395 Flatbush Avenue Extension Redevelopment

Draft Environmental Impact Statement

PREPARED FOR

Department of Housing Preservation & Development
100 Gold Street, Room 7-A3
New York, NY 10028
212.863.7106

PREPARED BY

VHB Engineering, Surveying and Landscape Architecture, P.C.
One Penn Plaza
Suite 715
New York, NY 10119
212.722.9247

CEQR No.: 25HPD058K
ULURP NO.: 260038ZMK, 260039ZRK, 260040PPK, 260041HUK, 260042PCK, 260043ZCK, 260044LDK

August 8, 2025

Table of Contents

Chapter Page

Executive Summary ES-1

Introduction ES-1
Development Site ES-2
Neighborhood Context ES-5
Proposed Actions ES-8
Proposed Project ES-8
Project Purpose and Need ES-9
Analysis Framework ES-11
Analysis (Build) Year ES-11
Future No-Action Condition ES-11
Future With-Action Condition ES-11
Increment for Analysis ES-12
Principal Conclusions of Environmental Analysis ES-12
Land Use, Zoning, and Public Policy ES-13
Socioeconomic Conditions ES-14
Community Facilities and Services ES-15
Open Space ES-16
Shadows ES-16
Historic Resources ES-17
Urban Design and Visual Resources ES-18
Hazardous Materials ES-18
Transportation ES-19
Air Quality ES-20
Noise ES-21
Greenhouse Gas Emissions ES-22
Public Health ES-23
Neighborhood Character ES-23
Disadvantaged Communities ES-24
Construction ES-24
Mitigation ES-29
Alternatives ES-33
Unavoidable Significant Adverse Impacts ES-34
Growth-Inducing Aspects of the Proposed Project ES-34
Irreversible and Irretrievable Commitments of Resources ES-34

Project Description 1-1

Introduction 1-1
Development Site 1-2
Neighborhood Context 1-5
Proposed Actions 1-8

Proposed Project 1-8
Project Purpose and Need 1-9
Analysis Framework 1-11
Analysis (Build) Year 1-11
Future No-Action Condition 1-12
Future With-Action Condition 1-12
Increment for Analysis 1-12
Public Review Process 1-13
Environmental Review Process 1-14
CEQR and SEQRA 1-14

Land Use, Zoning, and Public Policy 2-1

Introduction 2-1
Principal Conclusions 2-2
Land Use and Zoning 2-2
Public Policy 2-2
Methodology 2-3
Study Area Definition 2-3
Assessment 2-4
Existing Condition 2-4
No-Action Condition 2-17
With-Action Condition 2-19

Socioeconomic Conditions 3-1

Introduction 3-1
Principal Conclusions 3-2
Methodology 3-3
Analysis Format 3-3
Indirect Residential Displacement Methodology 3-4
Preliminary Assessment 3-7
Existing Conditions 3-7
No Action Condition 3-9
With Action Condition 3-10

Community Facilities and Services 4-1

Introduction 4-1
Principal Conclusions 4-2
Early Childhood Programs 4-2
Public Schools 4-2
Preliminary Screening 4-2
Direct Effects 4-2
Indirect Effects 4-3
Detailed Analysis: Early Childhood Programs 4-3
Methodology 4-3
Existing Conditions 4-4

No-Action Condition *4-6*
Future With-Action Condition *4-8*
Detailed Analysis: Public Schools 4-9
Methodology *4-9*
Existing Conditions *4-11*
No-Action Condition *4-12*
With-Action Condition *4-13*

Open Space 5-1

Introduction 5-1
Principal Conclusions 5-2
Methodology 5-2
Direct Effects Analysis *5-2*
Indirect Analysis *5-3*
Preliminary Assessment 5-10
Existing Conditions *5-10*
No-Action Condition *5-14*
With-Action Condition *5-15*

Shadows 6-1

Introduction 6-1
Principal Conclusions 6-2
Methodology 6-2
Identification of Sunlight-Sensitive Resources *6-3*
Preliminary Assessment *6-3*
Detailed Assessment *6-4*
Determination of Significance *6-4*
Preliminary Assessment 6-5
Tier 1 and 2 Screening *6-5*
Tier 3 Screening Assessment *6-9*
Detailed Analysis 6-15
No-Action Condition *6-15*
With-Action Condition *6-15*

Historic and Cultural Resources 7-1

Introduction 7-1
Principal Conclusions 7-2
Methodology 7-2
Archaeological Resources *7-3*
Architectural Resources *7-3*
Preliminary Assessment 7-4
Existing Conditions *7-4*
No-Action Condition *7-8*
With-Action Condition *7-9*

Urban Design and Visual Resources 8-1

Introduction 8-1
Principal Conclusions 8-2
Urban Design 8-2
Visual Resources 8-2
Methodology 8-3
Assessment Criteria 8-4
Study Area 8-5
Detailed Analysis 8-7
Existing Conditions 8-7
No-Action Condition 8-20
With-Action Condition 8-22

Hazardous Materials 9-1

Introduction 9-1
Principal Conclusions 9-2
Methodology 9-2
Assessment 9-3
Existing Conditions 9-3
Future No-Action Condition 9-4
Future With-Action Condition 9-4

Transportation 10-1

Introduction 10-1
Principal Conclusions 10-4
Methodology 10-5
Level 1 Screening Assessment 10-6
Level 1 Screening Results 10-10
Level 2 Screening Assessment 10-13
Level 2 Screening Results 10-33
Detailed Analysis Methodology 10-38
Traffic 10-38
Parking 10-39
Transit 10-39
Pedestrians 10-41
Vehicle and Pedestrian Safety 10-44
Existing Conditions 10-45
Traffic 10-45
Parking 10-65
Subways 10-67
Pedestrians 10-70
No Action Conditions 10-72
Traffic 10-72
Parking 10-93
Subways 10-94

Pedestrians *10-95*
With Action Conditions 10-98
Traffic *10-98*
Parking *10-130*
Subways *10-132*
Pedestrians *10-135*
Vehicular and Pedestrian Safety *10-140*

Air Quality 11-1

Introduction 11-1
Principal Conclusions 11-2
Air Quality Standards 11-2
Pollutants of Concern 11-4
Regulatory Context 11-5
Impact Criteria 11-6
Background Concentrations 11-7
Mobile Sources 11-8
Mobile Source Intersection Analysis *11-8*
Stationary Sources 11-11
Industrial Source Analysis *11-11*
Large or Major Source Analysis *11-15*

Noise 12-1

Introduction 12-1
Principal Conclusions 12-2
Stationary Source *12-2*
Open Space *12-3*
Noise Background 12-3
Noise Standards and Impact Criteria 12-6
Noise Exposure Guidelines *12-6*
Impact Criteria *12-6*
Assessment Methodology 12-8
General Methodology *12-8*
Mobile Sources *12-9*
Existing Condition 12-10
No-Action Condition 12-16
With-Action Condition 12-17
Stationary Source *12-19*
Open Space *12-20*
Building Attenuation Assessment 12-20

Greenhouse Gas Emissions and Climate Change 13-1

Introduction 13-1
Principal Conclusions 13-2
Pollutants of Concern 13-2

Policy and Regulations on GHG Emissions and Climate Resilience 13-4
Federal *13-4*
State *13-5*
Local *13-5*
Methodology 13-7
GHG Emissions Assessment *13-7*
Assessment 13-8
Direct GHG Emissions *13-8*
Indirect GHG Emissions *13-8*
Mobile Source Emissions *13-9*
Construction Emissions *13-10*
Evaluation of the With-Action Development's Consistency with GHG Reduction Goals *13-11*

