	131	290	260	0	3,495	0	4,278	In	78	119	0	39	236
	Out	104	135	295	271	0	3,649	0	4,454	Out	81	119	0	39	239
	Total	206	266	585	531	0	7,144	0	8,732	Total	159	238	0	78	475
PM	In	52	37	226	101	0	751	54	1,221	In	38	109	0	6	153
	Out	382	147	2,471	784	0	1,055	950	5,789	Out	326	109	0	6	441
	Total	434	184	2,697	885	0	1,806	1,004	7,010	Total	364	218	0	12	594
Saturday	In	64	63	164	125	0	1,562	0	1,978	In	41	50	0	0	91
	Out	57	56	148	112	0	1,393	0	1,766	Out	36	50	0	0	86
	Total	121	119	312	237	0	2,955	0	3,744	Total	77	100	0	0	177

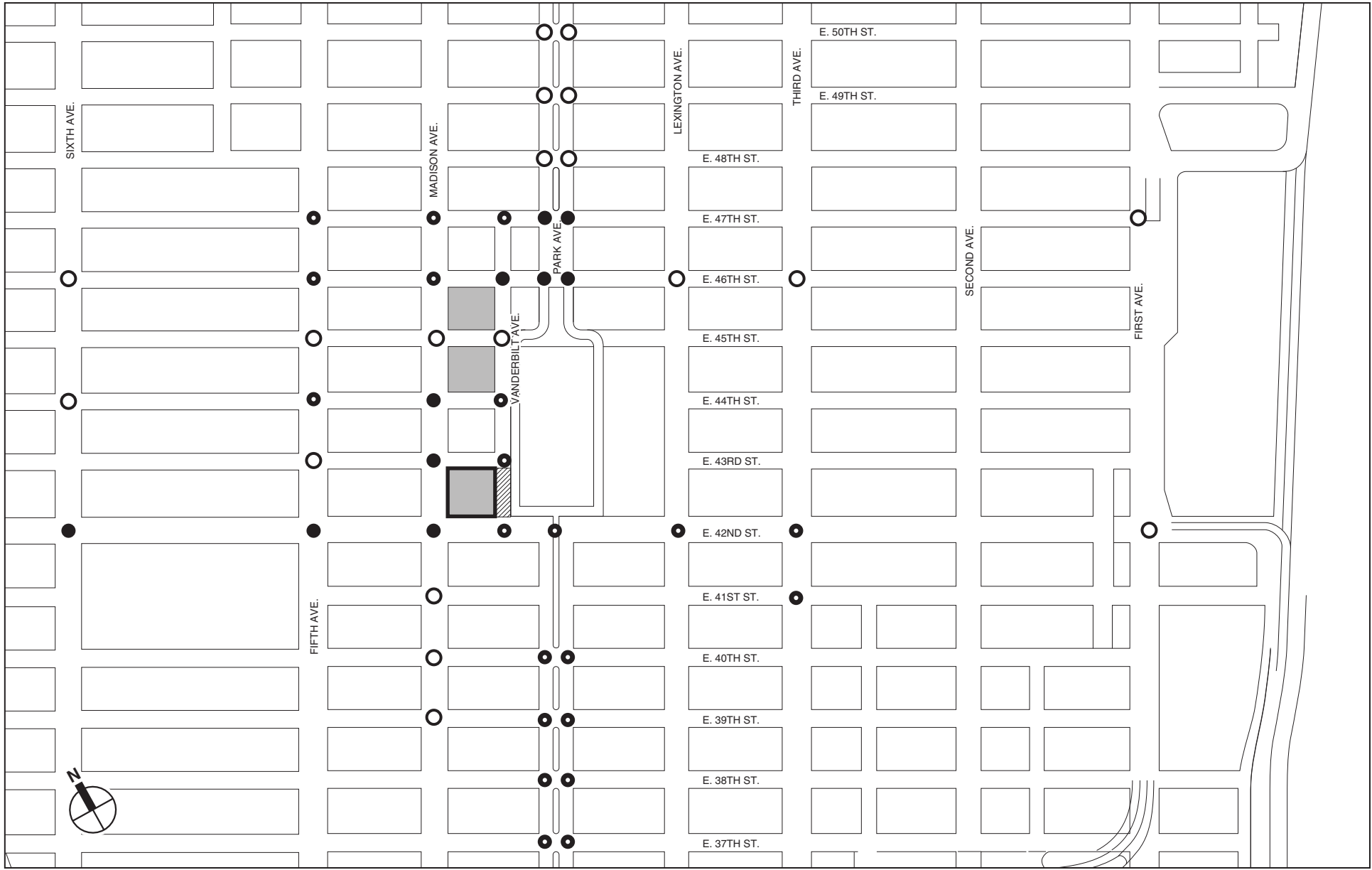
Table 19-50
2033 Vanderbilt Corridor With-Action Trip Generation Summary

Peak Hour	Person Trips									Vehicle Trips					
	In/Out	Auto	Taxi	Subway	City Bus	Tour Bus	Walk	Railroad	Total	In/Out	Auto	Taxi	Tour Bus	Delivery	Total
AM	In	769	256	4,838	1,481	218	1,086	2,012	10,660	In	664	173	5	61	903
	Out	45	56	325	131	178	458	88	1,281	Out	35	173	5	61	274
	Total	814	312	5,163	1,612	396	1,544	2,100	11,941	Total	699	346	10	122	1,177
MD	In	165	250	583	446	198	5,505	33	7,180	In	125	208	5	70	408
	Out	166	256	595	467	198	5,781	33	7,496	Out	128	208	5	70	411
	Total	331	506	1,178	913	396	11,286	66	14,676	Total	253	416	10	140	819
PM	In	294	301	561	165	0	925	175	2,421	In	135	268	0	12	415
	Out	942	362	5,390	1,618	0	1,406	2,235	11,953	Out	771	268	0	12	1,051
	Total	1,236	663	5,951	1,783	0	2,331	2,410	14,374	Total	906	536	0	24	1,466
Saturday	In	292	323	414	190	0	2,128	84	3,431	In	129	168	0	6	303
	Out	150	179	280	142	0	1,752	31	2,534	Out	75	168	0	6	249
	Total	442	502	694	332	0	3,880	115	5,965	Total	204	336	0	12	552

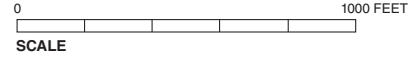
Table 19-51
2033 Vanderbilt Corridor Trip Increments

Peak Hour	Person Trips									Vehicle Trips					
	In/Out	Auto	Taxi	Subway	City Bus	Tour Bus	Walk	Railroad	Total	In/Out	Auto	Taxi	Tour Bus	Delivery	Total
AM	In	457	146	2,753	837	218	587	1,192	6,190	In	395	96	5	27	523
	Out	22	44	211	86	178	229	53	823	Out	18	96	5	27	146
	Total	479	190	2,964	923	396	816	1,245	7,013	Total	413	192	10	54	669
MD	In	63	119	293	186	198	2,010	33	2,902	In	47	89	5	31	172
	Out	62	121	300	196	198	2,132	33	3,042	Out	47	89	5	31	172
	Total	125	240	593	382	396	4,142	66	5,944	Total	94	178	10	62	344
PM	In	242	264	335	64	0	174	121	1,200	In	97	159	0	6	262
	Out	560	215	2,919	834	0	351	1,285	6,164	Out	445	159	0	6	610
	Total	802	479	3,254	898	0	525	1,406	7,364	Total	542	318	0	12	872
Saturday	In	228	260	250	65	0	566	84	1,453	In	88	118	0	6	212
	Out	93	123	132	30	0	359	31	768	Out	39	118	0	6	163
	Total	321	383	382	95	0	925	115	2,221	Total	127	236	0	12	375

Compared with the trip increments analyzed in Chapter 10, “Transportation,” the redevelopment of the projected development sites within the Vanderbilt Corridor pursuant to the proposed actions would result in 67 to 327 more incremental vehicle trips and 794 to 3,104 more incremental person trips during the analysis peak hours. Correspondingly, there would be up to 1,469 more incremental subway trips and 427 more incremental bus trips during peak hours. As a result, the transportation study areas needed to address potential impacts from these projected trip increments would be larger than those described in the Chapter 10, “Transportation.” As shown in **Figure 19-23**, the traffic study area considered for this conceptual analysis would include 50 intersections (as compared with the 31 intersections analyzed in Chapter 10, “Transportation”). For transit, in addition to station elements at the Grand Central-42nd Street and 42nd Street-Bryant Park stations, those at the 47th-50th Streets Rockefeller Center station (see **Figure 19-24**) were also included for analysis. Subway line-haul analyses were prepared for the same lines assessed for the One Vanderbilt development; and incremental bus trips would still be sufficiently distributed to not warrant a detailed bus line-haul analysis. With regard to pedestrians, as shown in **Figure 19-25**, 19 sidewalks, 42 corners, and 28 crosswalks were selected for analysis (as compared with 11 sidewalks, 15 corners, and 9 crosswalks analyzed in Chapter 10, “Transportation”).



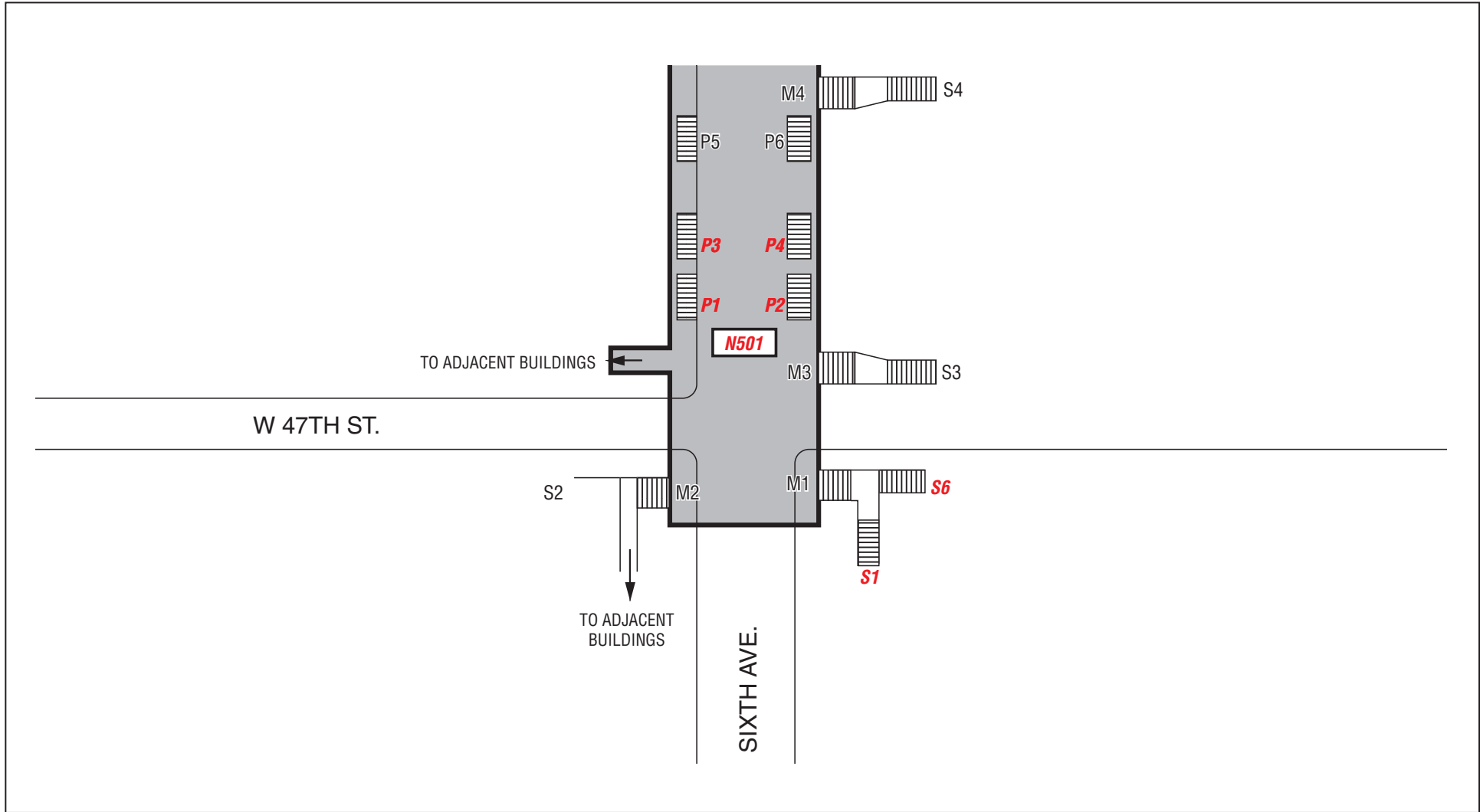
- 2033 Vanderbilt Corridor Development Sites
- One Vanderbilt Development Site
- Proposed Public Place
- 2021 and 2033 Traffic Analysis Location – Weekday Only
- 2021 and 2033 Traffic Analysis Location – Weekday and Saturday
- 2033 Traffic Analysis Location – Weekday Only



Vanderbilt Corridor and One Vanderbilt

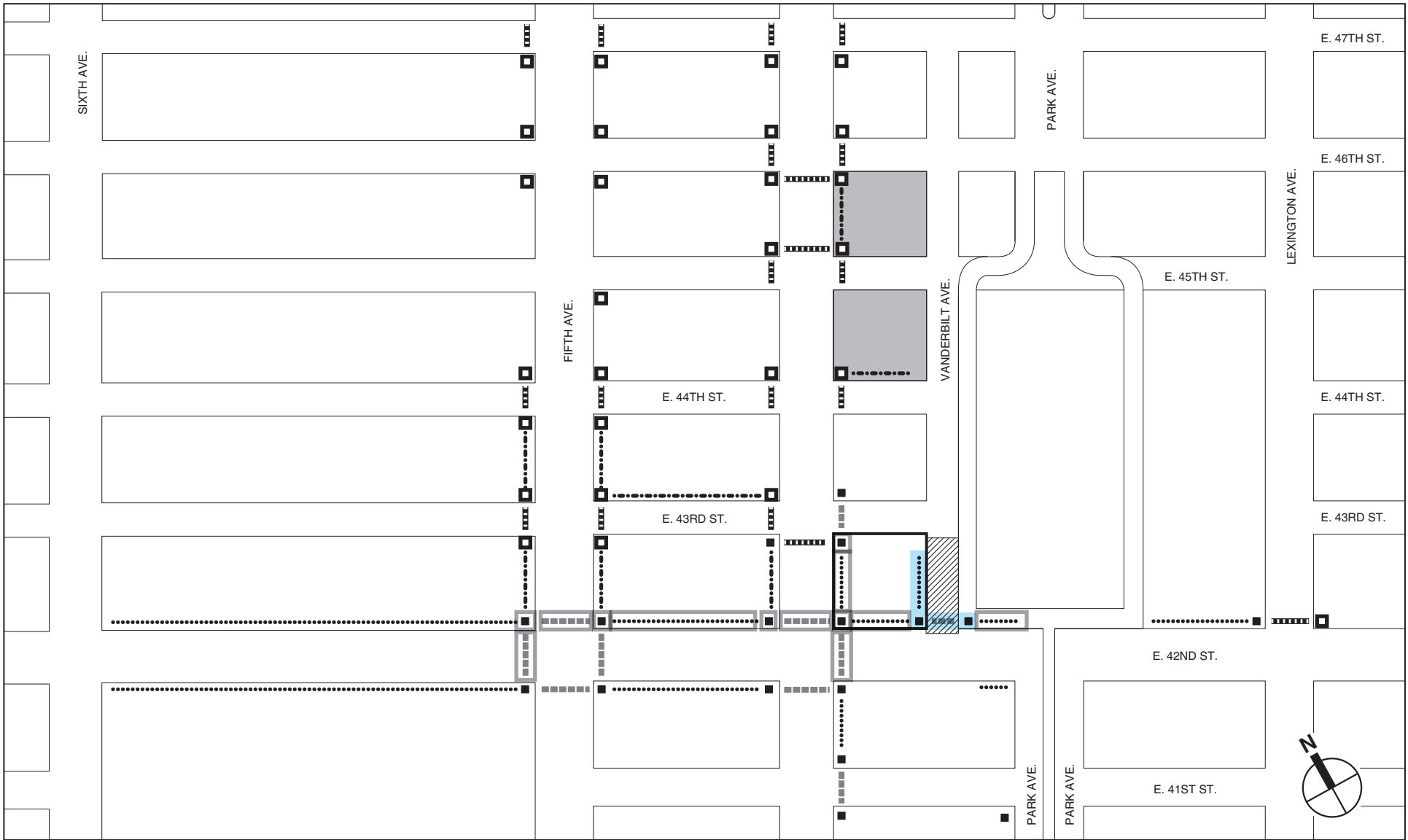
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2033 Vanderbilt Corridor Traffic Analysis Locations
Figure 19-23



 Stair
 Fare Array

**S6 Denotes Analysis Locations*



2033 Vanderbilt Corridor Development Sites

One Vanderbilt Development Site

Proposed Public Place

2021 and 2033 Analysis Location

Crosswalk (weekday)

Corner (weekday)

Sidewalk (weekday)

Crosswalk (weekday/Saturday)

Corner (weekday/Saturday)

Sidewalk (weekday/Saturday)

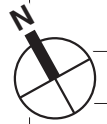
>200 Net-Incremental Pedestrian Trips in at Least One Peak Hour.
Not Included in Analysis Locations Due to Proposed Public Place

2033 Analysis Location – Weekday Only

Crosswalk

Corner

Sidewalk



Vanderbilt Corridor and One Vanderbilt

This figure has been updated for the FEIS

2033 Vanderbilt Corridor
Pedestrian Analysis Locations
Figure 19-25

Overall, with greater incremental trip-making, additional background growth, and trips generated by other projects, the With-Action condition for this 2033 conceptual analysis would yield more significant adverse transportation-related impacts. As detailed in Chapter 10, “Transportation,” the completion of the One Vanderbilt site (Block 1277) in 2021 is expected to result in significant adverse impacts at 17 traffic intersections; and 11 pedestrian elements, including 1 impacted sidewalk, 4 impacted corner reservoirs, and 6 impacted crosswalks. Improvement measures were explored to mitigate these impacts to the extent practicable (see Chapter 18, “Mitigation”). Of the above, significant adverse impacts at 4 intersections and potentially several of the 11 pedestrian elements could be unmitigatable. For transit, although two elements at the Grand Central-42nd Street subway station would incur deterioration in service levels in exceedance of the CEQR impact threshold, these impacts, when viewed in the context of the transit station improvements as a whole that are part of the proposed One Vanderbilt development, are not considered significant. In comparison, the proposed One Vanderbilt development, together with the projected redevelopment of the projected development sites within the Vanderbilt Corridor pursuant to the proposed actions in 2033, would result in significant adverse impacts at 34 traffic intersections; eight subway station elements, including four impacted stairways and four impacted escalators; and 37 pedestrian elements, including 6 impacted sidewalks, 10 impacted corner reservoirs, and 21 impacted crosswalks. Some of these impacts could be mitigated with the same or similar improvement measures identified in Chapter 18, “Mitigation.” Others, including those identified to be unmitigatable for the development of the One Vanderbilt site in 2021, would similarly be unmitigatable under the 2033 Vanderbilt Corridor With-Action condition. As development programs for Block 1279 and Block 1281 become more defined, they will be studied as part of separate environmental reviews, for which more details on the predicted impacts and associated mitigation measures would be determined. Similarly, more updated crash data would be analyzed at such time to assess vehicular and pedestrian safety at the relevant intersections. It should also be noted that the potential future development of these two blocks could use the Grand Central Public Realm Improvement Bonus special permit, the amended Landmark transfer special Permit or a combination of the two. Therefore, it may be required to provide funding for additional transit-related improvements, which have not been defined at this time and were conservatively not assumed in this analysis. Regarding parking, with the same inventory of available parking resources, future parking demand with the proposed One Vanderbilt development, together with the projected redevelopment of the projected development sites within the Vanderbilt Corridor pursuant to the proposed actions is expected to result in a parking shortfall of 345 spaces or 14 percent over capacity during the weekday midday peak utilization period for the off-street parking facilities studied in Chapter 10, “Transportation.” Some of the overflow in parking demand is expected to seek available parking supply at greater distances away. As stated in the *CEQR Technical Manual*, a parking shortfall in Manhattan and other CBD neighborhoods does not constitute a significant adverse parking impact, due to the magnitude of available alternative modes of transportation.

BASELINE TRANSPORTATION DATA AND ANALYSIS METHODOLOGY

As discussed in Chapter 10, “Transportation,” baseline conditions for the One Vanderbilt project transportation study areas were developed using data collected in 2013 and 2014, supplemented by traffic/transit/pedestrian volumes and analyses presented in the 2013 *East Midtown Rezoning and Related Action FEIS*. For the conceptual analyses, future background conditions depicted in Chapter 10, “Transportation,” were first extended from 2021 to 2033 by incorporating additional background growth and trips generated by other projects that are expected to be completed

Vanderbilt Corridor and One Vanderbilt

between 2021 and 2033. Future No-Action transportation data developed for the larger *East Midtown Rezoning and Related Action FEIS* transportation networks were then used to supplement baseline traffic, transit, and pedestrian volumes for the 2033 expanded study areas. For the limited locations where the 2033 projected trip increments would exceed the CEQR analysis thresholds and at which relevant baseline data/analyses are not available, they have been excluded for this conceptual analysis. Similarly, since the Saturday peak hour was not studied as part of the *East Midtown Rezoning and Related Action FEIS* and Saturday peak hour trip increments for the Vanderbilt Corridor projected developments would not be substantially greater than those for the One Vanderbilt project, the Saturday study areas analyzed in Chapter 10, “Transportation,” were not expanded for this conceptual analysis. While additional transit improvements may be stipulated as part of future applicants’ exercising the special permit mechanisms for Blocks 1279 and 1281, they were conservatively not assumed in the 2033 conceptual analyses. These analyses also assume the same transportation network changes and make use of the same detailed analysis methodologies described in Chapter 10, “Transportation.”