Public Health 14-1

Introduction 14-1
Principal Conclusions 14-2
Methodology 14-2
Assessment 14-2
Operational Period *14-2*
Construction Period *14-6*

Neighborhood Character 15-1

Introduction 15-1
Principal Conclusions 15-2
Methodology 15-2
Preliminary Assessment 15-4
Defining Features of the Neighborhood *15-4*
Potential to Affect the Defining Features of the Neighborhood *15-5*
Potential to Affect the Contributing Elements of Neighborhood Character *15-5*

Effects on Disadvantaged Communities 16-1

Introduction 16-1
Principal Conclusions 16-2
Methodology 16-2
Study Area *16-2*
DACs Assessment 16-5
Impact Summary *16-5*
Determination *16-11*

Construction 17-1

Introduction 17-1
Principal Conclusions 17-1
Transportation *17-2*
Air Quality *17-3*

Noise *17-4*
Vibration *17-5*
Other Technical Areas *17-5*
Water and Sewer Infrastructure *17-7*
Methodology 17-7
Construction Regulations and General Practices 17-7
Construction Oversight *17-7*
Construction Hours *17-8*
Construction Practices *17-9*
Construction Description 17-10
Construction Schedule *17-10*
Construction Activities 17-12
Number of Construction Workers and Material Deliveries *17-14*
Assessment of Project Construction 17-14
Land Use and Neighborhood Character *17-15*
Socioeconomic Conditions *17-15*
Community Facilities *17-15*
Open Space *17-15*
Historic and Cultural Resources *17-15*
Natural Resources *17-15*
Hazardous Materials *17-16*
Water and Sewer Infrastructure *17-16*
Transportation *17-16*
Air Quality *17-65*
Noise *17-73*
Vibration *17-86*

Mitigation 18-1

Introduction 18-1
Principal Conclusions 18-1
Transportation *18-2*
Construction *18-4*
Transportation 18-5
Traffic *18-5*
Pedestrians *18-38*
Construction 18-41
Traffic *18-41*
Noise *18-41*

Alternatives 19-1

Introduction 19-1
Principal Conclusions 19-2
No-Action Alternative *19-2*
No Unmitigated Significant Adverse Impacts Alternative *19-3*
No-Action Alternative 19-3
Description of the No-Action Alternative *19-3*

Land Use, Zoning, and Public Policy *19-3*
Socioeconomic Conditions *19-4*
Community Facilities and Services *19-4*
Open Space *19-5*
Shadows *19-5*
Urban Design and Visual Resources *19-5*
Hazardous Materials *19-6*
Transportation *19-6*
Air Quality *19-6*
Greenhouse Gas Emissions and Climate Change *19-6*
Noise *19-7*
Public Health *19-7*
Neighborhood Character *19-7*
Construction *19-7*
Disadvantaged Communities *19-7*
No Unmitigated Significant Adverse Impacts Alternative 19-8
Description of the No Unmitigated Significant Adverse Impacts Alternative *19-8*
Transportation *19-8*
Construction *19-9*

Unavoidable Significant Adverse Impacts 20-1

Introduction 20-1
Transportation 20-2
Traffic *20-2*
Construction 20-2
Traffic *20-2*
Pedestrian *20-2*
Noise *20-3*

Growth-Inducing Aspects of the Proposed Project 21-1

Introduction 21-1
Principal Conclusions 21-2

Irreversible and Irretrievable Commitments of Resources 22-1

List of Appendices

Appendix A ..... LPC Correspondence

Appendix B ..... Phase I Environmental Site Assessment

List of Tables

Table No.	Title	Page
Table ES-1	Future No-Action and With-Action Comparison	ES-12
Table ES-2	Summary of Impacts[1]	ES-13
Table ES-3	Predicted With-Action Noise Level and Required Building Attenuation Value	ES-22
Table ES-4	Impact and Potential Mitigations Summary	ES-30
Table ES-5	Transportation- Traffic Impact Summary	ES-31
Table 1-1	Future No-Action and With-Action Comparison	1-13
Table 2-1	Study Area Generalized Land Use	2-5
Table 2-2	No-Action Projects Within 400-Foot Study Area	2-19
Table 3-1	Area Population	3-7
Table 3-2	Household and Housing Data	3-7
Table 3-3	Housing Tenure	3-8
Table 3-4	Median Gross Rent	3-8
Table 3-5	Average and Median Household Income	3-9
Table 3-6	Household Income Distribution	3-9
Table 3-7	Population from No-Action Projects	3-9
Table 3-8	2024 New York City AMI	3-10
Table 3-9	Estimated Income for Market-Rate Units	3-11
Table 4-1	Publicly Funded Early Childhood Programs Serving the Study Area	4-4
Table 4-2	Childcare Eligible Children Anticipated in No-Action Development Projects	4-6
Table 4-3	No-Action Condition Estimated Publicly Funded Childcare Center Enrollment, Capacity and Utilization	4-8
Table 4-4	Publicly Funded Childcare Center Utilization Summary: No-Action, With-Action, Increment	4-8
Table 4-5	Public School Enrollment, Capacity, and Utilization for Existing Conditions, School District 13, Subdistrict 2	4-12
Table 4-6	Projected Public School Enrollment, Capacity, and Utilization for No-Action Condition, School District 13, Subdistrict 2	4-13
Table 4-7	Projected Public School Enrollment, Capacity, and Utilization for With-Action Condition, School District 2, Subdistrict 3	4-14

Table 5-1	Percent Change Guidance to Determine Possible Open Space Impact	5-9
Table 5-2	Population from Census Tracts	5-10
Table 5-3	Approximate Population from Developments Completed Since 2021	5-11
Table 5-4	Existing Residential Study Area Open Spaces	5-12
Table 5-5	Existing Conditions – Adequacy of Open Space Resources	5-14
Table 5-6	Population from No-Action Projects	5-14
Table 5-7	No-Action Condition – Adequacy of Open Space Resources	5-15
Table 5-8	No-Action and With-Action Population Comparison	5-15
Table 5-9	With-Action Condition – Adequacy of Open Space Resources	5-16
Table 5-10	Open Space Ratios Summary	5-16
Table 6-1	Sunlight-Sensitive Resources in the Study Area	6-7
Table 6-2	Tiers 1-3 Screening Results	6-14
Table 6-3	Detailed Analysis Summary of Incremental Shadow Entry/Exit Times	6-16
Table 7-1	Historic Resources in the Study Area	7-8
Table 10-1	Scenario 1 Development Increment for Analysis	10-4
Table 10-2	Scenario 2 Development Increment for Analysis	10-4
Table 10-3	Travel Demand Characteristics	10-7
Table 10-4	Trip Generation Summary – Person Trips for Scenario 1	10-11
Table 10-5	Trip Generation Summary – Person Trips for Scenario 2	10-12
Table 10-6	Trip Generation Summary – Vehicle Trips for Scenario 1	10-13
Table 10-7	Trip Generation Summary – Vehicle Trips for Scenario 2	10-13
Table 10-8	Weekday Parking Demand Distributions	10-17
Table 10-9	Saturday Parking Demand Distributions	10-18
Table 10-10	Traffic Study Area Intersections	10-34
Table 10-11	Distribution of Subway Riders by Subway Station and Subway Lines	10-36
Table 10-12	Level of Service Criteria for Subway Station Elements	10-40
Table 10-13	Significant Impact Guidance for Stairs and Passageways	10-41
Table 10-14	Level of Service Criteria for Pedestrian Elements	10-42
Table 10-15	Significant Impact Criteria for Sidewalks	10-43
Table 10-16	Significant Impact Criteria for Corners and Crosswalks	10-44
Table 10-17	Existing Traffic Level of Service Summary – Overall Intersections	10-55
Table 10-18	Existing Traffic Level of Service Summary – Traffic Movements	10-55

Table 10-19 Existing Traffic Level of Service 10-56
Table 10-20 Off-Street Parking Inventory 10-67
Table 10-21 Existing Subway Station Level of Service – Fare Control Areas 10-68
Table 10-22 Existing Subway Station Level of Service – Stairways – AM Peak Hour 10-69
Table 10-23 Existing Subway Station Level of Service – Stairways – PM Peak Hour 10-69
Table 10-24 Existing Pedestrian Levels of Service Summary 10-70
Table 10-25 Existing Pedestrian Levels of Service – Sidewalks 10-71
Table 10-26 Existing Pedestrian Levels of Service – Crosswalks 10-71
Table 10-27 Existing Pedestrian Levels of Service – Corners 10-72
Table 10-28 Background Development Projects 10-73
Table 10-29 Year 2032 No-Action Traffic Level of Service Summary – Overall Intersections 10-83
Table 10-30 Year 2032 No-Action Traffic Level of Service Summary – Traffic Movements 10-83
Table 10-31 2032 No-Action Traffic Level of Service 10-84
Table 10-32 No-Action Condition Subway Station Level of Service – Fare Control Areas 10-94
Table 10-33 No-Action Condition Subway Station Level of Service – Stairways – AM Peak Hour 10-94
Table 10-34 No-Action Condition Subway Station Level of Service – Stairways – PM Peak Hour 10-95
Table 10-35 Year 2032 No-Action Pedestrian Levels of Service Summary 10-96
Table 10-36 Year 2032 No-Action Pedestrian Levels of Service – Sidewalks 10-97
Table 10-37 Year 2032 No-Action Pedestrian Levels of Service – Crosswalks 10-97
Table 10-38 Year 2032 No-Action Pedestrian Levels of Service – Corners 10-98
Table 10-39 Year 2032 With-Action Traffic Level of Service Summary – Overall Intersections 10-107
Table 10-40 Year 2032 With-Action Traffic Level of Service Summary – Traffic Movements ... 10-108
Table 10-41 No-Action vs. With-Action Traffic Level of Service – Weekday AM Peak Hour 10-109
Table 10-42 No-Action vs. With-Action Traffic Level of Service – Weekday Midday Peak Hour 10-114
Table 10-43 No-Action vs. With-Action Traffic Level of Service – Weekday PM Peak Hour 10-119
Table 10-44 No-Action vs. With-Action Traffic Level of Service – Saturday Peak Hour 10-124
Table 10-45 Proposed Project Parking Demand by Hour 10-131
Table 10-46 With-Action Parking Demand and Supply 10-132
Table 10-47 Project-Generated Subway Trip Increment by Subway Station Element 10-133
Table 10-48 No-Action vs. With-Action Subway Station Level of Service – Fare Control Areas 10-134

Table 10-49 No-Action vs. With-Action Subway Station Level of Service – Stairways – AM Peak Hour 10-134
Table 10-50 No-Action vs. With-Action Subway Station Level of Service – Stairways – PM Peak Hour 10-135
Table 10-51 Year 2032 With-Action Pedestrian Levels of Service Summary 10-136
Table 10-52 Year 2032 No-Action vs. With-Action Pedestrian Levels of Service – Sidewalks .. 10-137
Table 10-53 Year 2032 No-Action vs. With-Action Pedestrian Levels of Service – Crosswalks 10-138
Table 10-54 Year 2032 No-Action vs. With-Action Pedestrian Levels of Service – Corners 10-139
Table 10-55 Vehicle and Pedestrian Crash Summary 10-141
Table 11-1 National Ambient Air Quality Standards 11-4
Table 11-2 Background Concentrations 11-8
Table 11-3 Mobile Source Analysis Results (µg/m3) 11-11
Table 11-4 NYCDEP Permits: Registrations 11-13
Table 11-5 Results of Industrial Source Analysis 11-14
Table 11-6 Large Source Stack Parameters 11-17
Table 11-7 Large Source Emission Rates (g/sec) 11-17
Table 11-8 Highest Concentrations from the Large Source 11-18
Table 12-1 Common Indoor and Outdoor Sound Levels 12-5
Table 12-2 Noise Exposure Guidelines for Use in City Environmental Impact Review[1] 12-7
Table 12-3 Required Attenuation Values to Achieve Acceptable Interior Noise Levels 12-8
Table 12-4 Ambient Sound Level Measurements 12-12
Table 12-5 Measurement and Existing Condition Noise PCEs 12-13
Table 12-6 Predicted Existing Condition Noise Levels Compared to Measurement Noise Levels 12-13
Table 12-7 Range of Predicted Existing Condition Noise Levels along Hudson Avenue 12-14
Table 12-8 No-Action and Existing Condition Noise PCEs 12-16
Table 12-9 Predicted No-Action Noise Levels Compared to Existing Condition Noise Levels . 12-17
Table 12-10 Range of Predicted No-Action Condition Noise Levels along Hudson Avenue 12-17
Table 12-11 With-Action and No-Action Condition Noise PCEs 12-18
Table 12-12 Predicted With-Action Noise Levels Compared to No-Action Noise Levels 12-19
Table 12-13 Range of Predicted With-Action Condition Noise Levels along Hudson Avenue ... 12-19
Table 12-14 Predicted With-Action Sound Levels from Recreational Space 12-20
Table 12-15 Predicted With-Action Noise Level and Required Building Attenuation Value 12-21

Table 13-1 Global Warming Potential for Primary Greenhouse Gases 13-3
Table 13-2 GHG Emissions from Purchased Electricity Consumption 13-9
Table 13-3 Average One-Way Trip Distances (Miles) 13-9
Table 13-4 Percentages of Daily Vehicle-Mile-Travel (VMT) by Facility Type 13-9
Table 13-5 GHG Emissions from Mobile Sources 13-10
Table 13-6 Local Law 97 GHG Limits of the With-Action Development 13-11
Table 16-1 Disadvantaged Communities in the Half-Mile Radius 16-3
Table 16-2 Intersections with Unmitigated Traffic Impacts 16-5
Table 16-3 Intersections with Unmitigated Construction Traffic Impacts 16-8
Table 17-1 Average Number of Daily Construction Workers and Trucks by Quarter 7-14
Table 17-2 Average Number of Daily Construction Vehicles by Quarter 7-17
Table 17-3 Construction Vehicle Trips by Hour (Q3 2030) 7-18
Table 17-4 Level 1 Intersection Screening 7-19
Table 17-5 Construction Existing Traffic Levels of Service 7-25
Table 17-6 Construction No-Action Traffic Levels of Service 7-35
Table 17-7 Construction With-Action Traffic Levels of Service – AM Peak Hour 7-48
Table 17-8 Construction With-Action Traffic Level of Service – PM Peak Hour 7-54
Table 17-9 Construction With-Action Parking Demand and Supply 7-61
Table 17-10 Existing Pedestrian Levels of Service 7-62
Table 17-11 No-Action Pedestrian Levels of Service 7-63
Table 17-12 No-Action vs. With-Action Pedestrian Levels of Service 7-64
Table 17-13 Pollutants for Analysis and Averaging Periods 7-66
Table 17-14 Highest Predicted Total Concentrations for Construction Activities 7-72
Table 17-15 Mobile Source Analysis Results 7-72
Table 17-16 Receptors and Land Uses 7-76
Table 17-17 Construction Mobile Source Screening Analysis 7-79
Table 17-18 Sound Levels and Maximum Numbers of the Construction Equipment 7-81
Table 17-19 Background Noise Level (dBA, L_{eq}) 7-82
Table 17-20 Construction Exterior Noise Level 7-83
Table 18-1 Impact and Potential Mitigations Summary 18-2
Table 18-2 Transportation- Traffic Impact Summary 18-3
Table 18-3 Traffic Impact Mitigation Summary 18-5