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2033)

In addition to 12 more years of background growth, trip-making associated with “No Build” projects anticipated to be completed beyond the 2021 One Vanderbilt site analysis year were incorporated into the 2033 future No-Action condition. These “No Build” projects include the development of several nearby sites identified in the *East Midtown Rezoning and Related Action FEIS* and the full build-out of the First Avenue Properties and Hudson Yards developments. The 2033 future transportation networks were developed using the methodology described above and analyzed for traffic, transit, and pedestrian service levels. The results of these analyses, as well as discussions of future No-Action parking conditions, are provided below.

Traffic

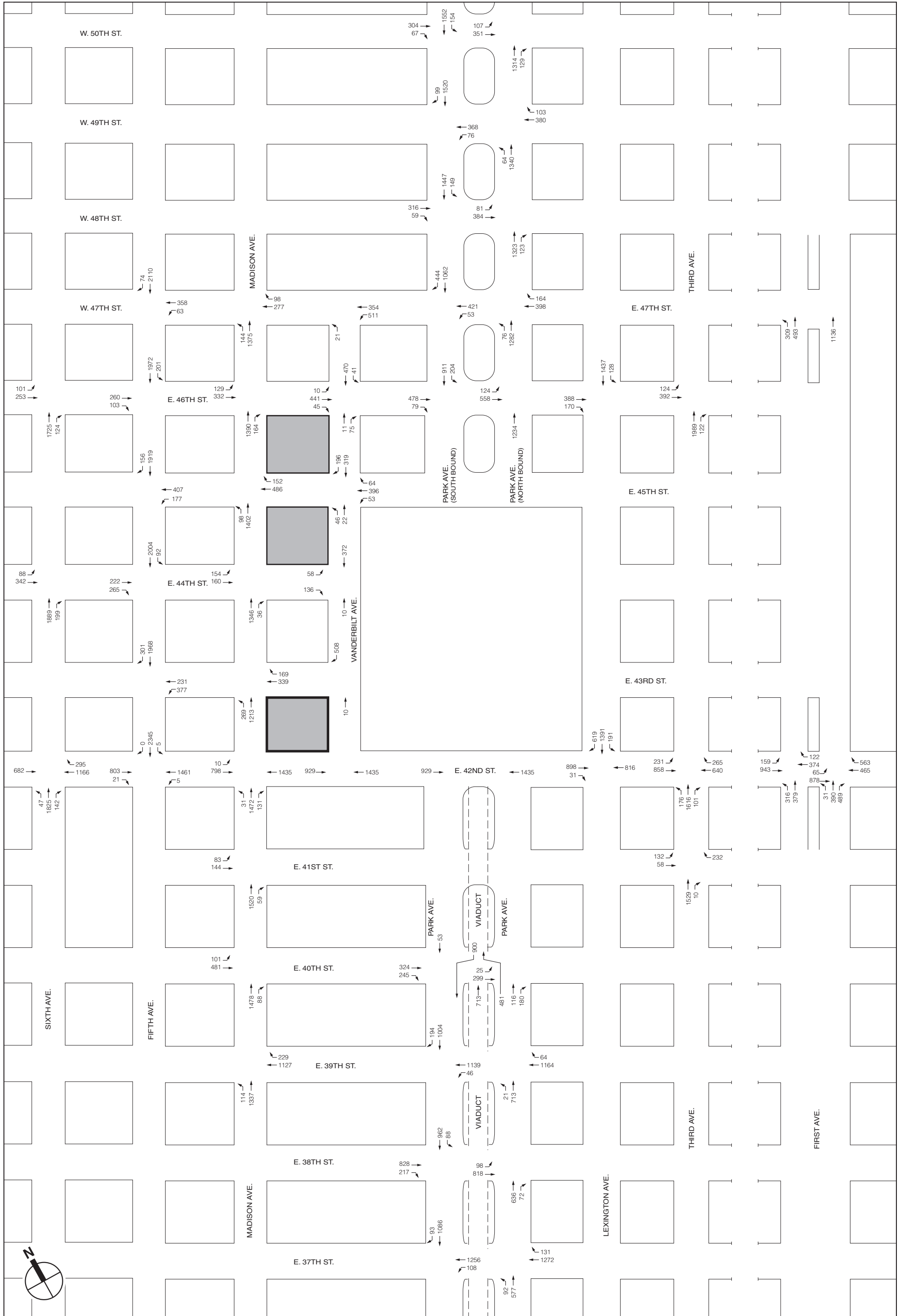
The 2033 Vanderbilt Corridor No-Action traffic volumes for the weekday AM, midday, PM, and Saturday peak hours are presented in **Figures 19-26 to 19-29**. A summary of the 2033 Vanderbilt Corridor No-Action traffic analysis results is presented in **Table 19-52**. Details on levels-of-service, volume-to-capacity (v/c) ratios, and average delays are compiled in **Appendix F**.

Table 19-52

Summary of 2033 Vanderbilt Corridor No-Action Traffic Analysis Results

Level of Service	Analysis Peak Hours			
	Weekday AM	Weekday Midday	Weekday PM	Saturday
<i>Signalized Intersections</i>				
Lane Groups at LOS A/B/C	81	88	91	23
Lane Groups at LOS D	30	28	25	4
Lane Groups at LOS E	10	9	8	2
Lane Groups at LOS F	35	27	34	5
Total	156	152	158	34
Lane Groups with v/c ≥ 0.90	56	45	53	8
<i>Unsignalized Intersections</i>				
Lane Groups at LOS A/B/C	8	7	8	0
Lane Groups at LOS D	0	0	0	0
Lane Groups at LOS E	0	0	0	0
Lane Groups at LOS F	0	1	0	0
Total	8	8	8	0
Lane Groups with v/c ≥ 0.90	0	0	0	0

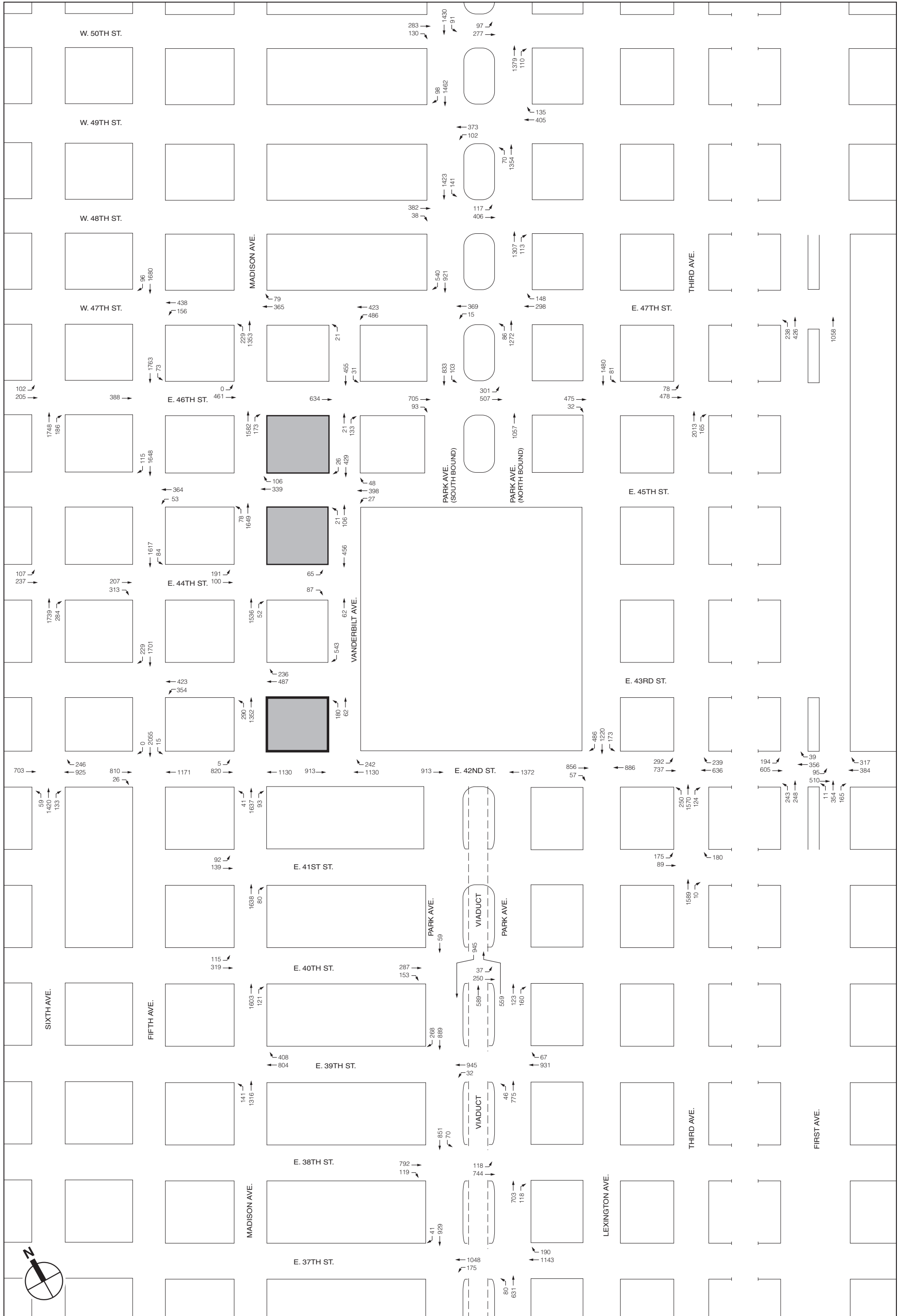
Notes: LOS = Level-of-Service; v/c = volume-to-capacity ratio



One Vanderbilt Development Site
 2033 Vanderbilt Corridor Development Sites

NOT TO SCALE

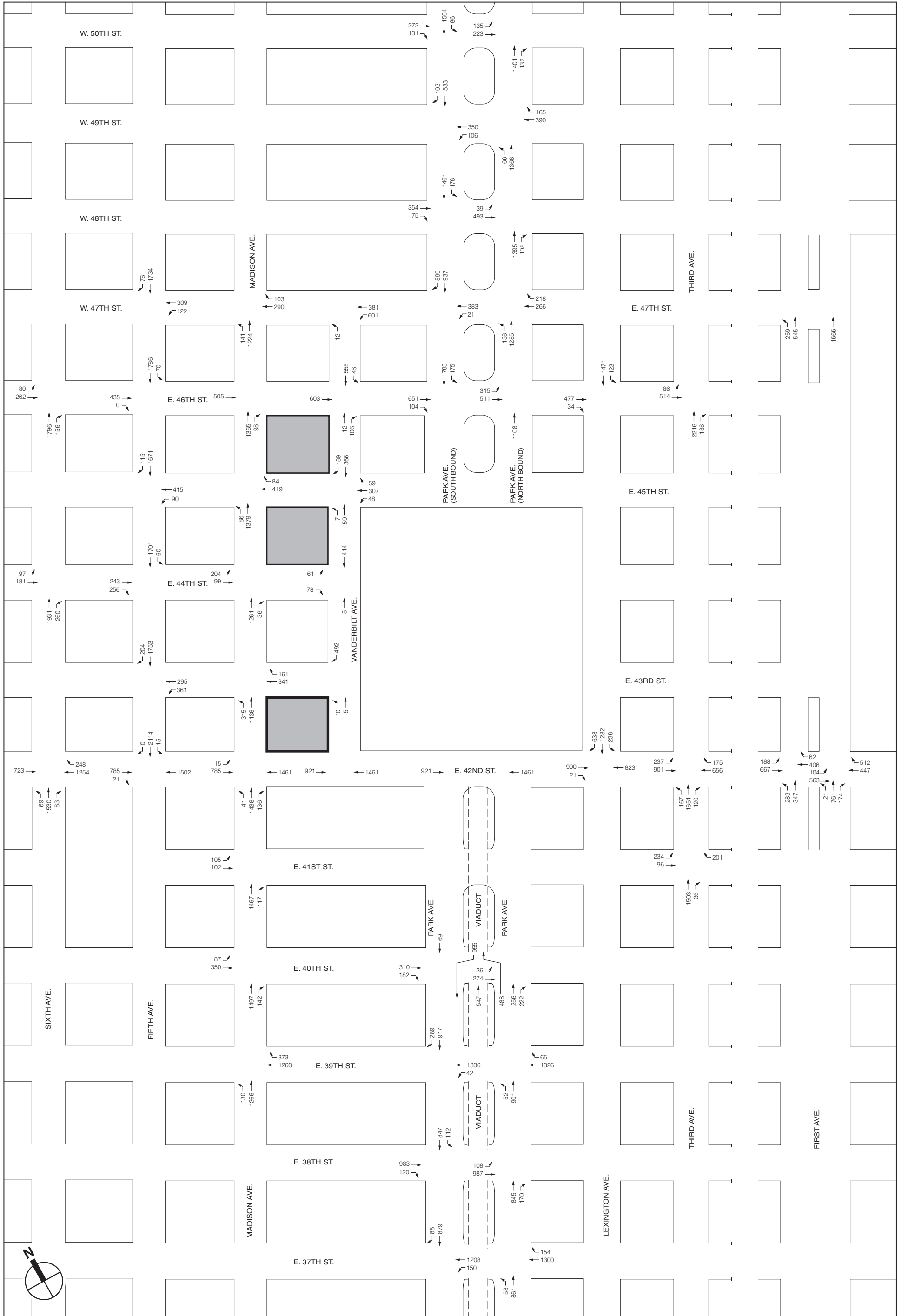
2033 Vanderbilt Corridor No-Action Traffic Volumes
 Weekday AM Peak Hour
Figure 19-26



One Vanderbilt Development Site
 2033 Vanderbilt Corridor Development Sites

NOT TO SCALE

2033 Vanderbilt Corridor No-Action Traffic Volumes
 Weekday Midday Peak Hour
Figure 19-27



One Vanderbilt Development Site
 2033 Vanderbilt Corridor Development Sites

NOT TO SCALE

2033 Vanderbilt Corridor No-Action Traffic Volumes
 Weekday PM Peak Hour
Figure 19-28



 One Vanderbilt Development Site
 2033 Vanderbilt Corridor Development Sites

NOT TO SCALE

2033 No-Action Traffic Volumes
 Saturday Peak Hour
Figure 19-29

Transit

Summaries of the 2033 Vanderbilt Corridor No-Action transit analysis results are presented in **Tables 19-53 through 19-55**. Details on service levels at station analysis elements are compiled in **Appendix F**.

Table 19-53

**Summary of 2033 Vanderbilt Corridor No-Action Transit Analysis Results
Grand Central-42nd Street Station**

Level of Service	Analysis Peak Hours	
	AM Peak Hour	PM Peak Hour
Stairs at LOS A/B/C	17	24
Stairs at LOS D	11	7
Stairs at LOS E	6	4
Stairs at LOS F	2	1
Total	36	36
Escalators at LOS A/B/C	0	3
Escalators at LOS D	8	5
Escalators at LOS E	0	0
Escalators at LOS F	0	0
Total	8	8
Fare Array Area at LOS A/B/C	10	10
Fare Array Area at LOS D	0	0
Fare Array Area at LOS E	0	0
Fare Array Area at LOS F	0	0
Total	10	10

Notes: LOS = Level-of-Service

Table 19-54

**Summary of 2033 Vanderbilt Corridor No-Action Transit Analysis Results
42nd Street-Bryant Park Station**

Level of Service	Analysis Peak Hours	
	AM Peak Hour	PM Peak Hour
Stairs at LOS A/B/C	3	3
Stairs at LOS D	0	0
Stairs at LOS E	0	0
Stairs at LOS F	0	0
Total	3	3
Fare Array Area at LOS A/B/C	1	1
Fare Array Area at LOS D	0	0
Fare Array Area at LOS E	0	0
Fare Array Area at LOS F	0	0
Total	1	1

Notes: LOS = Level-of-Service

Table 19-55

**Summary of 2033 Vanderbilt Corridor No-Action Transit Analysis Results
47th-50th Streets-Rockefeller Center Station**

Level of Service	Analysis Peak Hours	
	AM Peak Hour	PM Peak Hour
Stairs at LOS A/B/C	1	4
Stairs at LOS D	2	2
Stairs at LOS E	1	0
Stairs at LOS F	2	0
Total	6	3
Fare Array Area at LOS A/B/C	1	1
Fare Array Area at LOS D	0	0
Fare Array Area at LOS E	0	0
Fare Array Area at LOS F	0	0
Total	1	1

Notes: LOS = Level-of-Service

Pedestrians

The 2033 Vanderbilt Corridor No-Action pedestrian volumes for the weekday AM, midday, PM, and Saturday peak hours are presented in **Figures 19-30 to 19-33**. A summary of the 2033 No-Action pedestrian analysis results is presented in **Table 19-56**. Details on pedestrian service levels at study area sidewalks, corner reservoirs, and crosswalks are compiled in **Appendix F**.

Table 19-56

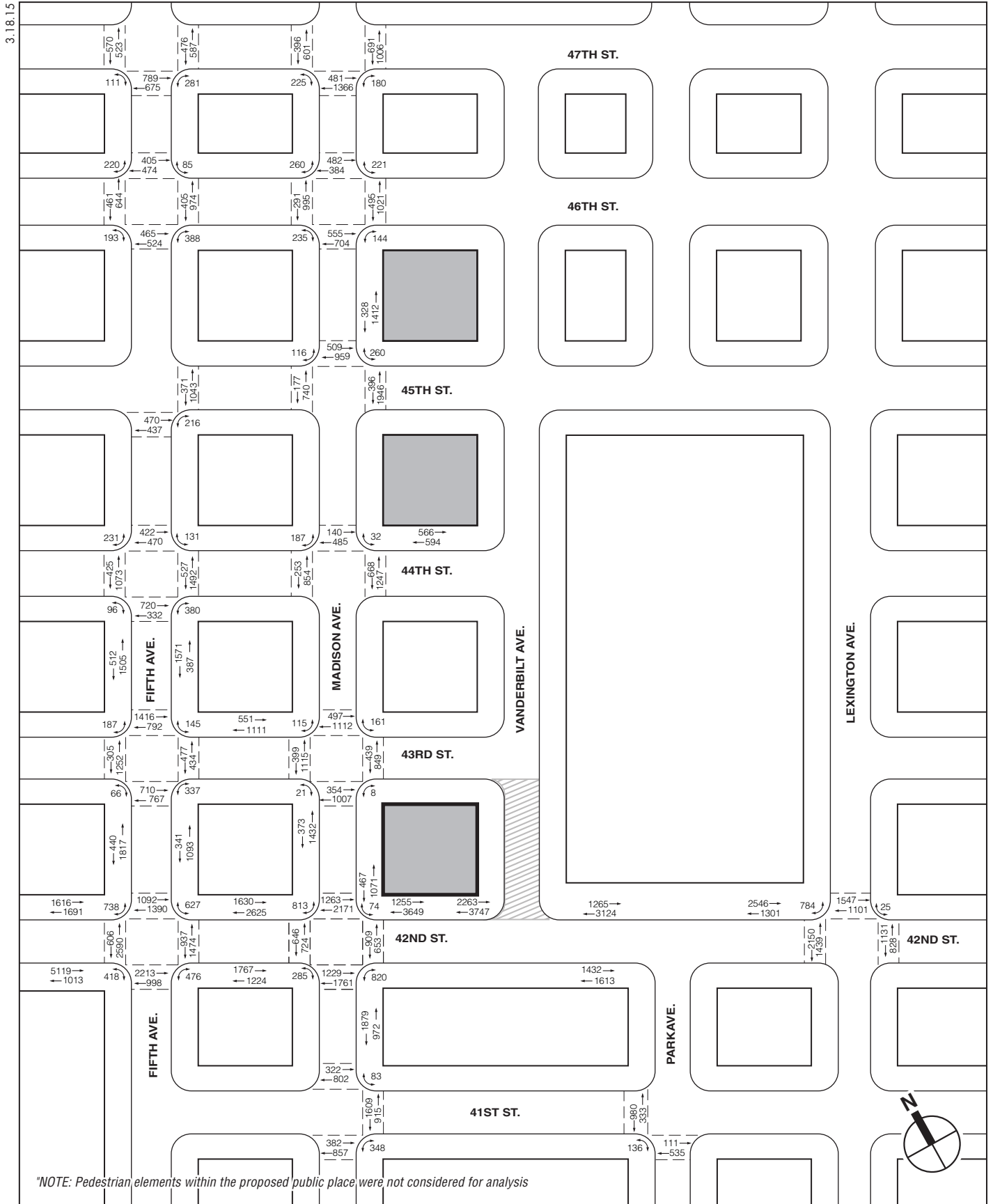
Summary of 2033 Vanderbilt Corridor No-Action Pedestrian Analysis Results