Table 18-4 Summary of Significantly Impacted Traffic Movements 18-6
Table 18-5 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday AM Peak Hour 18-7
Table 18-6 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday Midday Peak Hour 18-15
Table 18-7 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday PM Peak Hour 18-23
Table 18-8 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Saturday Peak Hour 18-30
Table 18-9 Crosswalk Impact Mitigation Summary 18-39
Table 18-10 Corner Impact Mitigation Summary 18-40
Table 20-1 Receptors with Unmitigable Construction Noise impacts 20-3

List of Figures

Figure No.	Title	Page
Figure ES-1	Site Location Map	ES-4
Figure ES-1	Existing Zoning Map	ES-7
Figure 1-1	Site Location Map	1-4
Figure 1-2	Existing Zoning Map	1-7
Figure 2-1	Land Use Map	2-7
Figure 2-2	Tax Map	2-10
Figure 2-3	Existing Zoning Map	2-12
Figure 2-4	No-Action Developments	2-18
Figure 3-1	Socioeconomic Study Area	3-6
Figure 4-1	Public Schools District 13, Subdistrict 2	4-10
Figure 5-1	Residential Open Space Study Area	5-4
Figure 5-2	Walk-to-a-Park Service Area	5-5
Figure 5-3	Open Space Inventory	5-8
Figure 6-1	Tier 1 and Tier 2 Screening	6-6
Figure 6-2	Tier 3 Screening December 21 Analysis Day	6-10
Figure 6-3	Tier 3 Screening March 21/September 21 Analysis Day	6-11

Figure 6-4 Tier 3 Screening May 6/August 6 Analysis Day 6-12
Figure 6-5 Tier 3 Screening June 21 Analysis Day 6-13
Figure 6-6 University Place – Vegetation Requiring Full or Partial Sunlight 6-18
Figure 6-7 Fort Greene Park – Features Requiring Full or Partial Sunlight 6-20
Figure 6-8 December 21 – 10:30 AM 6-26
Figure 6-9 December 21 – 10:50 AM 6-26
Figure 6-10 December 21 – 11:10 AM 6-27
Figure 6-11 March 21/September 21 – 10:20 AM 6-27
Figure 6-12 March 21/September 21 – 10:40 AM 6-28
Figure 6-13 March 21/September 21 – 11:00 AM 6-28
Figure 6-14 March 21/September 21 – 11:20 AM 6-29
Figure 6-15 May 6/August 6 – 10:50 AM 6-29
Figure 6-16 May 6/August 6 – 11:10 AM 6-30
Figure 6-17 May 6/August 6 – 11:30 AM 6-30
Figure 6-18 June 21 – 10:50 AM 6-31
Figure 6-19 June 21 – 11:10 AM 6-31
Figure 6-20 June 21 – 11:30 AM 6-32
Figure 6-21 December 21 – 2:25 PM 6-34
Figure 6-22 December 21 – 2:45 PM 6-34
Figure 6-23 March 21/September 21 – 3:00 PM 6-35
Figure 6-24 March 21/September 21 – 3:20 PM 6-35
Figure 6-25 March 21/September 21 – 3:40 PM 6-36
Figure 6-26 March 21/September 21 – 4:00 PM 6-36
Figure 6-27 March 21/September 21 – 4:29 PM 6-37
Figure 6-28 May 6/August 6 – 3:30 PM 6-37
Figure 6-29 May 6/August 6 – 3:50 PM 6-38
Figure 6-30 May 6/August 6 – 4:10 PM 6-38
Figure 6-31 May 6/August 6 – 4:30 PM 6-39
Figure 6-32 May 6/August 6 – 5:10 PM 6-41
Figure 6-33 June 21 – 5:57 AM 6-43
Figure 6-34 May 6/August 6 – 7:40 AM 6-45
Figure 6-35 May 6/August 6 – 8:00 AM 6-45

Figure 6-36 May 6/August 6 – 8:20 AM 6-46
Figure 6-37 May 6/August 6 – 8:40 AM 6-46
Figure 6-38 May 6/August 6 – 9:00 AM 6-47
Figure 6-39 June 21 – 8:20 AM 6-47
Figure 6-40 June 21 – 8:40 AM 6-48
Figure 6-41 June 21 – 9:00 AM 6-48
Figure 6-42 June 21 – 9:20 AM 6-49
Figure 6-43 June 21 – 9:40 AM 6-49
Figure 6-44 June 21 – 5:46 PM 6-51
Figure 7-1 Historic Resources Map 7-7
Figure 8-1 Study Area with Photograph Locations 8-6
Figure 8-2 Primary Study Area Building Heights 8-12
Figure 8-3 Primary Study Area Built FAR 8-13
Figure 8-4 Comparative View of the Development Site at DeKalb Avenue and Ashland Place, facing West 8-25
Figure 8-5 Comparative View of the Development Site at DeKalb Avenue and Flatbush Avenue Extension, facing Southeast 8-26
Figure 8-6 Comparative View of the Development Site at Flatbush Avenue Extension and Livingston Street, facing North 8-27
Figure 8-7 Comparative View of the Development Site at Fulton Street, facing Northwest 8-28
Figure 8-8 Comparative View of Williamsburgh Savings Bank at Willoughby Avenue and Ashland Place, facing South 8-29
Figure 8-9 Comparative View of the Development Site at Fort Greene Park, facing West 8-30
Figure 8-10 Comparative View of the Development Site at DeKalb Ave and Fort Greene Park, facing West 8-31
Figure 10-1 Project Location 10-3
Figure 10-2 Subway Service Near the Development Site 10-15
Figure 10-3 Bus Service Near the Development Site 10-16
Figure 10-4 Project-Generated Pedestrian Trips – Weekday AM Peak Hour 10-19
Figure 10-5 Project-Generated Pedestrian Trips – Weekday Midday Peak Hour 10-20
Figure 10-6 Project-Generated Pedestrian Trips – Weekday PM Peak Hour 10-21
Figure 10-7 Project-Generated Pedestrian Trips – Saturday Peak Hour 10-22
Figure 10-8 Project-Generated Vehicle Trips – Weekday AM Peak Hour (North Study Area) 10-25