Level of Service	Analysis Peak Hours			
	Weekday AM	Weekday Midday	Weekday PM	Saturday
Sidewalks				
Sidewalks at LOS A/B/C	13	16	11	2
Sidewalks at LOS D	6	3	6	3
Sidewalks at LOS E	0	0	2	0
Sidewalks at LOS F	0	0	0	0
Total	19	19	19	5
Corner Reservoirs				
Corners at LOS A/B/C	36	33	30	4
Corners at LOS D	2	5	6	1
Corners at LOS E	3	3	5	0
Corners at LOS F	1	1	1	0
Total	42	42	42	5
Crosswalks				
Crosswalks at LOS A/B/C	13	10	6	2
Crosswalks at LOS D	11	11	11	1
Crosswalks at LOS E	4	7	11	1
Crosswalks at LOS F	0	0	0	0
Total	28	28	28	4

Notes: LOS = Level-of-Service

Parking

Accounting for background growth and added parking demand from nearby “No Build” projects and from as-of-right development on the Vanderbilt Corridor projected development sites, the 2033 Vanderbilt Corridor No-Action parking utilization for the off-street parking facilities studied in Chapter 10, “Transportation,” is expected to increase to a peak of 90 percent of the



One Vanderbilt Development Site

2033 Vanderbilt Corridor Development Sites

Proposed Public Place

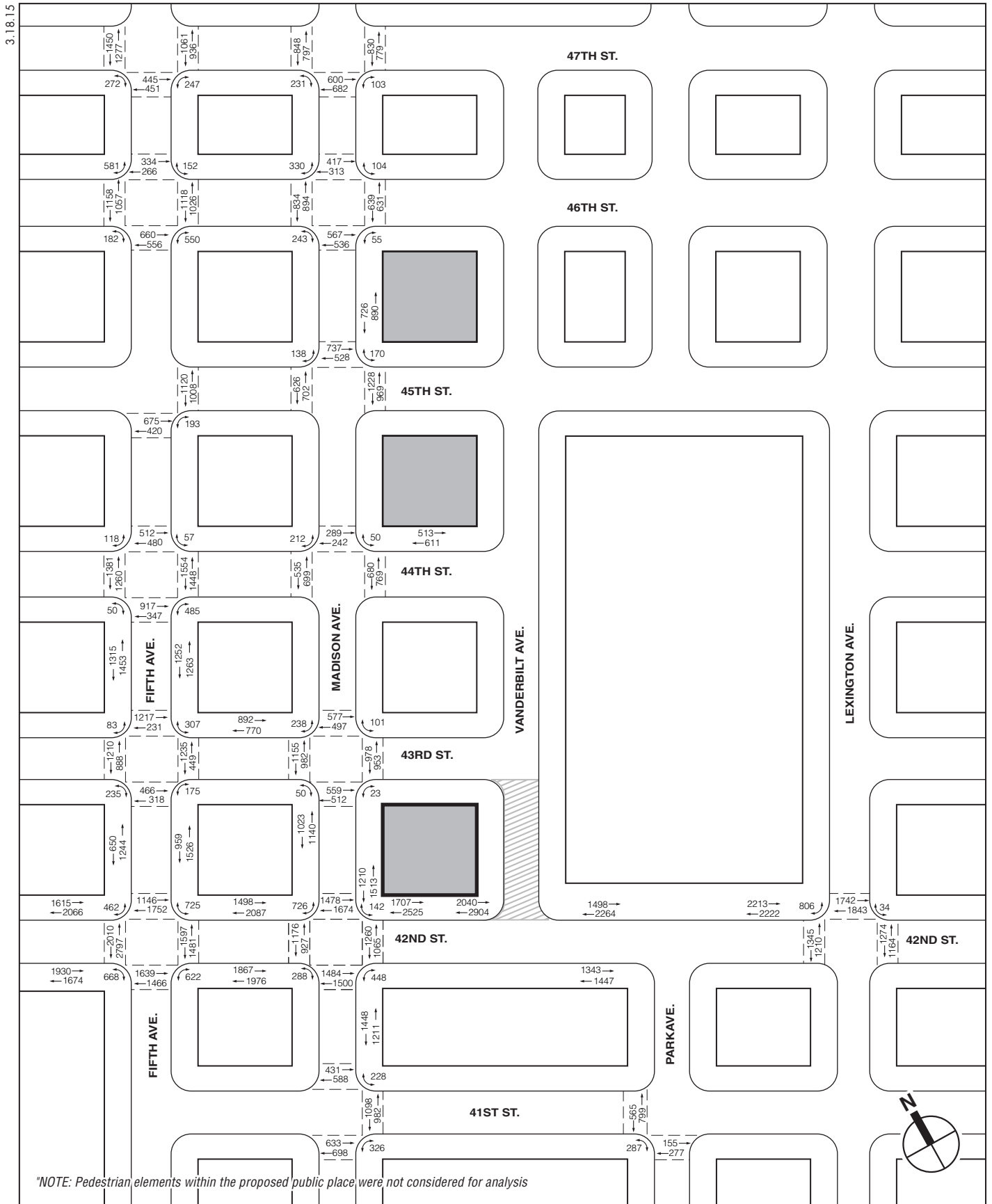
NOT TO SCALE

2033 Vanderbilt Corridor No-Action Pedestrian Volumes Weekday AM Peak Hour

Vanderbilt Corridor and One Vanderbilt

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Figure 19-30



One Vanderbilt Development Site

2033 Vanderbilt Corridor Development Sites

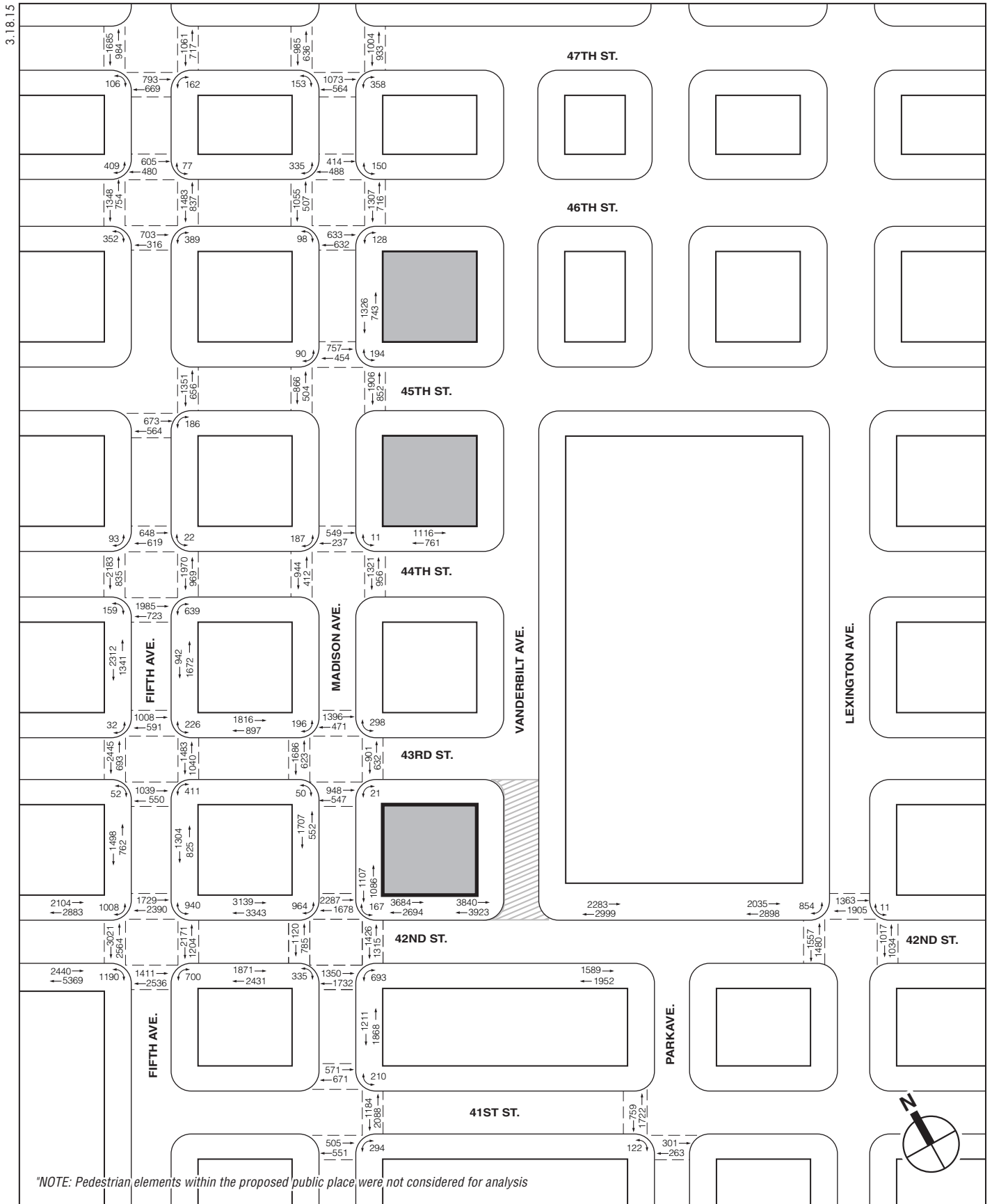
Proposed Public Place

2033 Vanderbilt Corridor No-Action Pedestrian Volumes Weekday Midday Peak Hour

Vanderbilt Corridor and One Vanderbilt

This figure has been updated for the FEIS

Figure 19-31



One Vanderbilt Development Site

2033 Vanderbilt Corridor Development Sites

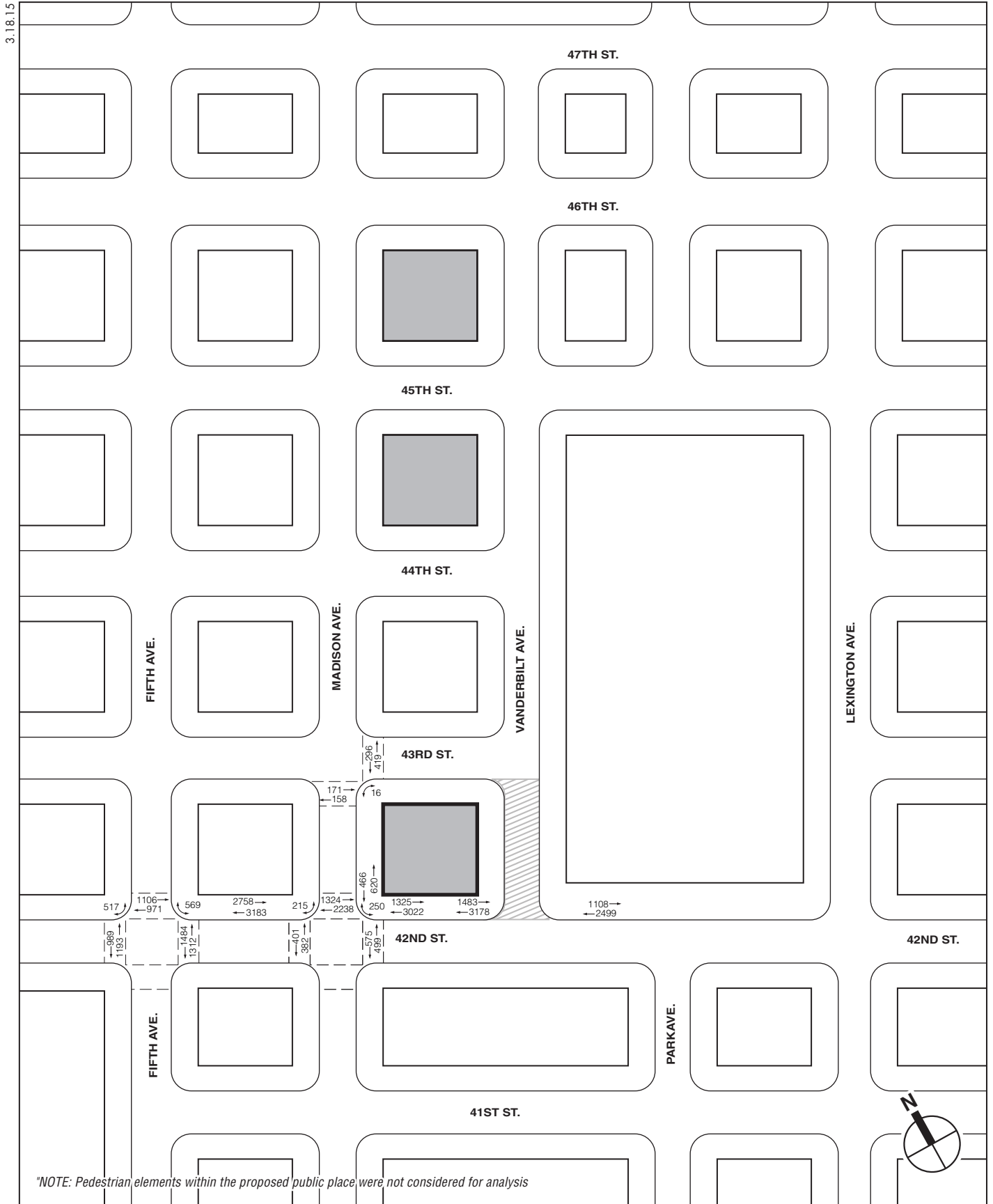
Proposed Public Place

2033 Vanderbilt Corridor No-Action Pedestrian Volumes Weekday PM Peak Hour

Vanderbilt Corridor and One Vanderbilt

This figure has been updated for the FEIS

Figure 19-32



One Vanderbilt Development Site

2033 Vanderbilt Corridor Development Sites

Proposed Public Place

NOT TO SCALE

2033 Vanderbilt Corridor No-Action Pedestrian Volumes
Saturday Peak Hour

Vanderbilt Corridor and One Vanderbilt

This figure has been updated for the FEIS

Figure 19-33

available parking supply. Approximately 237 parking spaces within these facilities would be expected to remain available during the weekday midday peak utilization period.

THE FUTURE WITH THE PROPOSED ACTIONS (2033)

The cumulative trip increments associated with the redevelopment of the projected development sites within the Vanderbilt Corridor pursuant to the proposed actions were overlaid onto the 2033 Vanderbilt Corridor No-Action transportation network to assess their potential impacts on the area’s roadway network, transit system, and pedestrian facilities. The results of these analyses, as well as assessments of how the incremental trips may affect parking supply and utilization, are presented below.

Traffic

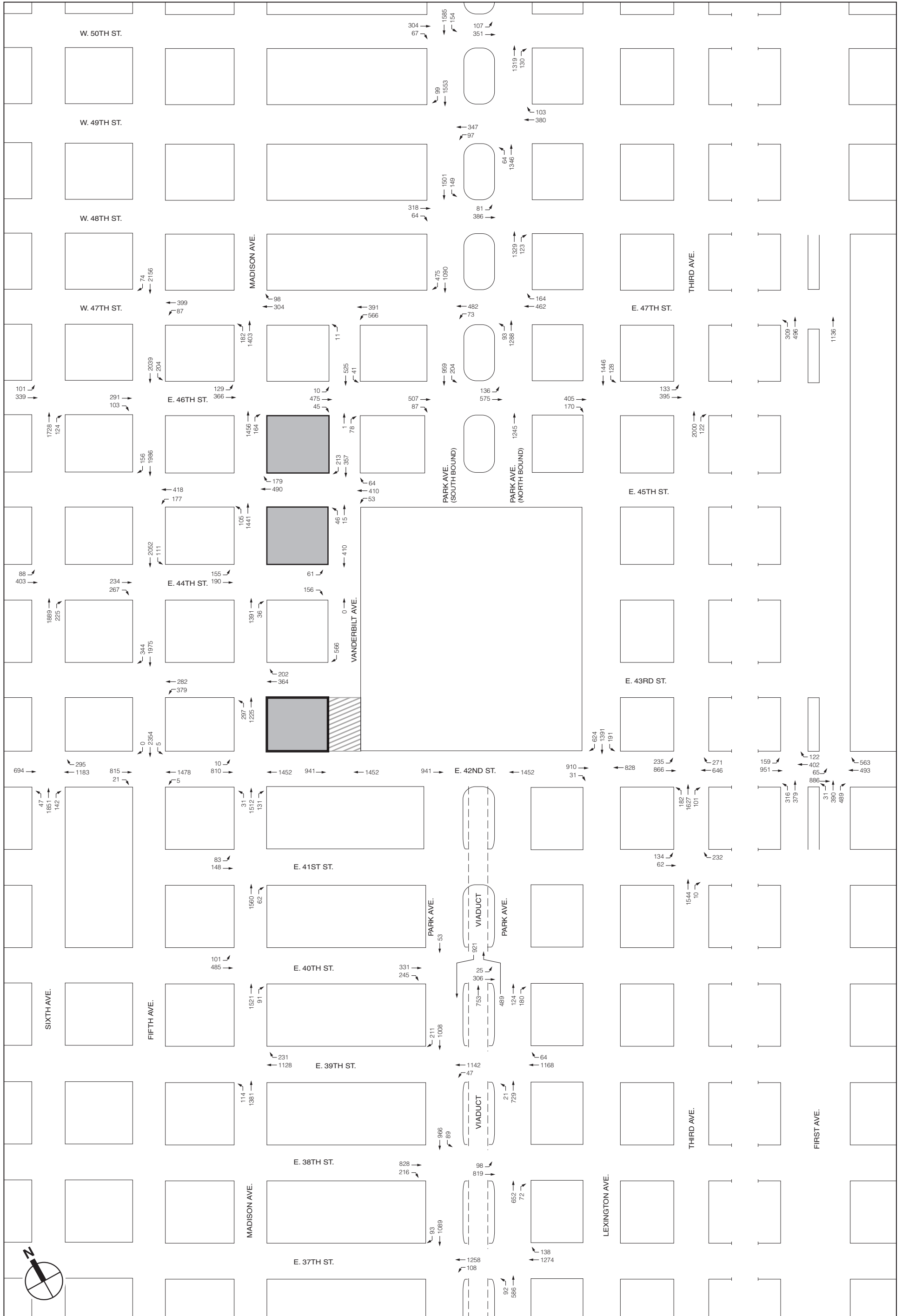
The 2033 Vanderbilt Corridor With-Action traffic volumes for the weekday AM, midday, PM, and Saturday peak hours are presented in **Figures 19-34 to 19-37**. A summary of the 2033 Vanderbilt Corridor With-Action traffic analysis results is presented in **Table 19-57**. Details on levels-of-service, volume-to-capacity (v/c) ratios, and average delays, as well as the peak hour incremental traffic volumes, are compiled in **Appendix F**.

Table 19-57
Summary of 2033 Vanderbilt Corridor With-Action Traffic Analysis Results

Level of Service	Analysis Peak Hours			
	Weekday AM	Weekday Midday	Weekday PM	Saturday
Signalized Intersections				
Lane Groups at LOS A/B/C	77	86	89	23
Lane Groups at LOS D	31	26	25	3
Lane Groups at LOS E	11	14	5	1
Lane Groups at LOS F	38	26	39	7
Total	156	152	158	34
Lane Groups with v/c ≥ 0.90	61	49	55	9
Unsignalized Intersections⁽¹⁾				
Lane Groups at LOS A/B/C	6	5	5	0
Lane Groups at LOS D	0	1	1	0
Lane Groups at LOS E	0	0	0	0
Lane Groups at LOS F	0	0	0	0
Total	6	6	6	0
Lane Groups with v/c ≥ 0.90	0	0	0	0
Notes: LOS = Level-of-Service; v/c = volume-to-capacity ratio ⁽¹⁾ As described in Chapter 10, "Transportation," due to the proposed configuration changes along Vanderbilt Avenue under the With-Action condition, the overall number of lane groups at the analyzed unsignalized intersections would be reduced from 8 under the No-Action to 6 under the With-Action.				

With greater incremental trip-making, the proposed One Vanderbilt development, together with the projected redevelopment of the projected development sites within the Vanderbilt Corridor pursuant to the proposed actions in 2033, would result in significant adverse impacts at 34 traffic intersections, as compared with 17 impacted intersections identified for the One Vanderbilt project in 2021. The additional impacted intersections are as follows.

1. First Avenue and East 42nd Street;
2. Park Avenue (southbound) and East 50th Street;
3. Park Avenue (northbound) and East 49th Street;
4. Park Avenue (southbound) and East 48th Street;
5. Park Avenue (northbound) and East 47th Street;

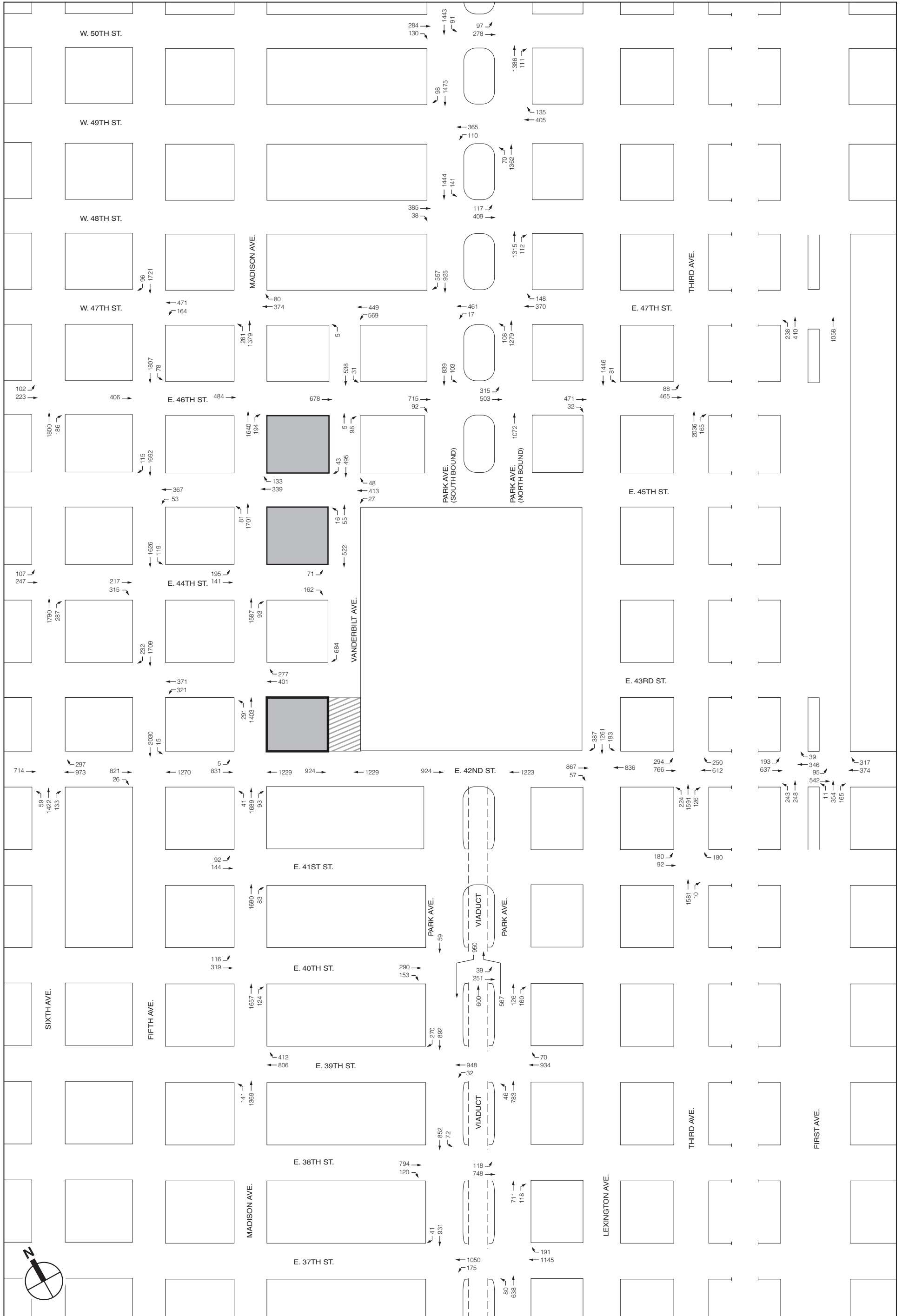


- One Vanderbilt Development Site
- 2033 Vanderbilt Corridor Development Sites
- Proposed Public Place

NOT TO SCALE

2033 Vanderbilt Corridor With-Action Traffic Volumes
 Weekday AM Peak Hour
Figure 19-34

Vanderbilt Corridor and One Vanderbilt
 This figure has been updated for the FEIS



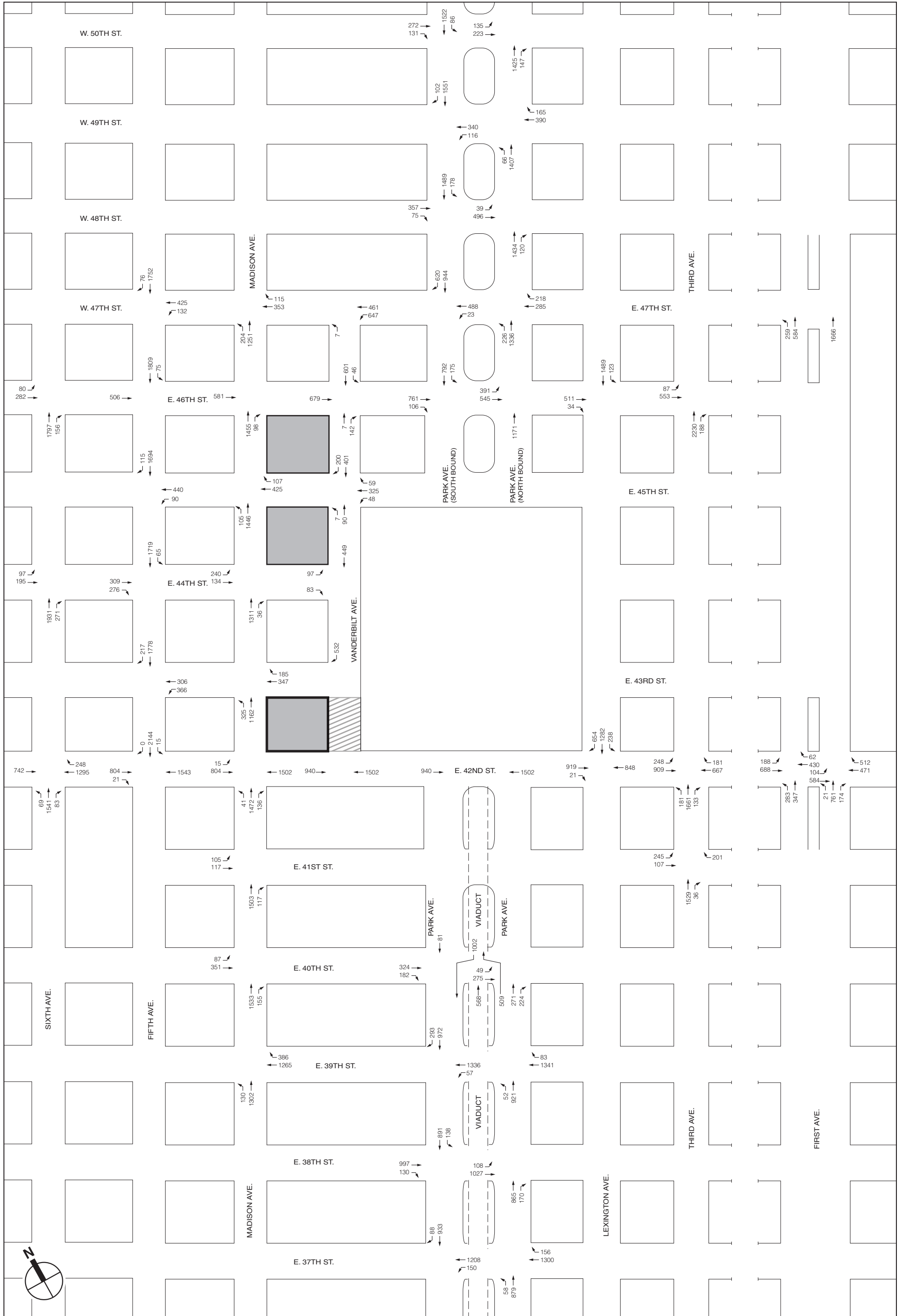
- One Vanderbilt Development Site
- 2033 Vanderbilt Corridor Development Sites
- Proposed Public Place

NOT TO SCALE

2033 Vanderbilt Corridor With-Action Traffic Volumes
Weekday Midday Peak Hour
Figure 19-35

Vanderbilt Corridor and One Vanderbilt

This figure has been updated for the FEIS



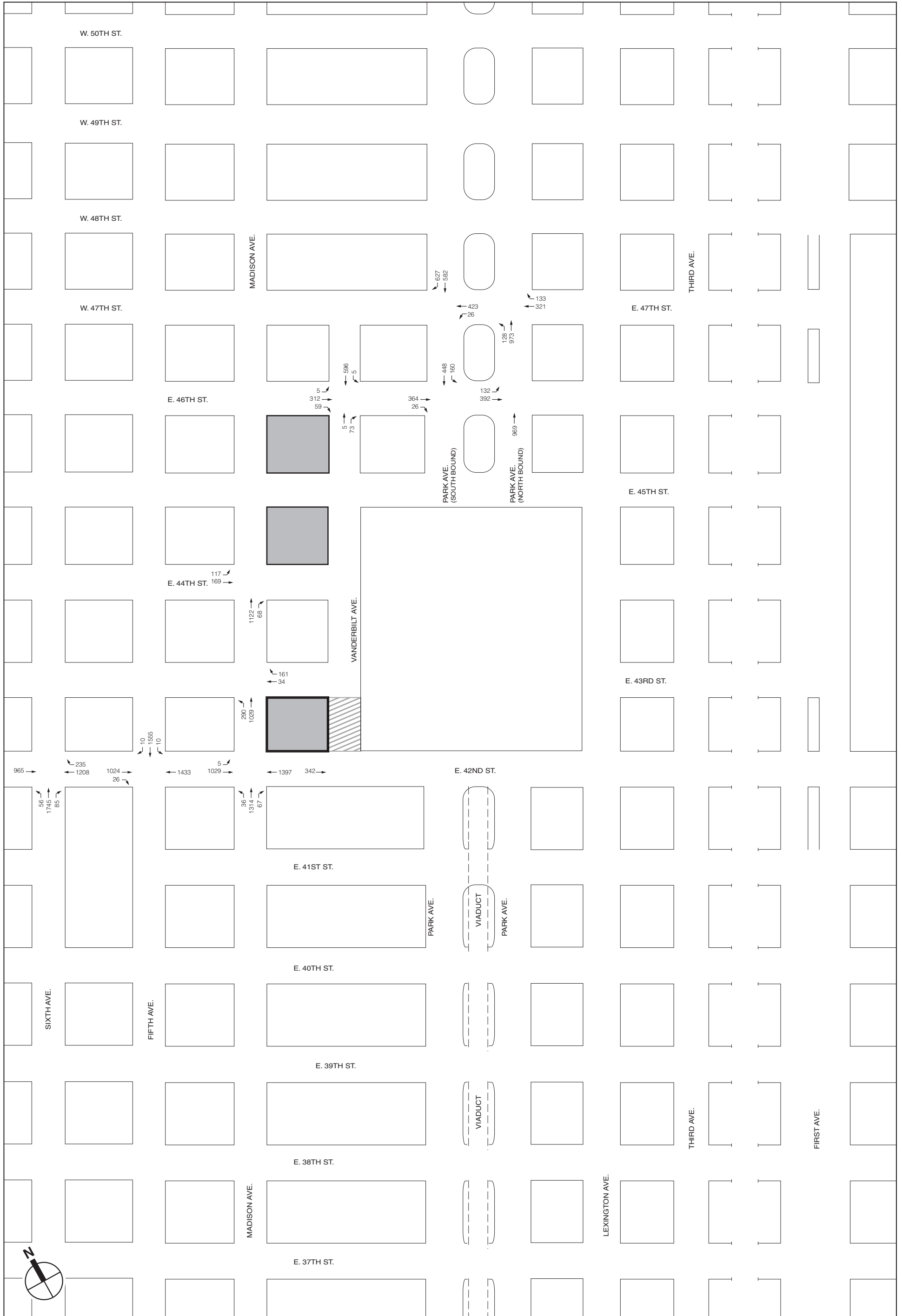
-  One Vanderbilt Development Site
-  2033 Vanderbilt Corridor Development Sites
-  Proposed Public Place

NOT TO SCALE

2033 With-Action Traffic Volumes
 Weekday PM Peak Hour
Figure 19-36

Vanderbilt Corridor and One Vanderbilt

This figure has been updated for the FEIS



-  One Vanderbilt Development Site
-  2033 Vanderbilt Corridor Development Sites
-  Proposed Public Place

NOT TO SCALE

2033 Vanderbilt Corridor With-Action Traffic Volumes
 Saturday Peak Hour
Figure 19-37

Vanderbilt Corridor and One Vanderbilt

6. Park Avenue and East 42nd Street;
7. Park Avenue (southbound) and East 38th Street;
8. Park Avenue (northbound) and East 37th Street;
9. Vanderbilt Avenue and East 45th Street;
10. Madison Avenue and East 47th Street;
11. Madison Avenue and East 46th Street;
12. Madison Avenue and East 45th Street;
13. Madison Avenue and East 41st Street;
14. Madison Avenue and East 39th Street;
15. Fifth Avenue and 45th Street;
16. Fifth Avenue and 43rd Street; and
17. Sixth Avenue and West 44th Street

Some of these impacts could be mitigated with the same or similar improvement measures identified in Chapter 18, “Mitigation.” Others, including those identified to be unmitigatable for the development of the One Vanderbilt site in 2021, would similarly be unmitigatable. As development programs for Block 1279 and Block 1281 become more defined, they will be studied as part of separate environmental reviews, for which more details on the predicted impacts and associated mitigation measures would be determined.

For the 17 impacted intersections identified for the proposed One Vanderbilt development in 2021, greater trip-making in 2033 from the proposed One Vanderbilt development, together with the projected redevelopment of the projected development sites within the Vanderbilt Corridor, would result in worsened impacts. A review of the mitigation needs for the greater 2033 impacts was conducted to determine if the measures identified to mitigate 2021 impacts would still be effective in mitigating 2033 impacts at these locations. This review, as summarized in **Table 19-58**, showed that while the same or similar measures identified to mitigate the 2021 impacts could be adopted to mitigate the 2033 impacts at certain intersections, there would be five additional intersections where no feasible measures can be identified to mitigate the 2033 impacts.

Table 19-58

2033 Vanderbilt Corridor Required Mitigation at 2021 One Vanderbilt Impacted Traffic Intersections

Significantly Impacted Intersections	2021 <u>One Vanderbilt</u> Proposed Mitigation Measures	2033 <u>Vanderbilt Corridor</u> Required Mitigation Measures
Third Avenue and East 42nd Street	Unmitigated	Same – Unmitigated
Third Avenue and East 41st Street	Shift signal timing (1 second)	Similar mitigation; shift signal timing (2 seconds)
Lexington Avenue and East 42nd Street	<u>Unmitigated</u>	<u>Same – Unmitigated</u>
Park Avenue (SB) and East 47th Street	Shift signal timing (1 second)	Unmitigated
Park Avenue (NB) and East 40th Street	Restripe and shift signal timing (1 second)	Unmitigated
Park Avenue (SB) and East 40th Street	Restripe and shift signal timing (1 second)	Unmitigated
Park Avenue (NB) and East 39th Street	Shift signal timing (1 to 2 seconds)	Same mitigation
Vanderbilt Avenue and East 46th Street	Shift signal timing (1 second)	Similar mitigation; shift signal timing (3 to 4 seconds)

Table 19-58 (cont'd)

2033 Vanderbilt Corridor Required Mitigation at 2021 One Vanderbilt Impacted Traffic Intersections

Significantly Impacted Intersections	2021 <u>One Vanderbilt</u> Proposed Mitigation Measures	2033 <u>Vanderbilt Corridor</u> Required Mitigation Measures
Vanderbilt Avenue and East 42nd Street	Shift signal timing (1 to 2 seconds)	Same mitigation
Madison Avenue and East 44th Street	<u>Restripe</u> and shift signal timing (1 second)	Similar mitigation; <u>restripe</u> and shift signal timing (2 seconds)
Madison Avenue and East 43rd Street	Shift signal timing (1 <u>to</u> 2 seconds)	Unmitigated
Madison Avenue and East 42nd Street	Unmitigated	Same – Unmitigated
Fifth Avenue and 47th Street	Shift signal timing (1 second)	Similar mitigation; shift signal timing (2 seconds)
Fifth Avenue and 46th Street	Shift signal timing (1 second)	Similar mitigation; shift signal timing (2 seconds)
Fifth Avenue and 44th Street	Restripe and shift signal timing (1 second)	Unmitigated
Fifth Avenue and 42nd Street	Unmitigated	Same – Unmitigated
Sixth Avenue and West 42nd Street	<u>Shift signal timing (4 seconds)</u>	<u>Similar mitigation; shift signal timing (4 seconds)</u>

Transit

Summaries of the 2033 Vanderbilt Corridor With-Action transit analysis results are presented in **Tables 19-59 through 19-61**. Details on service levels at station analysis elements are compiled in **Appendix F**. Considering the cumulative build-out of the Vanderbilt Corridor, deteriorations at eight subway station elements, including four escalators and four stairways, would exceed CEQR impact thresholds. However, this analysis finding does not account for the fact that the potential future development of the two remaining blocks of the Vanderbilt Corridor would use either the Grand Central Public Realm bonus or the amended Landmark transfer special permit or a combination of the two and may be required to provide funding for additional transit-related improvements, which could alleviate/eliminate some or all of the station impacts identified above.

Table 19-59

**Summary of 2033 Vanderbilt Corridor With-Action Transit Analysis Results
Grand Central-42nd Street Station**

Level of Service	Analysis Peak Hours	
	AM Peak Hour	PM Peak Hour
Stairs at LOS A/B/C	19	26
Stairs at LOS D	9	6
Stairs at LOS E	7	4
Stairs at LOS F	1	0
Total	36	36
Escalators at LOS A/B/C	2	3
Escalators at LOS D	6	4
Escalators at LOS E	0	1
Escalators at LOS F	0	0
Total	8	8
Fare Array Area at LOS A/B/C	13	13
Fare Array Area at LOS D	0	0
Fare Array Area at LOS E	0	0
Fare Array Area at LOS F	0	0
Total	13	13

Notes: LOS = Level-of-Service

Table 19-60

**Summary of 2033 Vanderbilt Corridor With-Action Transit Analysis Results
42nd Street-Bryant Park Station**

Level of Service	Analysis Peak Hours	
	AM Peak Hour	PM Peak Hour
Stairs at LOS A/B/C	3	3
Stairs at LOS D	0	0
Stairs at LOS E	0	0
Stairs at LOS F	0	0
Total	3	3
Fare Array Area at LOS A/B/C	1	1
Fare Array Area at LOS D	0	0
Fare Array Area at LOS E	0	0
Fare Array Area at LOS F	0	0
Total	1	1

Notes: LOS = Level-of-Service

Table 19-61

**Summary of 2033 Vanderbilt Corridor With-Action Transit Analysis Results
47th-50th Streets-Rockefeller Center Station**

Level of Service	Analysis Peak Hours	
	AM Peak Hour	PM Peak Hour
Stairs at LOS A/B/C	1	3
Stairs at LOS D	1	3
Stairs at LOS E	2	0
Stairs at LOS F	2	0
Total	6	6
Fare Array Area at LOS A/B/C	1	1
Fare Array Area at LOS D	0	0
Fare Array Area at LOS E	0	0
Fare Array Area at LOS F	0	0
Total	1	1

Notes: LOS = Level-of-Service

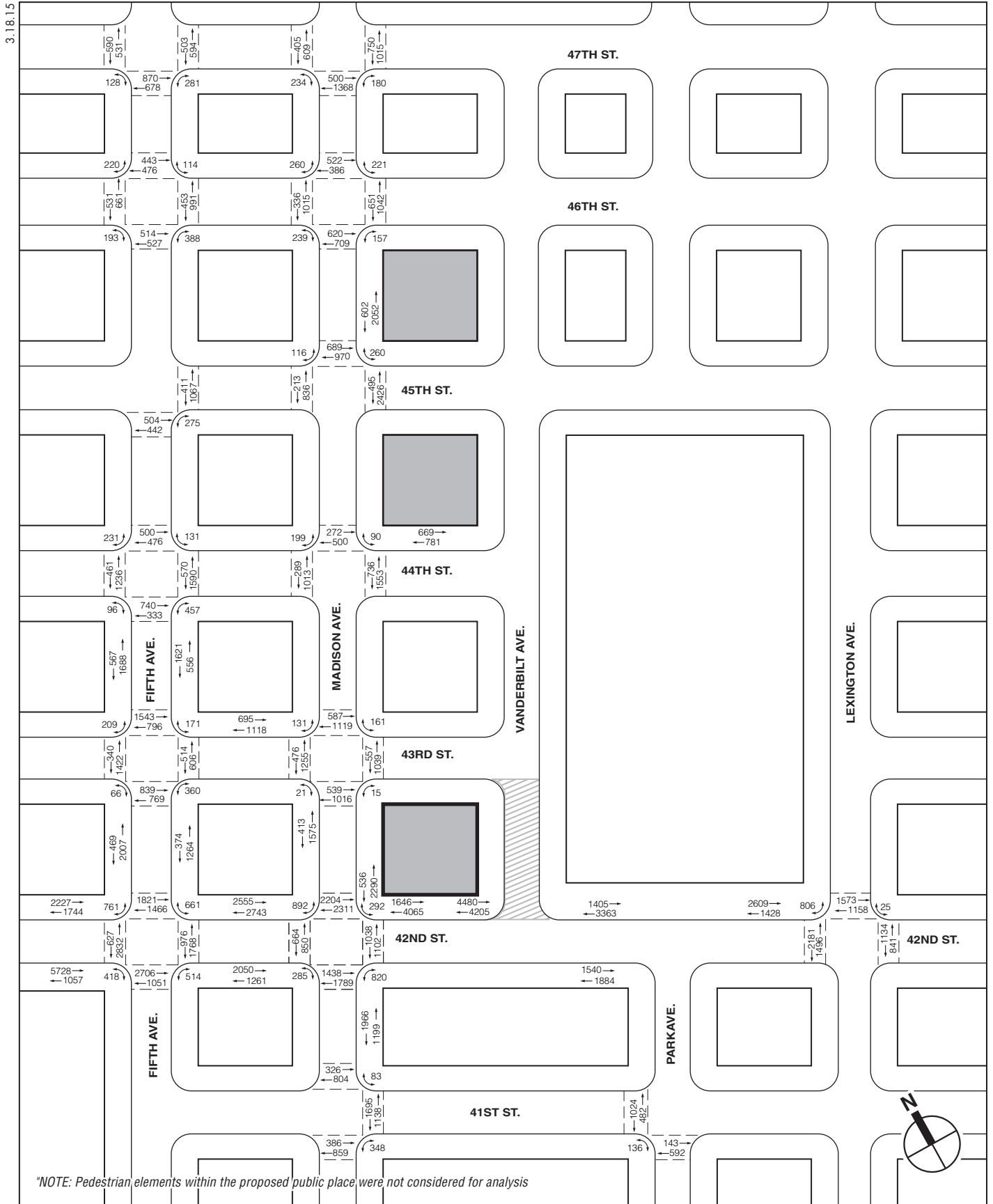
Pedestrians

The 2033 Vanderbilt Corridor With-Action pedestrian volumes for the weekday AM, midday, PM, and Saturday peak hours are presented in **Figures 19-38 to 19-41**. A summary of the 2033 Vanderbilt Corridor With-Action pedestrian analysis results is presented in **Table 19-62**. Details on pedestrian service levels at study area sidewalks, corner reservoirs, and crosswalks, as well as the peak hour incremental pedestrian volumes, are compiled in **Appendix F**.