Figure 10-9 Project-Generated Vehicle Trips – Weekday AM Peak Hour (South Study Area) 10-26
Figure 10-10 Project-Generated Vehicle Trips – Weekday Midday Peak Hour (North Study Area) 10-27
Figure 10-11 Project-Generated Vehicle Trips – Weekday Midday Peak Hour (South Study Area) 10-28
Figure 10-12 Project-Generated Vehicle Trips – Weekday PM Peak Hour (North Study Area) 10-29
Figure 10-13 Project-Generated Vehicle Trips – Weekday PM Peak Hour (South Study Area) 10-30
Figure 10-14 Project-Generated Vehicle Trips – Saturday Peak Hour (North Study Area) 10-31
Figure 10-15 Project-Generated Vehicle Trips – Saturday Peak Hour (South Study Area) 10-32
Figure 10-16 Traffic Study Area 10-35
Figure 10-17 Pedestrian Study Area 10-37
Figure 10-18 Existing Traffic Volumes – Weekday AM Peak Hour (North Study Area) 10-47
Figure 10-19 Existing Traffic Volumes – Weekday AM Peak Hour (South Study Area) 10-48
Figure 10-20 Existing Traffic Volumes – Weekday Midday Peak Hour (North Study Area) 10-49
Figure 10-21 Existing Traffic Volumes – Weekday Midday Peak Hour (South Study Area) 10-50
Figure 10-22 Existing Traffic Volumes – Weekday PM Peak Hour (North Study Area) 10-51
Figure 10-23 Existing Traffic Volumes – Weekday PM Peak Hour (South Study Area) 10-52
Figure 10-24 Existing Traffic Volumes – Saturday Peak Hour (North Study Area) 10-53
Figure 10-25 Existing Traffic Volumes – Saturday Peak Hour (South Study Area) 10-54
Figure 10-26 Off-Street Parking Inventory 10-66
Figure 10-27 No-Action Condition Traffic Volumes – Weekday AM Peak Hour (North Study Area) 10-74
Figure 10-28 No-Action Condition Traffic Volumes – Weekday AM Peak Hour (South Study Area) 10-75
Figure 10-29 No-Action Condition Traffic Volumes – Weekday Midday Peak Hour (North Study Area) 10-76
Figure 10-30 No-Action Condition Traffic Volumes – Weekday Midday Peak Hour (South Study Area) 10-77
Figure 10-31 No-Action Condition Traffic Volumes – Weekday PM Peak Hour (North Study Area) 10-78
Figure 10-32 No-Action Condition Traffic Volumes – Weekday PM Peak Hour (South Study Area) 10-79
Figure 10-33 No-Action Condition Traffic Volumes – Saturday Peak Hour (North Study Area) 10-80
Figure 10-34 No-Action Condition Traffic Volumes – Saturday Peak Hour (South Study Area) 10-81

Figure 10-35 With-Action Condition Traffic Volumes – Weekday AM Peak Hour (North Study Area) 10-99
Figure 10-36 With-Action Condition Traffic Volumes – Weekday AM Peak Hour (South Study Area) 10-100
Figure 10-37 With-Action Condition Traffic Volumes – Weekday Midday Peak Hour (North S tudy Area) 10-101
Figure 10-38 With-Action Condition Traffic Volumes – Weekday Midday Peak Hour (South Study Area) 10-102
Figure 10-39 With-Action Condition Traffic Volumes – Weekday PM Peak Hour (North Study Area) 10-103
Figure 10-40 With-Action Condition Traffic Volumes – Weekday PM Peak Hour (South Study Area) 10-104
Figure 10-41 With-Action Condition Traffic Volumes – Saturday Peak Hour (North Study Area) 10-105
Figure 10-42 With-Action Condition Traffic Volumes – Saturday Peak Hour (South Study Area) 10-106
Figure 12-1 Noise Monitoring Locations 12-15
Figure 12-2 Attenuation Requirement 10-23
Figure 13-1 Three Scopes of GHG Emissions 13-7
Figure 13-2 Embodied Carbon of a Building 13-10
Figure 16-1 Disadvantaged Communities (DACs) Census Tracts 16-4
Figure 16-2 Locations of Traffic Impact and DAC Census Tracts 16-7
Figure 16-3 Locations of Construction Traffic Impacts and DAC Census Tracts 16-9
Figure 16-4 Locations of Construction Noise Impact 16-11
Figure 17-1 Anticipated Construction Schedule 17-11
Figure 17-2 Construction Existing Traffic Volumes – AM Peak Hour (North Study Area) 17-21
Figure 17-3 Construction Existing Traffic Volumes – AM Peak Hour (South Study Area) 17-22
Figure 17-4 Construction Existing Traffic Volumes – PM Peak Hour (North Study Area) 17-23
Figure 17-5 Construction Existing Traffic Volumes – PM Peak Hour (South Study Area) 17-24
Figure 17-6 Construction No-Action Traffic Volumes – AM Peak Hour (North Study Area) 17-31
Figure 17-7 Construction No-Action Traffic Volumes – AM Peak Hour (South Study Area) 17-32
Figure 17-8 Construction No-Action Traffic Volumes – PM Peak Hour (North Study Area) 17-33
Figure 17-9 Construction No-Action Traffic Volumes – PM Peak Hour (South Study Area) 17-34
Figure 17-10 Construction Increment Traffic Volumes – AM Peak Hour (North Study Area) 17-40

Figure 17-11 Construction Increment Traffic Volumes – AM Peak Hour (South Study Area) 17-41
Figure 17-12 Construction Increment Traffic Volumes – PM Peak Hour (North Study Area) 17-42
Figure 17-13 Construction Increment Traffic Volumes – PM Peak Hour (South Study Area) 17-43
Figure 17-14 Construction With-Action Traffic Volumes – AM Peak Hour (North Study Area) ... 17-44
Figure 17-15 Construction With-Action Traffic Volumes – AM Peak Hour (South Study Area) ... 17-45
Figure 17-16 Construction With-Action Traffic Volumes – PM Peak Hour (North Study Area) 17-46
Figure 17-17 Construction With-Action Traffic Volumes – PM Peak Hour (South Study Area) 17-47
Figure 17-18 Construction Noise Receptor Locations 17-77
Figure 17-19 Cumulative Sound Emissions from Stationary Equipment During Each Month 17-80
Figure 20-1 Significant Adverse Construction Noise Impact Locations 20-4

List of Photos

Photo No.	Title	Page
Photo 2-1	View of the Development Site Looking Southwest at the Intersection of Dekalb Avenue	2-8
Photo 2-2	View of the Development Site Looking North Along Fulton Street	2-8
Photo 2-3	View towards the Development Site at the Intersection of Flatbush Avenue and Fulton Street	2-8
Photo 2-4	View Towards the DeKalb Avenue Subway Entry	2-8
Photo 2-5	View from the Development Site at the Intersection of Fulton Street and Flatbush Avenue	2-9
Photo 2-6	View at the Development Site Looking Southeast along Fulton Street	2-9
Photo 2-7	View from the Development Site at the Intersection of Fulton Street and Flatbush Avenue	2-9
Photo 2-8	View from the Development Site at the Intersection of DeKalb Avenue and Hudson Avenue	2-9
Photo 7-1	Dime Savings Bank	7-8
Photo 7-2	Flatbush Avenue	7-8
Photo 7-3	Pioneer Warehouse (33 Flatbush Avenue on the left)	7-8
Photo 8-1	View of the Development Site facing East along Fulton Street	8-8
Photo 8-2	View of the Development Site facing South along Flatbush Avenue Extension	8-8

Photo 8-3 View along Hudson Avenue looking North 8-8
Photo 8-4 Facing North along Livingston Street 8-9
Photo 8-5 Facing South along Flatbush Avenue Extension 8-9
Photo 8-6 View West along Fulton Street 8-10
Photo 8-7 View Southwest along DeKalb Avenue 8-10
Photo 8-8 Facing West along Livingston Street 8-14
Photo 8-9 Facing Northwest along Flatbush Avenue 8-14
Photo 8-10 View of the Brooklyn Tower facing North along Bond Street 8-14
Photo 8-11 Facing Southeast along Fulton Street 8-14
Photo 8-12 View of Long Island University facing Southeast from University Park 8-15
Photo 8-13 Facing Northeast on South Elliot Place 8-17
Photo 8-14 Facing Northwest along Atlantic Avenue 8-17
Photo 8-15 View East along Willoughby Street 8-18
Photo 8-16 View Northeast along Ashland Place 8-18
Photo 8-17 View of Williamsburgh Savings Bank at Willoughby Avenue and Ashland Place, facing South 8-19
Photo 8-18 View from Fort Greene Park Toward the Development Site, facing West 8-20

Executive Summary

Introduction

The New York City Department of Housing Preservation and Development (HPD), as a co-applicant, has prepared this Environmental Impact Statement (EIS) pursuant to the City Environmental Quality Review (CEQR) process for the proposed 395 Flatbush Avenue Extension Redevelopment project (the Proposed Project) in Downtown Brooklyn Neighborhood, Community District (CD) 2.

HPD, in conjunction with the New York City Department of Health and Mental Hygiene (DOHMH) and the Department of Citywide Administrative Services (DCAS) (each a co-applicant, and collectively, the Applicant) is seeking approval for a zoning map amendment, zoning text amendments, disposition of City-owned property, site selection and acquisition of real property interest, certification to establish and facilitate a transit volume, and an amendment to the Brooklyn Center Urban Renewal Plan (URP) (collectively, the Proposed Actions). The Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with an approximately 1,544,875-gross-square-foot (gsf) (1,075,100 zoning square foot [zsf], 21.87 floor area ratio [FAR]), 72-story (840-foot-tall) mixed-use building (the Proposed Project). The Proposed Project would include 1,233,950 gsf (933,820 zsf, 19.0 FAR) of residential floor area and 209,770 gsf (141,280 zsf, 2.87 FAR) of non-residential floor area. The non-residential floor area would comprise 128,255 gsf of retail space and 81,515 gsf for commercial office and/or community facility use that may be dedicated for future City use. Additionally, the Proposed Project would provide 4,475 sf open space available to the public, along with other public realm improvements detailed below.

The Proposed Project would introduce 1,263 dwelling units, of which 325 to 379 would be designated as income-restricted, rent-stabilized, and permanently affordable for households with incomes at an average of 60 or 80 percent area median income (AMI), pursuant to applicable requirements of the City's Mandatory Inclusionary Housing (MIH) Program option 1 or 2, respectively.

The Proposed Project would also introduce public realm improvements, including approximately 4,745 sf of open space available to the public on the southern portion of the Development Site, an expanded sidewalk along the Development Site's Flatbush Avenue Extension frontage, and surface

improvements around the existing DeKalb Avenue subway station entrance on the Development Site. Additionally, the Proposed Project would also include private amenity spaces for the building's residents, consisting of no less than 28,000 sf of active recreational space (including but not limited to gym and play areas) and 5,000 sf of passive recreational space (including but not limited to lounge areas, a roof deck, and dog run). Such amenities would be located throughout the building, including potential use of terrace and rooftop areas.

This Executive Summary provides a detailed description of Development Site, Proposed Actions, Proposed Project, Project Purpose and Need and, and the public review process for the proposed action. It also summarizes the Environmental Impact Statement (EIS) analyses that examine the potential for the proposed action to result in significant adverse environmental impacts in any technical area of the 2021 City Environmental Quality Review (CEQR) Technical Manual.

Development Site

The Development Site (Brooklyn Block 2093, Lot 1) is owned by the City of New York, and has a lot area of approximately 49,153 sf.[1] As shown in **Figure ES-1**, the Development Site is bounded by DeKalb Avenue to the north with approximately 193 feet of frontage, Fulton Street to the south with approximately 130 feet of frontage, Hudson Avenue to the east with approximately 365 feet of frontage, and Flatbush Avenue Extension to the west with approximately 334 feet of frontage.

The Development Site, subject to a long-term lease with Fulton DeKalb Associates L.P., is currently improved with a seven-story, 375,108 gsf (307,949 zsf) commercial building with 293,370 gsf (274,431 zsf) of commercial office space, 35,548 gsf (33,518 zsf) of ground floor retail, and 46,190 gsf of below-grade parking (which accommodates 140 public parking spaces). Constructed in 1974, the existing building currently houses a Verizon call center in its office space. The ground floor retail space is primarily tenanted with local retail chains. All current leases, which are between Fulton DeKalb Associates, L. P. and sublessee, are expected to terminate before 2028, and all tenants will vacate the building by January 1, 2028.

An entrance to the DeKalb Avenue subway station (B/Q/R lines) is located at the northwest corner of the Development Site. This entrance includes a street elevator and two staircases that lead out to the plaza entrance. Additionally, there are three curb cuts located along the Hudson Avenue frontage: two of which serve the existing building's loading areas, with the third curb cut provides access to a public parking garage. The two for loading purposes measure approximately 20 feet and 60 feet in width each and are separated by approximately 50 feet, whereas the curb-cut for parking garage access measures approximately 40 feet in width. An existing Real Estate of Utility Companies (REUC) easement granted by Metropolitan Transit Authority (MTA) (REUC No. B119-E271) extends diagonally west to east in the Development Site which restricts development that exceeds a depth of approximately six feet below grade where the MTA subway lines are situated.

The rezoning area is coterminous with the centerline of the streets surrounding the Development Site, which is in a C6-4 zoning district within the Special Downtown Brooklyn District (DB), which permits a maximum commercial FAR of 10.0 and a maximum residential FAR of 10.0 which can be increased to 12.0 FAR in MIH areas or other qualifying affordable or senior housing. The Development Site is also within the Brooklyn Center Urban Renewal Area (URA) which was originally

[1] The lot size is based on a site survey dated December 4, 2024.