With greater incremental trip-making, the redevelopment of the projected development sites within the Vanderbilt Corridor pursuant to the proposed actions in 2033 would result in significant adverse impacts at 6 sidewalks, 10 corners, and 21 crosswalks, as compared with 1 impacted sidewalk, 4 impacted corners, and 6 impacted crosswalks identified for the One Vanderbilt project in 2021. The additional impacted pedestrian elements are as follows.

Sidewalks

1. South sidewalk of West 42nd Street between Fifth Avenue and Sixth Avenue;
2. North sidewalk of West 42nd Street between Fifth Avenue and Sixth Avenue;
3. Northwest sidewalk of East 42nd Street between Madison Avenue and Vanderbilt Avenue;



One Vanderbilt Development Site

2033 Vanderbilt Corridor Development Sites

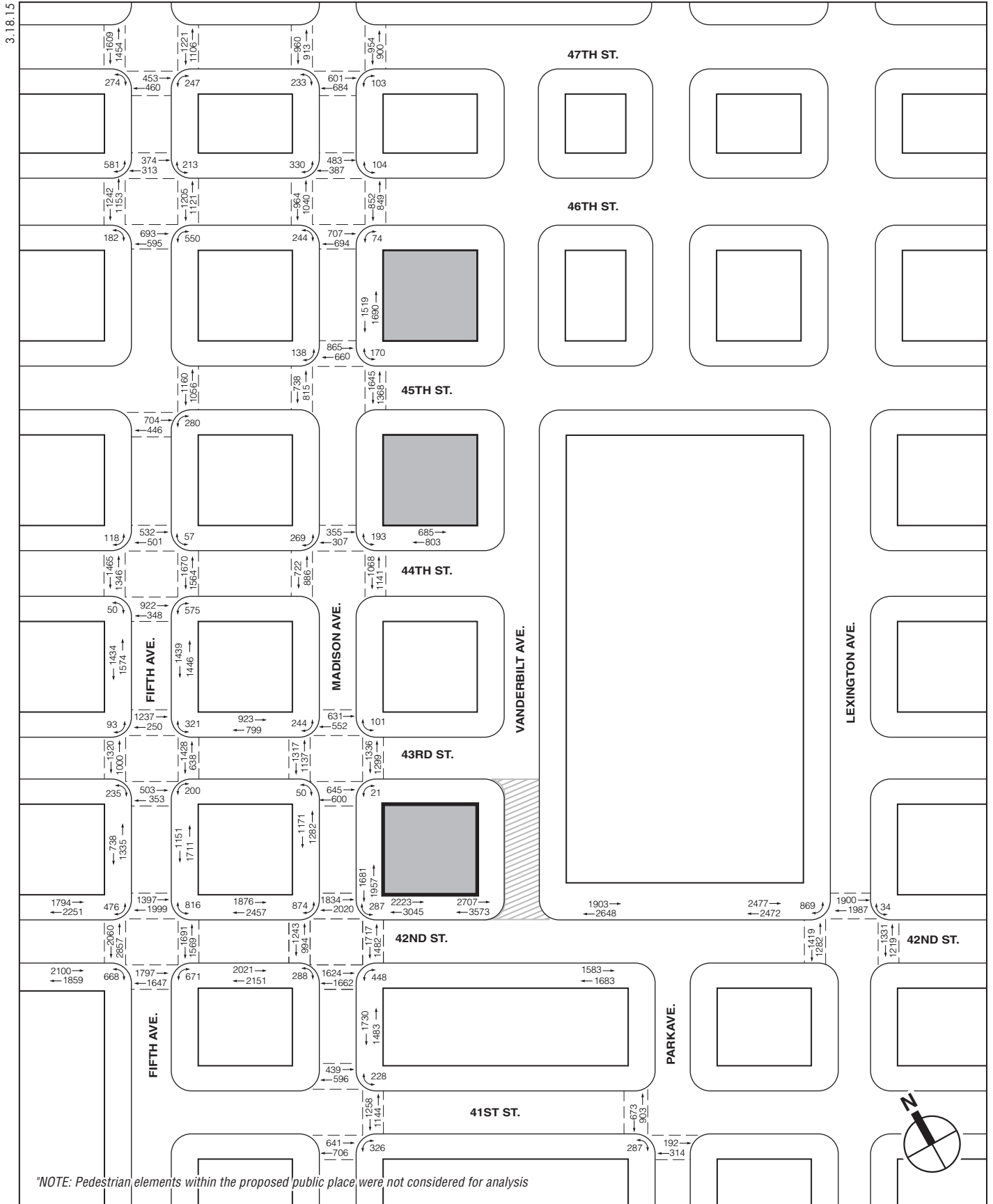
Proposed Public Place

2033 Vanderbilt Corridor With-Action Pedestrian Volumes Weekday AM Peak Hour

Vanderbilt Corridor and One Vanderbilt

This figure has been updated for the FEIS

Figure 19-38



One Vanderbilt Development Site

2033 Vanderbilt Corridor Development Sites

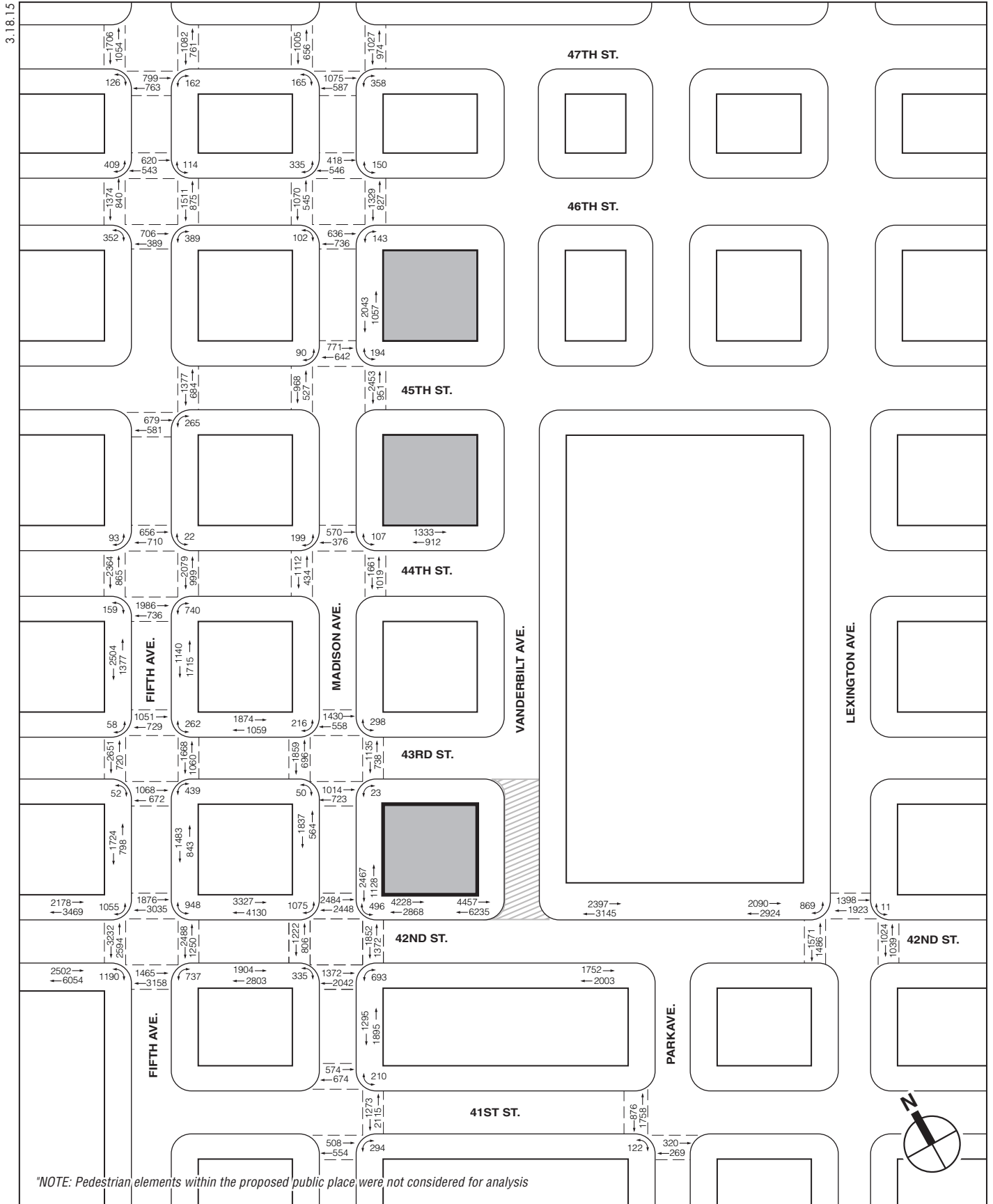
Proposed Public Place

2033 Vanderbilt Corridor With-Action Pedestrian Volumes Weekday Midday Peak Hour

Vanderbilt Corridor and One Vanderbilt

This figure has been updated for the FEIS

Figure 19-39



One Vanderbilt Development Site

2033 Vanderbilt Corridor Development Sites

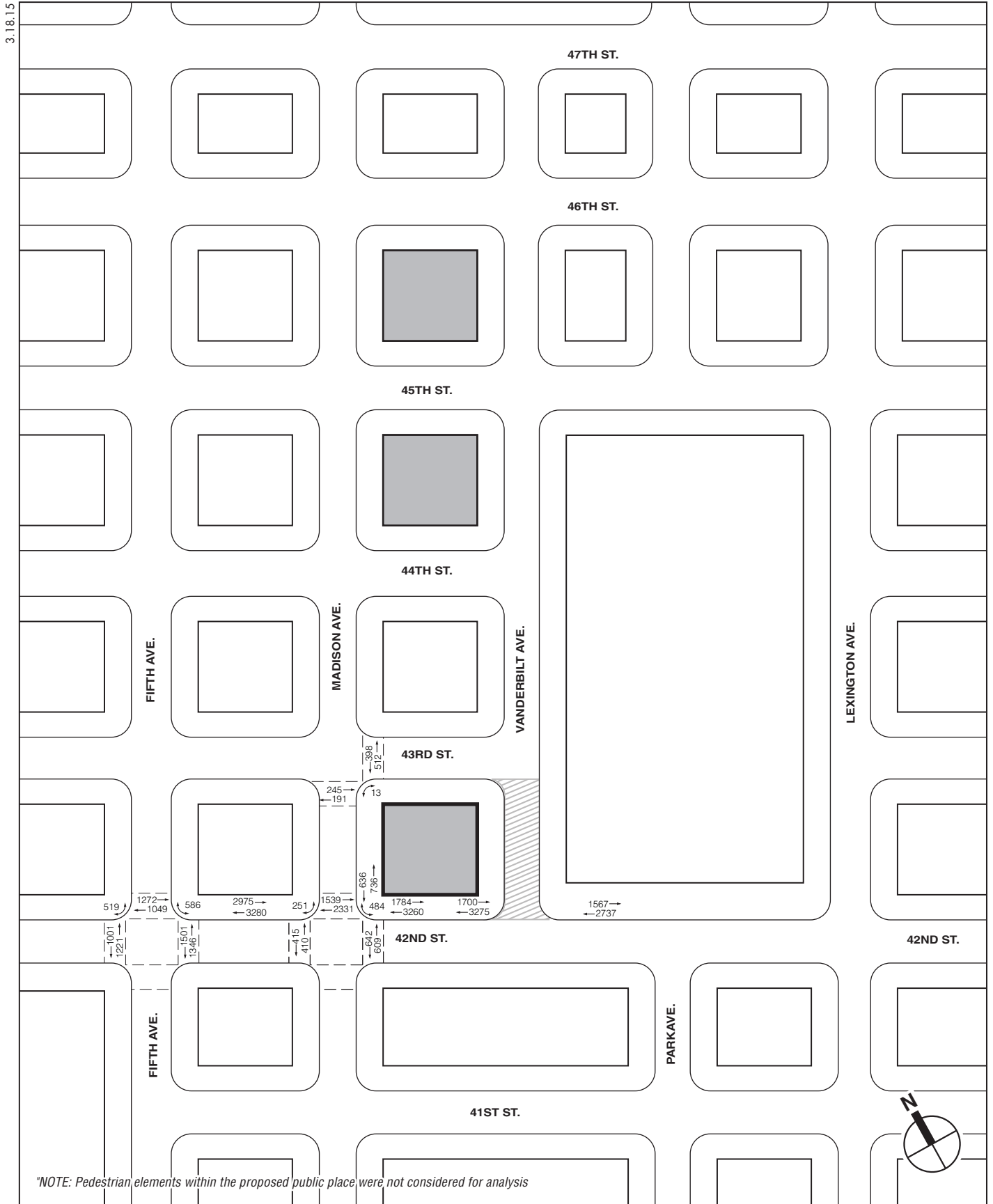
Proposed Public Place

2033 Vanderbilt Corridor With-Action Pedestrian Volumes Weekday PM Peak Hour

Vanderbilt Corridor and One Vanderbilt

This figure has been updated for the FEIS

Figure 19-40



One Vanderbilt Development Site

2033 Vanderbilt Corridor Development Sites

Proposed Public Place

2033 Vanderbilt Corridor With-Action Pedestrian Volumes Saturday Peak Hour

Vanderbilt Corridor and One Vanderbilt

This figure has been updated for the FEIS

Figure 19-41

Table 19-62

Summary of 2033 Vanderbilt Corridor With-Action Pedestrian Analysis Results

Level of Service	Analysis Peak Hours			
	Weekday AM	Weekday Midday	Weekday PM	Saturday
Sidewalks				
Sidewalks at LOS A/B/C	12	13	10	3
Sidewalks at LOS D	7	6	6	2
Sidewalks at LOS E	0	0	3	0
Sidewalks at LOS F	0	0	0	0
Total	19	19	19	5
Corner Reservoirs				
Corners at LOS A/B/C	31	29	28	4
Corners at LOS D	7	9	8	1
Corners at LOS E	2	2	5	0
Corners at LOS F	2	2	1	0
Total	42	42	42	5
Crosswalks				
Crosswalks at LOS A/B/C	12	6	3	2
Crosswalks at LOS D	8	9	14	1
Crosswalks at LOS E	8	13	10	1
Crosswalks at LOS F	0	0	1	0
Total	28	28	28	4
Notes: LOS = Level-of-Service				

4. North sidewalk of East 43rd Street between Fifth Avenue and Madison Avenue; and
5. West sidewalk of Madison Avenue between East 42nd Street and East 43rd Street;

Corners

1. Southeast corner of Madison Avenue and East 41st Street;
2. Northwest corner of Madison Avenue and East 43rd Street;
3. Northeast corner of Madison Avenue and East 45th Street;
4. Northwest corner of Madison Avenue and East 45th Street;
5. Northeast corner of Lexington Avenue and East 42nd Street; and
6. Northwest corner of Lexington Avenue and East 42nd Street;

Crosswalks

1. East crosswalk of Fifth Avenue and 42nd Street;
2. West crosswalk of Fifth Avenue and 42nd Street;
3. South crosswalk of Madison Avenue and East 43rd Street;
4. West crosswalk of Madison Avenue and East 43rd Street;
5. East crosswalk of Madison Avenue and East 43rd Street;
6. West crosswalk of Fifth Avenue and 43rd Street;
7. West crosswalk of Fifth Avenue and 44th Street;
8. East crosswalk of Fifth Avenue and 44th Street;
9. East crosswalk of Madison Avenue and East 44th Street;
10. North crosswalk of Madison Avenue and East 45th Street;
11. East crosswalk of Madison Avenue and East 45th Street;
12. East crosswalk of Madison Avenue and East 46th Street;

Vanderbilt Corridor and One Vanderbilt

- 13. West crosswalk of Madison Avenue and East 47th Street;
- 14. North crosswalk of Lexington Avenue and East 42nd Street; and
- 15. West crosswalk of Fifth Avenue and 47th Street.

Some of these impacts could be mitigated with the same or similar improvement measures identified in Chapter 18, “Mitigation.” Others, including those identified to be unmitigatable for the development of the One Vanderbilt site in 2021, would similarly be unmitigatable. As development programs for Block 1279 and Block 1281 become more defined, they will be studied as part of separate environmental reviews, for which more details on the predicted impacts and associated mitigation measures would be determined.

For the 1 impacted sidewalk, 4 impacted corners, and 6 impacted crosswalks identified for the proposed One Vanderbilt development in 2021, greater trip-making in 2033 from the build-out of proposed One Vanderbilt development, together with the projected redevelopment of the projected development sites within the Vanderbilt Corridor, would result in worsened impacts. A review of the mitigation needs for the greater 2033 impacts was conducted to determine if the measures identified to mitigate 2021 impacts would still be effective in mitigating 2033 impacts at these locations. This review, as summarized in **Table 19-63**, showed that the 2033 impacts could be mitigated with the same or similar measures identified to mitigate the 2021 impacts, with the exception of one location—the northeast corner of Madison Avenue and East 43rd Street—for which other mitigation measures would be needed to supplement or replace what has been proposed to address the 2021 impacts at this location. If no such measures can be found, then the significant adverse pedestrian impacts at this location would remain unmitigated. At the time of implementation, if some or all of these pedestrian mitigation measures are deemed infeasible and no alternative mitigation measures can be identified; those impacts would be unmitigated.

Table 19-63
2033 Vanderbilt Corridor Required Mitigation at 2021 One Vanderbilt Impacted Pedestrian Locations

Significantly Impacted Locations		2021 <u>One Vanderbilt</u> Proposed Mitigation Measures	2033 <u>Vanderbilt Corridor</u> Required Mitigation Measures
Intersection	Pedestrian Element		
Sidewalks			
Fifth Avenue and 42nd Street	North Sidewalk of East 42nd Street between Madison Avenue and Fifth Avenue	Reconstruct newsstand kiosk to narrower width (1.0-foot reduction)	Same mitigation
Corners			
Madison Avenue and East 43rd Street	Northeast Corner	Relocate trash can and signal pole	Need additional or different mitigation; potentially unmitigated
	Southwest Corner	Extend East 43rd Street curb by 0.5-foot (6-foot widening per DOT standards)	Similar mitigation; extend East 43rd Street curb by 1.0-foot (same 6-foot widening per DOT standards)
Madison Avenue and East 42nd Street	Northwest Corner	Extend Madison Avenue curb by 1.0-foot (8-foot widening per DOT standards)	Similar mitigation; extend East 43rd Street curb by 1.5-foot (same 8-foot widening per DOT standards)
Madison Avenue and East 41st Street	Northeast Corner	Relocate trash can	Same mitigation
Crosswalks			
Fifth Avenue and 42nd Street	North Crosswalk	Widen by 4 feet	Similar mitigation; widen by 5 feet
	South Crosswalk	Widen by 0.5 foot	Similar mitigation; widen by 2.5 feet
Madison Avenue and East 42nd Street	North Crosswalk	Widen by 5 feet	Same mitigation
	South Crosswalk	<u>Widen by 0.5 foot</u>	Same mitigation
	East Crosswalk	Widen by 1.5 feet	Similar mitigation; widen by 2.5 feet
Madison Avenue and East 41st Street	East Crosswalk	Shift signal timing (2 seconds)	Same mitigation

Parking

The proposed One Vanderbilt development, together with the projected redevelopment of the projected development sites within the Vanderbilt Corridor pursuant to the proposed actions, would result in an increase in area parking demand. With the same inventory of available parking resources, a parking shortfall of 345 spaces or 14 percent over capacity during the weekday midday peak utilization period would be expected for the off-street parking facilities studied in Chapter 10, “Transportation.” Some of the overflow in parking demand is expected to seek available parking supply at greater distances away. As stated in the *CEQR Technical Manual*, a parking shortfall in Manhattan and other CBD neighborhoods does not constitute a significant adverse parking impact, due to the magnitude of available alternative modes of transportation.