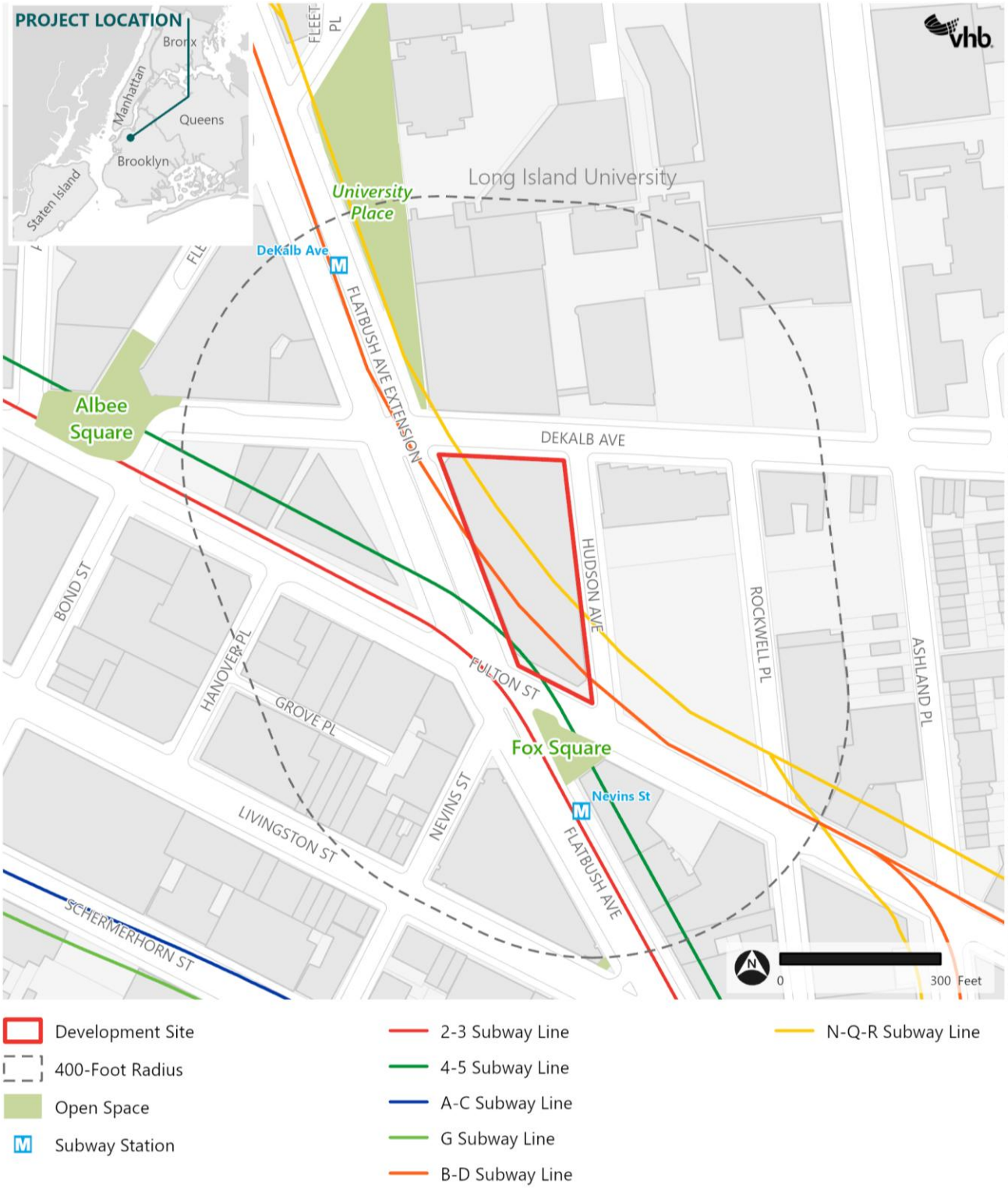
established in 1970 and remains in effect until July 2044.[2] The goals of the Brooklyn Center URP are to develop the Brooklyn Center URA in a comprehensive manner, removing blight and maximizing appropriate land uses such as high-quality housing, community facilities and retail uses. The URP also aims to strengthen the tax base of the City by encouraging development and employment opportunities in the Area. There are a total of 28 sites within the Brooklyn Center URA that have been or would be acquired by the City for redevelopment pursuant to the Fifth Amended Brooklyn Center URP, the majority of which are designated for commercial, residential, and community facility uses, with the remainder being preserved for public space uses which also permit below-grade parking and accessory uses.[3] The Development Site is identified as Site 2 in the Brooklyn Center URA. In addition, the Development Site lies within the Inner Transit Zone, a FRESH Zone, and the MetroTech Business Improvement District (BID).

The Development Site's western frontage, Flatbush Avenue Extension, is a 120-foot-wide principle arterial road that runs north-south through Brooklyn with multiple lanes of traffic, pedestrian islands, and street parking on the east side. Fulton Street, the Development Site's southern frontage, is an 80-foot-wide principle arterial and a major east-west commercial street with four lanes of traffic and bus lanes. DeKalb Avenue, the Development Site's northern frontage, is a 70-foot-wide principle arterial road with two lanes of westbound traffic, a bike lane, and landscaped sidewalks. Hudson Avenue, the Development Site's eastern frontage, is a 50-foot-wide roadway with one northbound lane (with the exception of a small northern segment providing two-way traffic and southbound traffic access to the parking garage) with approximately 13-foot-wide sidewalks and three curb cuts that provide access to the building's loading and parking areas (as is described above).

[2] Fifth Amended Urban Renewal Plan of Brooklyn Center Urban Renewal Area, The City of New York Department of Housing Preservation and Development. Published in September; Revised in April 2004.

[3] ULURP No. C040173 HUK and N040176 HGK

Figure ES-1 Site Location Map



Source: NYC DCP (2024); NYC Parks (2024)

Neighborhood Context

The Development Site is situated in the center of the DB, New York City's third-largest Central Business District (CBD). Approved in 2004, the DB (ULURP No. N 040171 ZMK) provides special height and setback regulations and urban design guidelines which has allowed for some of the largest and highest density developments in the City while promoting and supporting the continued growth of Downtown Brooklyn as a unique mixed-use area. The Development Site was identified in the Downtown Brooklyn Development EIS (CEQR No. 03DME016K) as Projected Development Site S. Some recent notable developments nearby and within the DB district include the 74-story, 1,066-foot-tall Brooklyn Tower at 9 DeKalb Avenue, constructed in 2022; a 43-story, 497-foot residential tower with ground floor retail at 540 Fulton Street, constructed in 2023; a 52-story, 575-foot-tall, mixed-use residential commercial building at 589 Fulton Street, constructed in 2023); and the 27-story, 268-foot-tall Brooklyn Grove at 10 Nevins Street (constructed in 2019). City Point, a mixed-use multi-building residential and commercial complex, just to the north of the Development Site, was completed in 2020, featuring three towers that vary from 19 stories to 68 stories, and from 361 feet to 720 feet in height. Other nearby developments include The Hub (constructed in 2020), a 50-story, 577-foot-tall mixed-use residential commercial building at 333 Schermerhorn Street, and The Toren (constructed in 2009), a 38-story, 399-foot-tall mixed-use residential commercial building at 150 Myrtle Avenue.

As a result of the establishment of the DB and related rezonings, the vicinity of the Development Site (within a radius of 400 feet) has become a growing mixed-use area with diverse land uses, including residential, commercial, and mixed residential and commercial buildings. Institutional uses, hotels, and community facility uses are also nearby. The area to the west includes Fulton Mall regional shopping corridor, the 5.5 million-square-foot MetroTech commercial and academic campus, and the 1.9 million-square-foot City Point mixed-use development and shopping center. To the north are two full-block institutional campuses, including the Downtown Brooklyn campus of the Long Island University and the Brooklyn Hospital. To the east and southeast is the area known as the Brooklyn Cultural District, with more than 50 cultural institutions anchored by several Brooklyn Academy of Music theaters. This area includes the Brooklyn Academy of Music Historic District, designated in 1978 (LP-01003).

As shown in **Figure ES-2**, the vicinity of the Development Site is primarily within C6-4, C6-4.5 and C6-9 zoning districts within the DB, which all have the residential district equivalent of an R10 district. R10 districts permit up to 12.0 Residential FAR in MIH areas or other qualifying affordable or senior housing. Additionally, the area to the northeast of the Development Site is in an R6 district, which permits a maximum residential FAR of 3.9 in MIH areas or other qualifying affordable or senior housing. The majority of the surrounding area is also within the DB. The current DB has two subdistricts - Atlantic Avenue and Fulton Mall. The Atlantic Avenue subdistrict has bulk and use regulations intended to preserve the scale and character of Atlantic Avenue, including certain architectural features, while Fulton Mall subdistrict's bulk and use regulations are intended to create an attractive shopping environment within the Fulton Mall subdistrict. Fulton Mall subdistrict is mapped directly west of the Development Site.

The study area surrounding the Development Site is entirely located within the boundary of the Brooklyn Center URA. Additionally, several sites within the study area were identified by the Brooklyn Center URA as being properties that either are or are to be acquired by the City for urban renewal, including Block 162, Lots 1, 3, 5, and 6 (Site 1); Block 161, Lots 47 and 50 (Site 3A); Block 149, Lots 14,

15, 17, 19, 22-25, and 50 (Site 4); Block 149, Lots 26, 28, 30-34 (Site 4A); Block 2106, Lots 1, 4-7, 9, 16, 19, 24, 26, 29, 35, and 40 (Site 5); and Block 2080, Lots 1, 5, and 13 (Site 9).