TRANSPORTATION IMPACTS COMPARISON SUMMARY

Tables 19-64 to 19-66 present comparisons of the projected significant adverse traffic, transit, and pedestrian impacts, respectively, for the 2021 proposed One Vanderbilt, 2021 Vanderbilt Corridor, and 2033 Vanderbilt Corridor With-Action conditions.

Table 19-64

2021 One Vanderbilt and 2021 and 2033 Vanderbilt Corridor Traffic Impacts Comparison Summary

Intersection		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour			
EB/WB Street	NB/SB Street	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	
East 42nd Street	First Avenue	=	=	EB-L (East)	=	=	=	=	EB-L (East)	EB-L (East)	=	=	=	
		=	=	EB-T (East)	=	=	=	=	=	=	=	=	=	
		=	=	=	=	=	EB-LT (East)	=	=	=	=	=	=	
		=	EB-L (West)	EB-L (West)	=	=	=	=	EB-L (West)	EB-L (West)	=	=	=	
East 42nd Street	Third Avenue	EB-L	EB-L	EB-L	EB-L	EB-L	EB-L	EB-L	EB-L	EB-L	=	=	=	
		EB-T	EB-T	EB-T	EB-T	EB-T	EB-T	EB-T	EB-T	EB-T	EB-T	=	=	=
		=	WB-R	WB-T	=	=	=	=	=	WB-T	WB-T	=	=	=
East 42nd Street	Park Avenue (SB)	=	=	SB-T	=	=	=	=	=	SB-T	=	=	=	
		=	=	=	=	=	=	=	=	=	=	=	=	
East 41st Street	Third Avenue	=	=	=	=	=	EB-LT	EB-LT	EB-LT	EB-LT	=	=	=	
		=	=	=	=	=	=	=	=	=	=	=	=	
East 42nd Street	Lexington Avenue	=	=	EB-T	=	=	=	=	=	EB-T	=	=	=	
		SB-R	SB-R	SB-R	EB-TR	EB-TR	EB-TR	SB-R	SB-R	SB-R	=	=	=	
East 50th Street	Park Avenue (SB)	=	=	SB-T	=	=	=	=	=	SB-T	=	=	=	
		=	=	=	=	=	=	=	=	=	=	=	=	

Vanderbilt Corridor and One Vanderbilt

Table 19-64 (cont'd)

2021 One Vanderbilt and 2021 and 2033 Vanderbilt Corridor Traffic Impacts Comparison Summary

Intersection		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
EB/WB Street	NB/SB Street	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor
East 49th Street	Park Avenue (NB)	-	-	-	-	-	-	-	-	NB-T	-	-	-
East 48th Street	Park Avenue (SB)	-	SB-T	SB-T	-	-	SB-T	-	-	SB-T	-	-	-
East 47th Street	Park Avenue (NB)	-	-	WB-LT	-	-	-	-	-	-	-	-	-
East 47th Street	Park Avenue (SB)	-	SB-R	SB-R	-	-	SB-TR	-	-	-	-	-	-
East 47th Street	Park Avenue (SB)	SB-R	SB-R	SB-R	-	-	-	SB-R	SB-R	SB-R	-	-	-
East 42nd Street	Park Avenue	-	-	WB-T	-	-	-	-	-	WB-T	-	-	-
East 40th Street	Park Avenue (NB)	-	NB-T (Tunnel Exit)	NB-T (Tunnel Exit)	-	-	-	-	-	-	-	-	-
East 40th Street	Park Avenue (SB)	SB-T (Viaduct Exit)	SB-T (Viaduct Exit)	SB-T (Viaduct Exit)	-	-	-	SB-T (Viaduct Exit)	SB-T (Viaduct Exit)	SB-T (Viaduct Exit)	-	-	-
East 39th Street	Park Avenue (NB)	WB-LTR	WB-LTR	WB-LTR	-	WB-LTR	WB-LTR	WB-LTR	WB-LTR	WB-LTR	-	-	-
East 38th Street	Park Avenue (SB)	-	-	-	-	-	-	-	-	EB-LTR	-	-	-
East 37th Street	Park Avenue (NB)	-	-	WB-TR	-	-	-	-	-	-	-	-	-
East 46th Street	Vanderbilt Avenue	SB-LT	SB-LT	SB-LT	-	SB-LT	SB-LT	SB-LT	SB-LT	SB-LT	-	-	SB-LT
East 45th Street	Vanderbilt Avenue	-	SB-TR	SB-TR	-	SB-TR	-	-	SB-TR	SB-TR	-	-	-
East 42nd Street	Vanderbilt Avenue	WB-T	WB-T	WB-T	-	-	-	WB-T	WB-T	WB-T	-	-	-
East 47th Street	Madison Avenue	-	-	-	-	NB-L	NB-L	-	-	NB-L	-	-	-
East 46th Street	Madison Avenue	-	-	NB-T	-	-	NB-T	-	-	NB-T	-	-	-
East 45th Street	Madison Avenue	-	-	NB-T	-	-	NB-T	-	-	NB-T	-	-	-
East 44th Street	Madison Avenue	EB-LT NB-T	EB-LT NB-T	EB-LT NB-T	EB-LT	EB-LT	EB-LT NB-T	EB-LT NB-T	EB-LT NB-T	EB-LT NB-T	-	-	-
East 43rd Street	Madison Avenue	NB-L	NB-L	WB-R NB-L	-	-	WB-R NB-T	NB-L	NB-L	NB-L	-	-	-
East 42nd Street	Madison Avenue	WB-T NB-LT	WB-T NB-LT	EB-LT WB-T NB-LT	WB-T NB-LT	WB-T NB-LT	EB-LT WB-T NB-LT	WB-T NB-T	WB-T NB-T	EB-LT WB-T NB-T	-	-	EB-LT WB-T
East 41st Street	Madison Avenue	-	-	-	-	-	NB-TR	-	-	-	-	-	-
East 39th Street	Madison Avenue	-	-	WB-R	-	-	WB-R	-	-	WB-T WB-R	-	-	-
47th Street	Fifth Avenue	SB-T	SB-T	SB-T	-	-	-	-	-	-	-	-	-
46th Street	Fifth Avenue	SB-LT	SB-LT	SB-LT	-	-	-	-	-	-	-	-	-

Table 19-64 (cont'd)

2021 One Vanderbilt and 2021 and 2033 Vanderbilt Corridor Traffic Impacts Comparison Summary

Intersection		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
EB/WB Street	NB/SB Street	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor
45th Street	Fifth Avenue	=	SB-T	SB-T	=	=	=	=	=	=	=	=	=
44th Street	Fifth Avenue	SB-LT	=	EB-R	=	=	EB-R	EB-R	EB-R	EB-R	=	=	=
43rd Street	Fifth Avenue	=	=	WB-L	=	=	=	=	=	WB-L	=	=	=
			SB-R	SB-R					SB-R	SB-R			
42nd Street	Fifth Avenue	WB-LT	WB-LT	WB-LT	WB-LT	WB-LT	WB-LT	WB-LT	WB-LT	WB-LT	WB-LT	WB-LT	EB-T WB-LT
West 44th Street	Sixth Avenue	=	EB-T	EB-T	=	=	=	=	=	=	=	=	=
									NB-R	NB-R			
West 42nd Street	Sixth Avenue	=	=	WB-T	=	=	WB-T	=	=	WB-T	=	=	EB-T WB-T WB-R
					WB-R	WB-R	WB-R				WB-R	WB-R	WB-R
Total Impacted Intersections/Lane Groups		14/17	21/25	30/43	6/9	10/13	19/27	14/16	18/23	28/39	2/2	2/2	4/8

Notes: EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; L = Left Turn; T = Through; R = Right Turn
Shading means not analyzed.

Table 19-65

2021 One Vanderbilt and 2021 and 2033 Vanderbilt Corridor Transit Impacts Comparison Summary

Subway Station	Weekday AM Peak Hour			Weekday PM Peak Hour		
	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor
Grand Central-42nd Street (4/5/6/7/S) Station	=	=	Escalator- E205/206 (Set 1)- Flushing Center Core	=	=	=
	=	=	Escalator- E205/206 (Set 2)- Flushing Center Core	=	=	=
	=	=	Escalator- E208/210 (Set 1)- Flushing West Core	=	=	=
	=	=	Escalator- E208/210 (Set 2)- Flushing West Core	=	=	=
	=	=	Stairway- P14- SB Lexington Platform	=	=	Stairway- P15- NB Lexington Platform
	=	=	Stairway- P16- SB Lexington Platform	=	=	Stairway- P17- NB Lexington Platform
Total Impacted Transit Elements	0	0	6	0	0	2

Vanderbilt Corridor and One Vanderbilt

Table 19-66
2021 One Vanderbilt and 2021 and 2033 Vanderbilt Corridor Pedestrian Impacts
Comparison Summary

Intersection		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
EB/WB Street	NB/SB Street	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor
47th Street	Fifth Avenue	=	=	=	=	=	W Crosswalk	=	=	=	=	=	=
44th Street	Fifth Avenue	=	=	E Crosswalk	=	=	E Crosswalk	=	=	=	=	=	=
43rd Street	Fifth Avenue	=	=	=	=	=	=	=	=	W Crosswalk	=	=	=
42nd Street	Fifth Avenue	=	=	=	=	=	=	N sidewalk of E 42nd Street between Madison Avenue and Fifth Avenue	N sidewalk of E 42nd Street between Madison Avenue and Fifth Avenue	N sidewalk of E 42nd Street between Madison Avenue and Fifth Avenue	=	=	=
=	=	=	=	S sidewalk of W 42nd Street between Fifth Avenue and Sixth Avenue	=	=	=	=	=	S sidewalk of W 42nd Street between Fifth Avenue and Sixth Avenue	=	=	=
=	=	=	=	W Crosswalk	=	=	=	=	=	=	=	=	=
=	=	N Crosswalk	N Crosswalk	N Crosswalk	N Crosswalk	N Crosswalk	N Crosswalk	N Crosswalk	N Crosswalk	N Crosswalk	=	=	N Crosswalk
=	=	S Crosswalk	S Crosswalk	S Crosswalk	=	S Crosswalk	S Crosswalk	S Crosswalk	S Crosswalk	S Crosswalk	=	=	=
E 47th Street	Madison Avenue	=	=	=	=	=	W Crosswalk	=	=	=	=	=	=
E 46th Street	Madison Avenue	=	=	E Crosswalk	=	=	E Crosswalk	=	=	=	=	=	=
E 45th Street	Madison Avenue	=	NE Corner	NE Corner	=	NE Corner	NE Corner	=	NE Corner	NE Corner	=	=	=
=	=	=	=	E Crosswalk	=	E Crosswalk	E Crosswalk	=	=	E Crosswalk	=	=	=
=	=	=	=	N Crosswalk	=	N Crosswalk	N Crosswalk	=	=	N Crosswalk	=	=	=
E 44th Street	Madison Avenue	=	=	E Crosswalk	=	=	E Crosswalk	=	E Crosswalk	E Crosswalk	=	=	=
E 43rd Street	Madison Avenue	=	=	=	=	=	=	N sidewalk of E 43rd Street between Madison Avenue and Fifth Avenue	N sidewalk of E 43rd Street between Madison Avenue and Fifth Avenue	=	=	=	=
=	=	NE Corner	NE Corner	NE Corner	NE Corner	NE Corner	NE Corner	NE Corner	NE Corner	NE Corner	=	=	=
=	=	=	=	SW Corner	=	=	E Crosswalk	=	NE Corner	NE Corner	=	=	=
=	=	=	=	W Crosswalk	=	E Crosswalk	E Crosswalk	=	NW Corner	NW Corner	=	=	=
=	=	=	W Crosswalk	W Crosswalk	=	W Crosswalk	W Crosswalk	=	SW Corner	SW Corner	=	=	=
=	=	=	S Crosswalk	S Crosswalk	=	=	=	=	W Crosswalk	W Crosswalk	=	=	=
E 42nd Street	Madison Avenue	NW Corner	NW Corner	NW Corner	NW Corner	NW Corner	NW Corner	NW Corner	NW Corner	NW Corner	=	=	=
=	=	N Crosswalk	N Crosswalk	N Crosswalk	N Crosswalk	N Crosswalk	E Crosswalk	E Crosswalk	E Crosswalk	E Crosswalk	=	=	=
=	=	=	=	S Crosswalk	=	S Crosswalk	N Crosswalk	N Crosswalk	N Crosswalk	N Crosswalk	N Crosswalk	N Crosswalk	N Crosswalk
=	=	=	=	=	=	S Crosswalk	S Crosswalk	S Crosswalk	S Crosswalk	S Crosswalk	=	=	=
E 41st Street	Madison Avenue	NE Corner	NE Corner	NE Corner	=	=	NE Corner	=	=	=	=	=	=
=	=	E Crosswalk	SE Corner	SE Corner	=	=	E Crosswalk	=	=	=	=	=	=

Table 19-66 (cont'd)

2021 One Vanderbilt and 2021 and 2033 Vanderbilt Corridor Pedestrian Impacts Comparison Summary

Intersection		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
EB/WB Street	NB/SB Street	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor	2021 One Vanderbilt	2021 Vanderbilt Corridor	2033 Vanderbilt Corridor
E 42nd Street	Lexington Avenue	=	=	=	=	NE Corner	NE Corner	=	=	=	=	=	=
=	=	=	=	=	=	NW Corner	NW Corner	=	=	=	=	=	=
=	=	=	=	=	=	N Crosswalk	N Crosswalk	=	=	=	=	=	=
Total Impacted Pedestrian Elements		<u>7</u>	<u>11</u>	<u>21</u>	<u>4</u>	<u>14</u>	<u>24</u>	<u>9</u>	<u>14</u>	<u>21</u>	<u>1</u>	<u>1</u>	<u>2</u>

Notes: E = East; W = West; N = North; S = South; NE = Northeast; NW = Northwest; SE = Southeast; SW = Southwest
 Shading means not analyzed.

For parking, as described in Chapter 10, “Transportation,” and in the above sections, no parking shortfall is anticipated for the 2021 proposed One Vanderbilt and 2021 Vanderbilt Corridor With-Action conditions. For the 2033 Vanderbilt Corridor With-Action condition, a parking shortfall is anticipated during the weekday midday peak utilization period. However, as described above, this parking shortfall would not constitute a significant adverse parking impact due to the magnitude of available alternative modes of transportation.

M. AIR QUALITY

This section evaluates the potential for the proposed One Vanderbilt development, together with the additional development in the Vanderbilt Corridor pursuant to the proposed actions, to result in significant adverse impacts on air quality in the 2021 and 2033 analysis years.

2021

As presented in Chapter 11, “Air Quality”, maximum PM₁₀ and PM_{2.5} concentrations and concentration increments from mobile sources would be below the corresponding ambient air quality standards and guidance thresholds. Likewise, as presented below, the 2033 conceptual analysis determined that maximum predicted pollutant concentrations and concentration increments from mobile sources would be below the corresponding ambient air quality standards and guidance thresholds for CO and PM. Even accounting for an earlier build year (which results in higher emissions levels), the development of the Vanderbilt Corridor would not be anticipated to result in concentrations that would exceed a significant impact threshold. Therefore, the additional vehicle trips associated with the redevelopment of the MTA site in 2021 would not result in any significant adverse air quality impacts.

Site-specific information for the anticipated redevelopment of the projected development site is not available at this time. Therefore, an analysis of the effect of emissions from heating and hot water systems and any other stationary sources (such as cogeneration systems) that may be introduced by the additional development in the Vanderbilt Corridor cannot be performed at this time, since for such an analysis, specific information regarding fuel type used, types and sizes of equipment, exhaust stack location and height, would be needed.

2033

The proposed One Vanderbilt development and potential additional development would introduce new emission sources, both mobile (exhaust for additional vehicle traffic) and stationary (emissions from fuel combusted in heating and hot water systems). The analysis of the effect of mobile source emissions follows the methodology described in Chapter 11, “Air Quality,” in accordance with the guidelines of the *CEQR Technical Manual*, and using the analysis developed for the conceptual analysis of the additional development on transportation, as described in Section L, “Transportation.”

Site-specific information for the anticipated redevelopment of the projected development sites is not available at this time. Therefore, an analysis of the effect of emissions from heating and hot water systems and any other stationary sources (such as cogeneration systems) that may be introduced by the additional development in the Vanderbilt Corridor cannot be performed at this time, since for such an analysis, specific information regarding fuel type used, types and sizes of equipment, exhaust stack location and height, would be needed. Each special permit would be subject to a separate discretionary approval process, with project-specific analysis that would address the potential effects of stationary source emissions on air quality. Based on stationary source screening assessments that considered the effect of nitrogen dioxide (NO₂), particulate matter (PM), and sulfur dioxide emissions from the proposed One Vanderbilt development’s fossil fuel-fired combustion sources on pollutant levels, there would be no potential for significant adverse impacts on air quality from the proposed stationary sources for the proposed One Vanderbilt development. Air quality (E) designations for stationary sources (such as fossil fuel-fired heating and hot water systems) may be required for the three additional projected development sites, as with the One Vanderbilt site, to ensure that there are no significant adverse air quality impacts from these sources.

METHODOLOGY

The analysis of potential for impacts on air quality from mobile source emissions of particulate matter (PM) with the proposed and potential development in the Vanderbilt Corridor followed the same methodology as the analysis of the proposed One Vanderbilt development (see Chapter 11, “Air Quality. In addition, the proposed One Vanderbilt development, together with the redevelopment of all projected development sites in the Vanderbilt Corridor pursuant to the proposed actions, would generate more than 140 trips at the study area intersections in the 2033 analysis year, which is the *CEQR Technical Manual* screening threshold, above which a quantified (microscale) analysis of carbon monoxide (CO) emissions from mobile sources is required. The aspects of the mobile source analysis specific to CO are described in the following text, as applicable.

CO DE MINIMIS CRITERIA

New York City has developed *de minimis* criteria to assess the significance of the increase in CO concentrations that would result from the impact of proposed projects on mobile sources, as set forth in the *CEQR Technical Manual*. These criteria set the minimum change in CO concentration that defines a significant environmental impact. Significant increases of CO concentrations in New York City are defined as: (1) an increase of 0.5 ppm or more in the maximum 8-hour average CO concentration at a location where the predicted No-Action 8-hour concentration is equal to or between 8 and 9 ppm; or (2) an increase of more than half the difference between baseline (i.e., No-Action) concentrations and the 8-hour standard, when No-

Action concentrations are below 8.0 ppm. The *de minimis* criteria for CO have been used to evaluate the significance of predicted impacts of the proposed One Vanderbilt development and the redevelopment of the projected development sites in the Vanderbilt Corridor on CO concentrations.

The PM concentrations with the proposed One Vanderbilt development and the redevelopment of the projected development sites in the Vanderbilt Corridor are compared with the standards and *de minimis* criteria described in Chapter 11, “Air Quality.”

TRAFFIC DATA

The traffic data discussed in Section L, “Transportation” for the Vanderbilt Corridor with and without the proposed actions for the 2033 analysis year were used as the basis for the mobile source air quality analysis. As with the mobile source analysis discussed in Chapter 11, the weekday morning (8 to 9 AM), weekday midday (12 to 1 PM), weekday evening (5 to 6 PM), and weekend midday (3 to 4 PM) peak periods were analyzed for PM. For CO, the weekday evening (5 to 6 PM) peak hour was analyzed, as that is the only peak period when the projected number of vehicles generated by the proposed action would be above the *CEQR Technical Manual* screening threshold for CO.

DISPERSION MODEL FOR MICROSCALE ANALYSES

Maximum CO concentrations at the receptor locations for the intersections analyzed were predicted using the Tier 1 CAL3QHC model Version 2.0.¹ The CAL3QHC model employs a Gaussian (normal distribution) dispersion assumption and includes an algorithm for estimating vehicular queue lengths at signalized intersections. CAL3QHC calculates emissions and dispersion of CO from idling and moving vehicles. The queuing algorithm includes site-specific traffic parameters, such as signal timing and delay (from the 2000 *Highway Capacity Manual* traffic forecasting model), saturation flow rate, vehicle arrival type, and signal actuation (i.e., pre-timed or actuated signal) characteristics to project the number of idling vehicles.

To determine motor vehicle generated PM_{2.5} concentrations adjacent to streets within the traffic study area, the CAL3QHCR model was applied. This refined version of the model can use hourly traffic and meteorology data, and is therefore more appropriate for calculating 24-hour and annual average concentrations.

METEOROLOGY

In applying the CAL3QHC model, the wind angle was varied to determine the wind direction resulting in the maximum concentrations at each receptor. Following the EPA guidelines², CAL3QHC computations were performed using a wind speed of 1 meter per second, and the neutral stability class D. The 8-hour average CO concentrations were estimated by multiplying the predicted 1-hour average CO concentrations by a factor of 0.77 to account for persistence of meteorological conditions and fluctuations in traffic volumes. A surface roughness of 3.21

¹ EPA, User’s Guide to CAL3QHC, A Modeling Methodology for Predicted Pollutant Concentrations Near Roadway Intersections, Office of Air Quality, Planning Standards, Research Triangle Park, North Carolina, EPA-454/R-92-006.

² *Guidelines for Modeling Carbon Monoxide from Roadway Intersections*, EPA Office of Air Quality Planning and Standards, Publication EPA-454/R-92-005.

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meters was chosen. At each receptor location, concentrations were calculated for all wind directions, and the highest predicted concentration was reported, regardless of frequency of occurrence. These assumptions ensured that reasonable worst-case meteorology was used to estimate impacts.

ANALYSIS YEAR

The microscale analyses were performed for 2033, the year by which the proposed One Vanderbilt development and the redevelopment of all the projected development sites within the Vanderbilt Corridor pursuant to the proposed actions would reasonably be expected to occur. The analysis was performed both without the proposed One Vanderbilt development and the anticipated redevelopment of the projected development sites (the No-Action condition) and with the proposed One Vanderbilt development and the anticipated redevelopment of the projected development sites (the With-Action condition). For the 2021 analysis year, the year by which the proposed One Vanderbilt development and redevelopment of the MTA site pursuant to the proposed actions is expected to occur, potential impacts were estimated using the results of the 2033 microscale analyses.

BACKGROUND CONCENTRATIONS

The particulate matter background concentrations used in the analysis of the proposed One Vanderbilt development and the anticipated redevelopment of the projected development sites in the Vanderbilt Corridor are the same as the background concentrations presented in Chapter 11. The 8-hour average CO background of 1.8 ppm is based on the maximum second-highest yearly concentration measured at the CCNY ambient monitoring station over the latest available five-year monitoring period (2009–2013).

ANALYSIS SITES

Traffic volumes on intersections in the study area were evaluated for the need to conduct a microscale analysis, based on the *CEQR Technical Manual* guidance. The incremental traffic volumes were reviewed and intersections with increments exceeding the CO and PM volume thresholds were identified in the 2033 analysis year. Of these intersections, three were selected for analysis of PM emissions and two were selected for analysis of CO emissions, as shown in **Table 19-67**.

**Table 19-67
Mobile Source Analysis Intersections**

Analysis Site	Location	Pollutants Analyzed	Peak Period Analyzed
1	Park Avenue and East 46th Street	CO	Weekday PM
		PM ₁₀ and PM _{2.5}	Weekday AM, MD, PM, Saturday MD
2	Vanderbilt Avenue and East 44th Street	PM ₁₀ and PM _{2.5}	Weekday AM, MD, PM, Saturday MD
3	Park Avenue and East 47th Street	CO	Weekday PM
		PM ₁₀ and PM _{2.5}	Weekday AM, MD, PM, Saturday MD

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2033)*MOBILE SOURCES*

CO and PM₁₀ concentrations in the No-Action condition were determined for future 2033 conditions using the methodology previously described. **Table 19-68** shows maximum predicted 8-hour average CO concentrations, including background concentrations, at the intersections for the 2033 No-Action condition.

Table 19-68
Maximum Predicted 8-Hour Average
CO No-Action Concentrations (2033)

Analysis Site	Location	Time Period	8-Hour Concentration (ppm)
1	Park Avenue and East 46th Street	PM	2.02
3	Park Avenue and East 47th Street	PM	2.01
Notes: 8-hour standard (NAAQS) is 9 ppm. Concentration includes a background concentration of 1.8 ppm.			

As shown in **Table 19-68**, 2033 No-Action values are predicted to be well below the 8-hour CO standard of 9 ppm.

Table 19-69 presents the maximum predicted PM₁₀ 24-hour concentrations, including background concentrations, at the analyzed intersections for the 2033 No-Action condition. The values shown are the highest predicted concentrations for the receptor locations.

Table 19-69
(2033) Maximum Predicted 24-Hour Average
PM₁₀ No-Action Concentrations (µg/m³)

Analysis Site	Location	Concentration
1	Park Avenue and East 46th Street	54.9
2	Vanderbilt Avenue and East 44th Street	51.5
3	Park Avenue and East 47th Street	58.6
Notes: NAAQS—24-hour average 150 µg/m ³ . Concentration includes a background concentration of 40.0 µg/m ³ .		

PM_{2.5} concentrations for the 2033 No-Action condition are not presented, since impacts are assessed on an incremental basis.

THE FUTURE WITH THE PROPOSED ACTIONS (2033)

Mobile source CO concentrations for future conditions in the 2033 analysis year were predicted using the methodology previously described. **Table 19-70** shows the future maximum predicted 8-hour average CO concentrations at the intersections studied. (No 1-hour values are shown, since no exceedances of the NAAQS would occur and the *de minimis* criteria are only applicable to 8-hour concentrations; therefore, the 8-hour values are the most critical for impact assessment.) The values shown are the highest predicted concentrations. The results indicate that the proposed actions would not result in any violations of the 8-hour CO standard. In addition,

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the incremental increases in 8-hour average CO concentrations are very small, and would not result in a violation of the CEQR *de minimis* CO criteria. Therefore, mobile source CO emissions resulting from the proposed One Vanderbilt development and the redevelopment of the projected development sites in the Vanderbilt Corridor pursuant to the proposed actions in 2033 would not result in a significant adverse impact on air quality.

**Table 19-70
(2033) 8-Hour CO Concentrations (ppm)**

Analysis Site	Location	Time Period	No Action	With Action	Increment	De Minimis
1	Park Avenue and East 46th Street	PM	2.02	2.02	≤0.01	5.5
3	Park Avenue and East 47th Street	PM	2.01	2.02	0.01	5.5
Notes: 8-hour standard is 9 ppm. Concentration includes a background concentration of 1.8 ppm.						

PM₁₀ concentrations for the 2033 With-Action condition were also determined using the methodology previously described. **Table 19-71** shows the future maximum predicted PM₁₀ 24-hour concentrations, including background concentrations, at the analyzed intersections in 2033. The values shown are the highest predicted concentrations for the receptor locations.

**Table 19-71
(2033) Maximum Predicted 24-Hour Average
PM₁₀ Concentrations (µg/m³)**

Analysis Site	Location	No Action	With Action
1	Park Avenue and East 46th Street	54.9	55.1
2	Vanderbilt Avenue and East 44th Street	51.5	52.4
3	Park Avenue and East 47th Street	58.6	59.3
Notes: NAAQS—24-hour average 150 µg/m ³ . Concentration includes a background concentration of 40.0 µg/m ³ .			

Using the methodology previously described, maximum predicted 24-hour and annual average PM_{2.5} concentration increments were calculated so that they could be compared with the *de minimis* criteria that would determine the potential significance of any impacts from the vehicle trips that would be generated by the proposed One Vanderbilt development and the redevelopment of the projected development sites in the Vanderbilt Corridor pursuant to the proposed actions in 2033. Based on this analysis, the maximum predicted localized 24-hour average and neighborhood-scale annual average incremental PM_{2.5} concentrations are presented in **Table 19-72** and **Table 19-73**, respectively. Note that PM_{2.5} concentrations in the 2033 No-Action condition are not presented, since impacts are assessed on an incremental basis.

Table 19-72
Maximum Predicted 24-Hour Average
PM_{2.5} Incremental Concentrations (2033)

Analysis Site	Location	Increment (µg/m ³)	De Minimis (µg/m ³)
1	Park Avenue and East 46th Street	0.12	4.5
2	Vanderbilt Avenue and East 44th Street	0.3	4.5
3	Park Avenue and East 47th Street	0.31	4.5
Note: PM _{2.5} <i>de minimis</i> criteria — 24-hour average, not to exceed more than half the difference between the background concentration of 26 µg/m ³ and the 24-hour standard of 35 µg/m ³ .			

Table 19-73
Maximum Predicted Annual Average
PM_{2.5} Incremental Concentrations (2033)

Analysis Site	Location	Increment (µg/m ³)
1	Park Avenue and East 46th Street	0.007
2	Vanderbilt Avenue and East 44th Street	0.017
3	Park Avenue and East 47th Street	0.024
Note: PM _{2.5} <i>de minimis</i> criteria—annual (neighborhood scale), 0.1 µg/m ³ .		

The results show that the annual and daily (24-hour) PM_{2.5} increments are predicted to be below the *de minimis* criteria. Therefore, there would be no potential for significant adverse impacts on air quality from the vehicle trips that would be generated by the proposed One Vanderbilt development and the redevelopment of the projected development sites in the Vanderbilt Corridor pursuant to the proposed actions in 2033.

N. GREENHOUSE GAS EMISSIONS

This section evaluates the greenhouse gas (GHG) emissions that would be generated by the construction and operation of potential uses under the proposed zoning text amendment, combining the effect of the proposed One Vanderbilt development—presented in Chapter 12, “Greenhouse Gas Emissions”—with that of the additional potential development that could occur within the Vanderbilt Corridor, described above. For a full discussion of the pollutants and regulatory context for this evaluation, see Chapter 12, “Greenhouse Gas Emissions.”

METHODOLOGY

Consistent with the methodology presented in the *CEQR Technical Manual* and described in detail in Chapter 12, “Greenhouse Gas Emissions,” the quantified emissions presented below do not represent a truly incremental assessment, since a “no action condition” would be impossible to evaluate reasonably in the context of global GHG emissions, due to the fact that if uses are not developed in one location, they may be developed elsewhere with an unknown impact on emissions. Therefore, the focus of this analysis is on the total emissions associated with potential new development that could result from the proposed actions. This excludes emissions from existing uses within the Vanderbilt Corridor that are not anticipated to change in the future with the proposed actions (2021 or 2033). However, it should be noted that any development which may occur within the Corridor under the proposed zoning text amendment would be subject to

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the same requirements, and would provide similar energy and GHG benefits to those described below.

This analysis follows the methodology provided in Chapter 12, “Greenhouse Gas Emissions,” with the exception of building energy emissions estimates for the projected development sites, which were prepared using the GHG intensity factors (emissions per developed space) for the appropriate uses provided in the *CEQR Technical Manual*. Building energy emissions for the proposed One Vanderbilt development were estimated in detail, as described in Chapter 12, “Greenhouse Gas Emissions.” An option under consideration for the proposed One Vanderbilt project would include on-site electricity and heat cogeneration, which would provide approximately one quarter of the electricity using a natural gas-fired system, requiring 148,268 MMBtu/yr of natural gas and obviating natural gas consumption for heat and hot water. The totals in this section conservatively include the emissions from the cogeneration scenario, which would result in higher emissions. For a detailed discussion comparing the energy use and GHG emissions for the proposed One Vanderbilt development with and without the cogeneration option under consideration, see Chapter 12, “Greenhouse Gas Emissions.”

The projected annual vehicle miles traveled, which form the basis for the GHG emissions calculations from mobile sources, are summarized in **Table 19-74**.

Table 19-74
Vehicle Miles Traveled per Year

Block	Roadway Type	Passenger	Taxi	Truck
Block 1277 (proposed One Vanderbilt project)	Local	301,782	319,074	1,069,115
	Arterial	658,433	696,161	2,332,615
	Interstate/Expressway	411,521	435,101	1,457,885
	<i>Subtotal</i>	<u>1,371,735</u>	<u>1,450,336</u>	<u>4,859,616</u>
Block 1279	Local	361,155	254,998	675,896
	Arterial	787,976	556,360	1,474,682
	Interstate/Expressway	492,485	347,725	921,676
	<i>Subtotal</i>	<u>1,641,616</u>	<u>1,159,084</u>	<u>3,072,255</u>
Block 1281	Local	532,665	365,196	1,110,079
	Arterial	1,162,178	796,791	2,421,992
	Interstate/Expressway	726,361	497,994	1,513,745
	<i>Subtotal</i>	<u>2,421,204</u>	<u>1,659,981</u>	<u>5,045,816</u>
Total		<u>5,434,55</u>	<u>4,269,400</u>	<u>12,977,686</u>

Note that the *CEQR Technical Manual* methodology provides year-specific data for emissions from mobile sources, but not for building energy. In contrast, per the manual’s guidance, building energy estimates for the projected development sites are not tied to year-specific data, but rather are based on representative data for existing buildings, which is likely conservative given the mix of building of all ages represented in the data. Future emissions would also be lower due to improvements in the grid-provided electricity generation, including increasing levels of low-carbon sources. Thus, the building energy GHG emissions estimates provided below are considered to be a conservative assumption. In addition, the mobile source GHG emissions analysis conservatively represents the results for 2021, because it is unknown when the redevelopment of the projected development sites would actually occur. This results in higher emissions since vehicle efficiency improves over time. The mobile source emissions would be approximately 10 percent lower in 2033 than in 2021.

PROJECTED GHG EMISSIONS FROM THE PROPOSED ACTIONS

Consistent with CEQR practice, emissions associated with construction have not been estimated explicitly for the proposed One Vanderbilt development or the projected development sites; however, analyses of similar projects have shown that construction emissions (both direct and emissions embedded in the production of materials, including on-site construction equipment, delivery trucks, and upstream emissions from the production of steel, rebar, aluminum, and cement used for construction) are equivalent to the total operational emissions over approximately 5 to 10 years. The proposed actions would not fundamentally change the City’s solid waste management system. Therefore, as per the *CEQR Technical Manual*, the GHG emissions from solid waste generation, transportation, treatment, and disposal are not quantified.

The square footage of the projected development sites, the GHG intensity factors, and resulting GHG emissions from each of the uses are presented in detail in **Table 19-75**, as well as the building energy emissions associated with the proposed One Vanderbilt project. (See Chapter 12, “Greenhouse Gas Emissions” for details on the development of the proposed One Vanderbilt project building energy emissions.) The detailed mobile source-related GHG emissions from each site are presented in detail in **Table 19-76** and a summary of the cumulative emissions from all sites is presented in **Table 19-77**.

Table 19-75
With-Action Condition: Annual Building Operational Emissions

Source Use	Building Square Footage	GHG Intensity (kg CO ₂ e / gsf / year)	Annual GHG Emissions (metric tons CO ₂ e)
Block 1277 (proposed One Vanderbilt development)		<i>Subtotal¹</i>	<u>12,035</u>
Block 1279			
Hotel	162,330	6.59	1,070
Local Retail	914,361	9.43	8,622
Office	25,051	9.43	236
<i>Block 1279 Subtotal</i>			<u>9,928</u>
Block 1281			
Local Retail	43,313	9.43	408
Office	1,580,924	9.43	14,908
<i>Block 1281 Subtotal</i>			<u>15,317</u>
Total			<u>37,280</u>
<p>Notes: Totals may not sum due to rounding. Per <i>CEQR Technical Manual</i> guidance, building energy emissions represent the latest data for existing buildings and not the future target year (2033). Future emissions are expected to be lower. ¹Full details of the building energy calculations for the proposed One Vanderbilt development, which apply a more detailed methodology, are presented in Chapter 12, “Greenhouse Gas Emissions.” Building operations GHG emissions from the proposed One Vanderbilt development represent the results with the cogeneration option which results in higher emissions overall.</p>			
<p>Sources: GHG intensity factors are from the <i>CEQR Technical Manual</i>.</p>			

Table 19-76
With-Action Condition: Annual Mobile
Source Emissions (metric tons CO₂e, 2021¹)

Roadway Type	Passenger Vehicle	Taxi	Truck	Total
Block 1277 (proposed One Vanderbilt development)				
Local	284	272	3,509	4,065
Arterial	377	357	4,723	5,457
Interstate/Expressway	166	156	2,261	2,583
<i>Block 1277 Subtotal</i>	<i>827</i>	<i>784</i>	<i>10,494</i>	<i>12,105</i>
Block 1279				
Local	340	217	2,218	2,775
Arterial	451	285	2,986	3,722
Interstate/Expressway	199	125	1,430	1,753
<i>Block 1279 Subtotal</i>	<i>990</i>	<i>627</i>	<i>6,634</i>	<i>8,251</i>
Block 1281				
Local	501	311	3,644	4,456
Arterial	666	408	4,904	5,978
Interstate/expressway	293	178	2,348	2,820
<i>Block 1281 Subtotal</i>	<i>1,460</i>	<i>898</i>	<i>10,896</i>	<i>13,253</i>
Total	3,277	2,309	28,023	33,609
Notes: ¹ Mobile source GHG emissions conservatively represent the results for 2021 because it is unknown when the additional developments in the Corridor will actually occur. This results in higher emissions since vehicle efficiency improves over time. These emissions would be approximately 10 percent lower in 2033.				

Table 19-77
With-Action Condition: Total Annual GHG
Emissions Summary (metric tons CO₂e)

Site	Building Operations	Mobile	Total
Block 1277 (Proposed One Vanderbilt Development) ¹	<u>12,035</u>	12,105	<u>24,140</u>
Block 1279	9,928	8,251	18,179
Block 1281	15,317	13,253	28,570
Total	<u>37,280</u>	33,609	<u>70,889</u>
Notes: ¹ Building operations GHG emissions from the proposed One Vanderbilt project represent the results with the cogeneration option, which results in higher emissions overall. For more information see Chapter 12, "Greenhouse Gas Emissions."			

ELEMENTS OF THE PROPOSED ACTIONS THAT WOULD REDUCE GHG EMISSIONS

The *CEQR Technical Manual* defines five goals through which a project’s consistency with the City’s emission reduction goal is evaluated: (1) efficient buildings; (2) clean power; (3) sustainable transportation; (4) construction operation emissions; and (5) building materials carbon intensity. The proposed One Vanderbilt development would include substantial energy efficiency design measures and components, and would support the other GHG goals by virtue of its nature and location: the project’s proximity to public transportation, its reliance on natural gas, its commitment to construction air quality controls (which will be reflected in the Restrictive Declaration to be recorded), and the fact that as a matter of course, construction in New York City uses recycled steel and includes cement replacements all demonstrate that the project supports the GHG reduction goal. While design details of the redevelopment of the

projected development sites are not available, under requirements of the special permit, potential developers will be required to apply to the CPC, and will need to demonstrate substantial energy efficiency and performance exceeding building code at the time. The CPC will ensure that any development approved will be consistent with the City's emission reduction goal as defined in the *CEQR Technical Manual*.

Therefore, based on the commitment to energy efficiency and by virtue of the location and nature of the proposed One Vanderbilt project and the projected development sites, the proposed actions would be consistent with the City's emissions reduction goals, as defined in the *CEQR Technical Manual*.

O. NOISE

Neither the proposed development of the One Vanderbilt site nor the redevelopment of the three additional projected development sites in the Vanderbilt Corridor pursuant to the proposed actions would result in significant adverse impacts with respect to noise.

The noise analysis for the proposed Vanderbilt Corridor consists of two parts:

- An analysis at locations where traffic generated by the proposed One Vanderbilt development and the projected Vanderbilt Corridor developments would have the potential to result in significant adverse noise impacts, to determine the magnitude of the increase in noise levels; and
- An analysis to determine the level of building attenuation necessary to ensure that interior noise levels at the One Vanderbilt site and the projected development sites would satisfy applicable interior noise criteria.
- The required level of building attenuation would be confirmed based on a site-specific analysis for each projected development site and be enforced via a noise (E) designation.

EXISTING NOISE LEVELS

Existing noise levels at receptors adjacent to the projected development sites were determined by field measurements, as described in Chapter 13, "Noise." These receptors are sites 5, 6, 7, and 8.

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2021)

Using the methodology described in Chapter 13, "Noise," noise levels in the No-Action condition were calculated at the four mobile source noise analysis receptors for the 2021 analysis year. These No-Action values are shown in Table 19-78.

In 2021, the maximum increase in $L_{eq(1)}$ noise levels for the No-Action condition would be 3.3 dBA at all of the mobile source noise analysis receptors. Changes of this magnitude would be barely perceptible. These noise level increases are due to background growth from 2014 to 2021, No-Action projects from the East Midtown Rezoning, and traffic from the as-of-right buildings. In terms of CEQR noise exposure guidelines, noise levels at receptor sites 5 and 7 would remain in the "marginally unacceptable" category, noise levels at receptor site 8 would remain in the "clearly unacceptable" category, and noise levels at receptor site 6 would change from the "marginally unacceptable" category to the "clearly unacceptable" category.

Table 19-78
2021 No-Action Condition Noise Levels (in dBA)

Receptor	Location	Time	Existing	No-Action	$L_{eq(1)}$	No-Action
			$L_{eq(1)}$	$L_{eq(1)}$	Change	$L_{10(1)}$
5	East 46th Street between Madison and Vanderbilt Avenues	AM	73.6	74.0	0.4	76.2
		MD	73.5	73.8	0.3	76.7
		PM	73.0	73.5	0.5	74.7
6	Vanderbilt Avenue between East 45th and East 46th Streets	AM	76.6	79.1	2.5	81.1
		MD	74.5	76.6	2.1	78.1
		PM	72.9	76.2	3.3	76.7
7	East 45th Street between Madison and Vanderbilt Avenues	AM	74.9	74.6	-0.3	75.7
		MD	72.6	73.5	0.9	75.3
		PM	73.7	74.4	0.7	76.3
8	Madison Avenue between East 45th and East 46th Streets	AM	77.3	77.5	0.2	81.4
		MD	76.5	76.8	0.3	80.1
		PM	77.5	77.7	0.2	81.8

THE FUTURE WITH THE PROPOSED ACTIONS (2021)

Using the methodology previously described, noise levels in the With-Action condition were calculated at the four mobile source noise analysis receptors for the 2021 analysis year. These Build values are shown in **Table 19-79**.

In 2021, comparing the No-Action condition with the With-Action condition, the maximum increase in $L_{eq(1)}$ noise levels would be 1.2 dBA at all of the mobile source noise analysis receptors. Changes of this magnitude would be imperceptible. In terms of CEQR noise exposure guidelines, noise levels at receptor sites 5 and 7 would remain in the “marginally unacceptable” category and noise levels at receptor sites 6 and 8 would remain in the “clearly unacceptable” category.

Table 19-79
2021 With-Action Condition Noise Levels (in dBA)

Receptor	Location	Time	No-Action	With-Action	$L_{eq(1)}$	With-Action
			$L_{eq(1)}$	$L_{eq(1)}$	Change	$L_{10(1)}$
5	East 46th Street between Madison and Vanderbilt Avenues	AM	74.0	74.1	0.1	76.3
		MD	73.8	73.9	0.1	76.8
		PM	73.5	73.7	0.2	74.9
6	Vanderbilt Avenue between East 45th and East 46th Streets	AM	79.1	79.5	0.4	81.5
		MD	76.6	77.8	1.2	79.3
		PM	76.2	76.8	0.6	77.3
7	East 45th Street between Madison and Vanderbilt Avenues	AM	74.6	74.8	0.2	75.9
		MD	73.5	73.8	0.3	75.6
		PM	74.4	74.5	0.1	76.4
8	Madison Avenue between East 45th and East 46th Streets	AM	77.5	77.6	0.1	81.5
		MD	76.8	77.1	0.3	80.4
		PM	77.7	77.8	0.1	81.9

THE FUTURE WITHOUT THE PROPOSED ACTIONS (2033)

Using the methodology described in Chapter 13, “Noise” noise levels in the No-Action condition were calculated at the four mobile source noise analysis receptors for the 2033 analysis year. These No-Action values are shown in **Table 19-80**.

Table 19-80
2033 No-Action Condition Noise Levels (in dBA)

Receptor	Location	Time	Existing	No-Action	$L_{eq(1)}$	No-Action
			$L_{eq(1)}$	$L_{eq(1)}$	Change	$L_{10(1)}$
5	East 46th Street between Madison and Vanderbilt Avenues	AM	73.6	74.6	1.0	76.8
		MD	73.5	74.5	1.0	77.4
		PM	73.0	<u>73.7</u>	<u>0.7</u>	<u>74.9</u>
6	Vanderbilt Avenue between East 45th and East 46th Streets	AM	76.6	<u>79.2</u>	<u>2.6</u>	<u>81.2</u>
		MD	74.5	<u>77.5</u>	<u>3.0</u>	<u>79.0</u>
		PM	72.9	<u>77.4</u>	<u>4.5</u>	<u>77.9</u>
7	East 45th Street between Madison and Vanderbilt Avenues	AM	74.9	75.3	0.4	76.4
		MD	72.6	72.8	0.2	74.6
		PM	73.7	73.8	0.1	75.7
8	Madison Avenue between East 45th and East 46th Streets	AM	77.3	<u>79.2</u>	<u>1.9</u>	<u>83.1</u>
		MD	76.5	79.2	2.7	82.5
		PM	77.5	78.3	0.8	82.4

In 2033, the maximum increase in $L_{eq(1)}$ noise levels for the No-Action condition would be 4.5 dBA at all of the mobile source noise analysis receptors. Changes of this magnitude would be readily perceptible. These noise level increases are due to background growth from 2014 to 2033, No-Action projects from the East Midtown Rezoning, and traffic from the as-of-right buildings. In terms of CEQR noise exposure guidelines, noise levels at receptor sites 5 and 7 would remain in the “marginally unacceptable” category, noise levels at receptor site 8 would remain in the “clearly unacceptable” category, and noise levels at receptor site 6 would change from the “marginally unacceptable” category to the “clearly unacceptable” category.

THE FUTURE WITH THE PROPOSED ACTIONS (2033)

Using the methodology previously described, noise levels in the With-Action condition were calculated at the four mobile source noise analysis receptors for the 2033 analysis year. These Build values are shown in **Table 19-81**.

In 2033, comparing the No-Action condition with the With-Action condition, the maximum increase in $L_{eq(1)}$ noise levels would be 1.2 dBA at all of the mobile source noise analysis receptors. Changes of this magnitude would be imperceptible. In terms of CEQR noise exposure guidelines, noise levels at receptor sites 5 and 7 would remain in the “marginally unacceptable” category and noise levels at receptor sites 6 and 8 would remain in the “clearly unacceptable” category.

Table 19-81
2033 With-Action Condition Noise Levels (in dBA)

Receptor	Location	Time	No-Action L _{eq(1)}	With-Action L _{eq(1)}	L _{eq(1)} Change	With-Action L ₁₀₍₁₎
5	East 46th Street between Madison and Vanderbilt Avenues	AM	74.6	75.0	0.4	77.2
		MD	74.5	74.9	0.4	77.8
		PM	73.7	74.0	0.3	75.2
6	Vanderbilt Avenue between East 45th and East 46th Streets	AM	79.2	79.7	0.5	81.7
		MD	77.5	78.7	1.2	80.2
		PM	77.4	78.1	0.7	78.6
7	East 45th Street between Madison and Vanderbilt Avenues	AM	75.3	75.5	0.2	76.6
		MD	72.8	73.0	0.2	74.8
		PM	73.8	74.3	0.5	76.2
8	Madison Avenue between East 45th and East 46th Streets	AM	79.2	79.4	0.2	83.3
		MD	79.2	79.5	0.3	82.8
		PM	78.3	78.4	0.1	82.5

NOISE ATTENUATION MEASURES FOR THE PROPOSED ACTIONS

The *CEQR Technical Manual* has set noise attenuation requirements for buildings based on exterior noise levels. Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 50 dBA (45 dBA or lower for residential uses) or lower for commercial uses, and are determined based on exterior L₁₀₍₁₎ noise levels. Based on measured exterior noise levels and *CEQR* criteria, the necessary attenuation for each façade of the proposed building has been calculated. The required attenuation levels at each of the receptor sites used for evaluation of noise attenuation requirements are shown in **Table 19-82**.

Table 19-82
Required Attenuation at Noise Measurement Locations Under *CEQR* Criteria

Receptor	Location	Highest Calculated With-Action L ₁₀₍₁₎ Value	Minimum Required Attenuation (dBA)
5	East 46th Street between Madison and Vanderbilt Avenues	77.8	33
6	Vanderbilt Avenue between East 45th and East 46th Streets	81.7	38
7	East 45th Street between Madison and Vanderbilt Avenues	76.6	33
8	Madison Avenue between East 45th and East 46th Streets	83.3	40

Note:
Attenuation values are shown for residential or hotel uses; commercial uses would require 5 dBA less.

Attenuation would be required at all receptor sites to achieve interior noise levels of 45 dBA or lower for residential and hotel uses, and 50 dBA or lower for commercial uses. Based on the values shown in **Table 19-83**, required attenuation levels were determined for all building façades and elevations. These values are shown in **Table 19-83**. The required level of building attenuation would be confirmed based on a site-specific analysis for each projected development site and be enforced through a noise (E) designation.

Table 19-83
Required Attenuation for Projected Development Sites

Projected Development Site	Façade(s)	Representative Receptor Site	Calculated L ₁₀₍₁₎ Noise Levels	CEQR Minimum Required Attenuation (in dBA) ¹
MTA Site (Block 1279, Lots 23-25, 48)	North and South	7	76.6	33
	West	8	83.2	40
52 Vanderbilt Site (Block 1279, Lot 45)	North and South	7	76.6	33
	East	6	<u>81.7</u>	38
Roosevelt Hotel Site (Block 1281, Lot 21)	North	5	77.8	33
	East	6	<u>81.7</u>	38
	South	7	76.6	33
	West	8	<u>83.3</u>	40

Note: ¹ Attenuation values are shown for residential or hotel uses; commercial uses would require 5 dBA less.

BUILDING ATTENUATION IMPLEMENTATION

The attenuation of a composite structure is a function of the attenuation provided by each of its component parts and how much of the area is made up of each part. Normally, a building façade consists of wall, glazing, and any vents or louvers associated with the building mechanical systems in various ratios of area. Currently, the proposed design for the building includes acoustically-rated windows and air conditioning as an alternate means of ventilation. The proposed building’s façades, including these elements, would be designed to provide a composite Outdoor-Indoor Transmission Class (OITC) rating¹ greater than or equal to those listed in above in **Tables 19-82 and 19-83**, along with an alternative means of ventilation. By adhering to these design specifications, the proposed building will thus provide sufficient attenuation to achieve the CEQR interior noise level guideline of 45 dBA or lower for residential or hotel uses and 50 dBA or lower for commercial uses, which would be considered acceptable according to CEQR interior noise level guidelines.

MECHANICAL EQUIPMENT

It is assumed that the building’s mechanical systems (i.e., HVAC systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code, the New York City Department of Buildings [DOB] Code) and to avoid producing levels that would result in any significant increase in ambient noise levels. Therefore, neither the proposed One Vanderbilt development nor the projected development within the Vanderbilt Corridor would result in any significant adverse noise impacts related to building mechanical equipment.

¹ The OITC classification is defined by ASTM International (ASTM E1332) and provides a single-number rating that is used for designing a building façade including walls, doors, glazing, and combinations thereof. The OITC rating is designed to evaluate building elements by their ability to reduce the overall loudness of ground and air transportation noise.

P. PUBLIC HEALTH

Based on the available information regarding development within the Vanderbilt Corridor that could occur in the future with the proposed actions, this conceptual analysis has not identified the potential for the projected additional development in the Vanderbilt Corridor to result in significant unmitigated adverse impacts in the following CEQR analysis areas: air quality, water quality, hazardous materials, and noise. Therefore, based on the methodologies in the *CEQR Technical Manual*, an analysis of public health is not warranted. However, a more detailed analysis of public health, if necessary, would be performed pursuant to the separate environmental review of any special permit applications for the projected development sites in the Vanderbilt Corridor.

Q. NEIGHBORHOOD CHARACTER

As described in the *CEQR Technical Manual*, an assessment of neighborhood character is generally needed when a proposed action has the potential to result in significant adverse impacts in one or more of the following technical areas: land use, zoning and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; and noise. An assessment of neighborhood character is also needed if an action may have moderate effects on several of the elements that define a neighborhood's character. This analysis finds that redevelopment within the Vanderbilt Corridor pursuant to the proposed actions would not result in a significant adverse impact to neighborhood character.

The additional development that could occur in the Vanderbilt Corridor in the future with the proposed actions could result in moderate effects in some or all of the technical areas that contribute to neighborhood character; however, it is unlikely that these combined moderate effects would result in any significant adverse impacts on neighborhood character. By 2021, there could be an increase in FAR up to 30.0 for commercial buildings on the One Vanderbilt site and the MTA site; by 2033, there could be an increase in FAR from 15.0 up to 30.0 for commercial buildings on the One Vanderbilt Site, Block 1281, and the MTA-owned portion of Block 1279, as well as a possible conversion of the commercial building at 52 Vanderbilt Avenue to a hotel use in the future with the proposed action as compared with the No-Action condition. However, the additional density and hotel use would be compatible with the existing and proposed high-density commercial uses centered around key public transit resources in the surrounding neighborhood. Thus, based on the available information regarding development within the Vanderbilt Corridor that could occur in the future with the proposed actions, it is expected that there would not be any significant adverse impacts on neighborhood character. However, a more detailed analysis of neighborhood character, if necessary, would be performed pursuant to the separate environmental review of any special permit applications for the projected development sites in the Vanderbilt Corridor.

R. CONSTRUCTION

Since the construction details associated with the potential redevelopment of the sites on Blocks 1279 and 1281 are not known, a site-specific analysis of the cumulative effects from construction within the Vanderbilt Corridor, including that from the One Vanderbilt development, cannot be made at this time. The discussion below addresses the potential effects

of construction of the projected development sites in the Vanderbilt Corridor on a conceptual and generic basis.

THE FUTURE WITH THE PROPOSED ACTIONS (2021)

With the proposed actions in 2021, the One Vanderbilt site and the MTA site would each be redeveloped with a commercial building of 30 FAR, and the other projected development sites would remain in their current condition. The development program for the MTA site is not known at this time but this development would require a separate land use application process (including environmental reviews) that could take more than two years to complete. Although the construction at the MTA site is assumed to be complete by 2021, it would have a shorter duration and would likely generate less intense construction activity as that development would be smaller than the One Vanderbilt development based on a site of roughly half the size. Further that construction could not begin until its land use approvals are complete, whereas One Vanderbilt construction is expected to begin in 2015. These circumstances reduce the likelihood that peak construction activities for the proposed One Vanderbilt development and the development at the MTA site would overlap or conflict with each other.

As discussed in Chapter 16, “Construction Impacts,” the incremental construction passenger car equivalents (PCEs) for the proposed One Vanderbilt development would be well below the CEQR Technical Manual transportation analysis thresholds for detailed analysis. As the development program for the MTA site becomes more defined, it will be studied as part of a separate environmental review. Construction managers for simultaneous projects on nearby construction sites within New York City would generally coordinate their activities to avoid delays and inefficiencies. In addition, Maintenance and Protection of Traffic (MPT) plans would be developed for any temporary curb-lane, sidewalk, and roadway closures. Approval of these plans and implementation of all temporary closures during construction would be coordinated with the New York City Department of Transportation’s (DOT) Office of Construction Mitigation and Coordination (OCMC).

Although the construction at the MTA site may potentially overlap with construction at the One Vanderbilt site, potential air quality concentration increments at nearby sensitive receptor locations during construction would be considerably diminished by dispersion due to the distance between the construction emissions sources for the development at the MTA site and the proposed One Vanderbilt development (e.g., the proposed One Vanderbilt development is approximately 320 feet from the MTA site, approximately 420 feet from the 52 Vanderbilt Avenue site, and approximately 580 feet from the Roosevelt Hotel site). Therefore, the cumulative air quality effects of simultaneous construction of the development at the MTA site and the proposed One Vanderbilt development are expected to be minimal.

As described in Chapter 16, “Construction Impacts,” the level of noise resulting from construction of the proposed One Vanderbilt development at the nearest sensitive noise receptor locations would not rise to the level that would create an exceedance of the CEQR Technical Manual noise impact criteria. Construction on the MTA site would not have line of sight or be within proximity of the same sensitive receptors most likely to experience noise resulting from construction of the proposed One Vanderbilt development, and would consequently not result in a substantial contribution to noise levels at those receptors. Therefore, the cumulative noise-related effects of simultaneous construction of the development at the MTA site and the proposed One Vanderbilt development are not expected to be substantial.

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To reduce the potential for human or environmental exposure to known or unexpectedly encountered contamination during and following construction of the proposed One Vanderbilt development, an “E” Designation for hazardous materials will be assigned to the One Vanderbilt site that will be administered by OER. Based on the findings of the existing sampling, a RAP and associated CHASP would be prepared for implementation during construction. In addition, during and following demolition for the proposed One Vanderbilt development, regulatory requirements pertaining to ACMs, LBP, and PCBs would be followed.

To reduce the potential for human or environmental exposure during and following construction, an (E) designation for hazardous materials will be assigned to the One Vanderbilt site. For the MTA site, data gathered for the *East Midtown Rezoning and Related Actions FEIS* identified the potential for subsurface contamination. As such, prior to any development on the MTA site under the proposed actions, the assessment for potential impacts would be similar to that required for the proposed One Vanderbilt development, and it is therefore likely that (E) designations would be placed on the MTA site as part of the environmental review. Therefore, the anticipated development at the MTA site and the One Vanderbilt site pursuant to the proposed actions is not expected to result in any significant adverse impacts related to hazardous materials.

It is expected that a CPP would be developed and implemented in consultation with LPC (and MTA, in the case of Grand Central Terminal) to avoid adverse construction-related impacts to nearby architectural resources. Although the proposed One Vanderbilt development would remove the S/NR-eligible Vanderbilt Avenue Building at 51 East 42nd Street, this architectural resource would be removed in the 2021 No-Action condition.

No community facilities would be directly displaced or altered by construction on the One Vanderbilt site or the MTA site. Construction would create direct benefits resulting from expenditures on labor, materials, and services, and indirect benefits created by expenditures by material suppliers, construction workers, and other employees involved in the direct activity. Construction also would contribute to increased tax revenues for the City and State, including those from personal income taxes.

THE FUTURE WITH THE PROPOSED ACTIONS (2033)

There are no specific proposals to redevelop the four blocks of the proposed Vanderbilt Corridor north of the One Vanderbilt Site, but any future development would require separate land use application processes (including environmental reviews) that could take more than two years to complete. Therefore, it is unlikely that peak construction activities for the projected development sites could overlap with those for the proposed One Vanderbilt development. In addition, much like the construction of the proposed One Vanderbilt development, two of the three additional projected development sites (the MTA site and the Roosevelt Hotel site) could undergo a comparable level of construction activities as-of-right under the 2033 No-Action condition, and the third site (the 52 Vanderbilt site) would essentially be a renovation of an existing building.

As discussed in Chapter 16, “Construction Impacts,” the incremental construction passenger car equivalents (PCEs) for the proposed One Vanderbilt development would be well below the *CEQR Technical Manual* transportation analysis thresholds for detailed analysis. The same conclusion reasonably can be drawn for the projected development sites. Therefore, the cumulative transportation effects of possible simultaneous construction of the projected development sites and the proposed One Vanderbilt development are unlikely to be substantial. In addition, construction managers for simultaneous projects on nearby construction sites within

New York City would generally coordinate their activities to avoid delays and inefficiencies. Further, Maintenance and Protection of Traffic (MPT) plans would be developed for any temporary curb-lane, sidewalk, and roadway closures. Approval of these plans and implementation of all temporary closures during construction would be coordinated with OCMC.

It is unlikely that peak construction activities for the projected development sites could overlap with those for the proposed One Vanderbilt development. However, even if the construction of the projected development sites in the Vanderbilt Corridor would occur at the same time as construction of the proposed One Vanderbilt development, potential air quality concentration increments at nearby sensitive receptor locations during construction would be considerably diminished by dispersion due to the distance between the construction emissions sources for the projected development sites and the proposed One Vanderbilt development (e.g., the proposed One Vanderbilt development is approximately 320 feet from the MTA site, approximately 420 feet from the 52 Vanderbilt Avenue site, and approximately 580 feet from Roosevelt Hotel site). Therefore, the cumulative air quality effects of simultaneous construction of the projected development sites and the proposed One Vanderbilt development are expected to be minimal.

The level of noise resulting from construction of the proposed One Vanderbilt development at the nearest sensitive noise receptor locations would not rise to the level that would create an exceedance of the *CEQR Technical Manual* noise impact criteria. Construction on the three additional projected development sites would not have line of sight or be within proximity of the same sensitive receptors most likely to experience noise resulting from construction of the proposed One Vanderbilt development, and would consequently not result in a substantial contribution to noise levels at those receptors. Therefore, the cumulative noise-related effects of simultaneous construction of the projected development sites and the proposed One Vanderbilt development are not expected to be substantial.

To reduce the potential for human or environmental exposure to known or unexpectedly encountered contamination during and following construction of the proposed One Vanderbilt development, an “E” Designation for hazardous materials will be assigned to the One Vanderbilt site that will be administered by OER. Based on the findings of the existing sampling, a RAP and associated CHASP would be prepared for implementation during construction. In addition, during and following demolition for the proposed One Vanderbilt development, regulatory requirements pertaining to ACMs, LBP, and PCBs would be followed.

To reduce the potential for human or environmental exposure during and following construction, an (E) designation for hazardous materials will be assigned to the One Vanderbilt site. For the three additional projected development sites, data gathered for the *East Midtown Rezoning and Related Actions FEIS* identified the potential for subsurface contamination at Blocks 1279 and 1281. As such, prior to any redevelopment of these blocks under the proposed actions, the assessment for potential impacts would be similar to that required for the proposed One Vanderbilt development, and it is therefore likely that (E) designations would be placed on these blocks as part of the environmental reviews for the three additional projected development sites. Therefore, the anticipated redevelopment of the three additional projected development sites and the One Vanderbilt site pursuant to the proposed actions is not expected to result in any significant adverse impacts related to hazardous materials.

It is expected that a CPP would be developed and implemented in consultation with LPC (and MTA, in the case of Grand Central Terminal) to avoid adverse construction-related impacts to nearby architectural resources. Although the proposed One Vanderbilt development would

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remove the S/NR-eligible Vanderbilt Avenue Building at 51 East 42nd Street, this architectural resource would be removed in the No-Action condition. Similarly, while the redevelopment of the Roosevelt Hotel site would remove the NYCL-eligible and S/NR-eligible Roosevelt Hotel, this resource also would be removed in the 2033 No-Action condition.

No community facilities would be directly displaced or altered by construction on the One Vanderbilt site or the projected development sites. Construction would create direct benefits resulting from expenditures on labor, materials, and services, and indirect benefits created by expenditures by material suppliers, construction workers, and other employees involved in the direct activity. Construction also would contribute to increased tax revenues for the City and State, including those from personal income taxes.

Overall, it is anticipated that the cumulative effects of simultaneous construction of the projected development sites and the proposed One Vanderbilt development, compared with the effects of the No-Action condition (2021 and 2033), would not be substantial. Any specific construction-related impacts that could result from applications for the proposed zoning text amendment and special permit would be assessed and disclosed under and pursuant to separate environmental reviews for the individual development sites in the Vanderbilt Corridor. *