The surrounding area is exceptionally well-served by public transportation. In addition to the DeKalb Avenue subway station (B/Q/R lines) entrance within the Development Site, the Nevins Street subway station (2/3/4/5 lines) is just south of the Development Site. Less than a half mile away are the Fulton Street subway station (G line) and the Atlantic Terminal/Barclay Center subway station (B/Q lines), along with the Atlantic Terminal Long Island Rail Road (LIRR) station. Additionally, MTA New York City Transit (NYCT) operates several bus routes in the vicinity, including the B25, B26, B38 B41, B45, B52, B67, B69, and B103 buses. A dedicated bus lane runs along Fulton Street, adjacent to the Development Site. A CitiBike station with 71 docking stations is also located along the Development Site's northern frontage facing DeKalb Avenue. Within the surrounding area, there are five CitiBike docks and bike lanes on Asheland Place, DeKalb Avenue, Bond Street, Schermerhorn Street, and Lafayette Avenue.

Figure ES-2 Existing Zoning Map



Source: NYC DCP (2024); NYC Parks (2024)

Proposed Actions

The Applicant is seeking the following actions that include discretionary land use approvals that are subject to the City's Uniform Land Use Review Procedure (ULURP), Section 200 of the City Charter and City 0Environmental Quality Review (CEQR):

Actions proposed by HPD:

- A Zoning Map Amendment to rezone the Development Site (and extending to the centerline of the street) from a C6-4 district to a C6-12 district (Project Area);
- Zoning text amendments to the Zoning Resolution of the City of New York (ZR) to:
  - Amend the DB (ZR 101-00 et. seq.) as following:
    - Modify ZR 101-00 et. seq. to establish a C6-12 district and modify ZR 101-21 to permit a maximum permitted FAR of 19.0 for residential and 23.0 for mixed-use developments on lots that are greater than 30,000 sf with at least one full block street frontage or occupy an entire block.
    - Modify ZR 101-222 and ZR 101-224 to modify setback requirements for large qualifying lots that have below grade transit infrastructure occupying more than 30 percent of the lot.
    - Modify ZR 101-41 to provide exemptions from the street wall location and continuity requirements for lots meeting a certain lot size threshold that provide open space.
  - Amend Appendix F: Mandatory Inclusionary Housing Areas and Former Inclusionary Housing Designated Areas for Brooklyn Community District 2 to establish the Project Area as an MIH area, Options 1 and 2;
- An Amendment to the Brooklyn Center URP;
- Chairperson Certification pursuant to ZR 66-21(c) to establish and facilitate a transit volume on the Development Site as determined by the Metropolitan Transit Authority (MTA).

Action proposed by DCAS and HPD:

- Disposition approval of City-owned property, Brooklyn Block 2093, Lot 1

Action proposed by DCAS and DOHMH:

- Combined Site Selection and Acquisition approval of real property interest of Brooklyn Block 2093, Lot 1

In conjunction with the Proposed Actions, additional approvals are being sought at the Public Design Commission (PDC) to facilitate certain elements of the Proposed Project. After PDC approval is obtained, the Applicant intends to seek a compliance determination from the Department of City Planning for the proposed Publicly Accessible Open Space signage pursuant to Chapter 11 of Title 62 of the Rules of the City of New York (POPS Rules).

Proposed Project

The Proposed Actions would facilitate the redevelopment of the Development Site (Brooklyn Block 2093, Lot 1). The existing building on the Development Site would be demolished (with the exception of several columns located over the MTA easement, which will be retained) and redeveloped with a 72-story (840-foot-tall, including an allowance for 40 feet of mechanical bulkhead), mixed-use

building. The existing entrance on the Development Site to the DeKalb Avenue subway station (B/Q/R lines) would be maintained. The proposed building would consist of approximately 1,544,875 gsf (1,075,100 zsf, 21.9 FAR) of which 1,233,950 gsf (933,820 zsf, 19.0 FAR) would be residential floor area and 209,770 gsf (141,280 zsf, 2.9 FAR) would be non-residential floor area designated for commercial (office and retail) and/or community facility uses (the Proposed Project). A total of 128,255 gsf (65,915 zsf) of retail and/or community facility space would be provided in in the subcellar, cellar, first, and second floors, with 81,515 gsf (75,365 zsf) of commercial office and/or community facility space that may be dedicated for future city use on the first, second, third and fourth floors. The fifth floor, 23rd, and 65th floors, as well as the roof are planned for residential amenities, and residential units would be provided on the remainder of floors sixth and above. Additionally, the Proposed Project would include 101,155 gsf of mechanical space primarily located in the cellar and on the fifth, 23rd, 42nd, and 65th floors.

The Proposed Project would introduce 1,263 apartments, of which 325 to 379 units would be designated as income-restricted, rent stabilized, and permanently affordable for households with incomes at an average of 60 percent or 80 percent AMI pursuant to applicable requirements of the City's MIH Program option 1 or 2, respectively. Similar to existing conditions, the Proposed Project's loading berths are proposed to be located along the Development Site's Hudson Avenue frontage. Access to the Proposed Project's office and residential uses would be located along the site's DeKalb Avenue frontage, and the Proposed Project's retail uses would be accessed along DeKalb Avenue, Flatbush Avenue, Fulton Street, and portions of Hudson Avenue.

The building's podium would have a maximum base height of 80 feet with the tower expected to reach a height of 800 feet, with another 40 feet allowance for the building bulkhead, for a total height of 840 feet.

The Proposed Project would also include a number of public realm improvements, including:

- An approximately 4,745 sf publicly accessible open space on the southern portion of the Development Site;
- An expanded sidewalk along Flatbush Avenue Extension;
- Improvements to the surface area around the DeKalb Avenue subway station on the Development Site.

The Proposed Project would also include private amenity spaces for the building's residents, consisting of no less than 28,000 sf of active recreational space (including but not limited to gym and play areas) and 5,000 sf of passive recreational space (including but not limited to lounge areas, a roof deck, and dog run). Such amenities would be located throughout the building, including potential use of terrace and rooftop areas.

Project Purpose and Need

The Development Site, which is City-owned, is located in the DB, New York City's third-largest Central Business District (CBD). Downtown Brooklyn is a unique mixed-use area with some of the tallest and highest density developments—both residential and commercial—in the city. The Proposed Project would revitalize a City-owned land that currently houses underperforming commercial uses into a vibrant mixed-use development. This transformation will generate new housing opportunities, including permanently affordable units, alongside state-of-the-art spaces for commercial (office and retail) and/or community facility uses, providing additional job opportunities for nearby residents and

benefitting the surrounding neighborhoods. The Proposed Project strategically capitalizes the Development Site's proximity to various public transportation options and the neighborhood's existing mixed-use land use character.

Given the existing housing crisis in New York City and the capacity of the Development Site to support new residential and commercial and/or community facility uses, the Proposed Actions would result in more appropriate land uses and density on the Development Site in a transit-rich area of Downtown Brooklyn, compared to the conditions absent the Proposed Actions. Development of the Proposed Project would enliven the pedestrian experience at the Development Site by introducing residential uses (including permanently affordable residential units) and would be compatible with the surrounding neighborhood and CBD by preserving commercial office and retail uses.

The additional affordable housing units generated by the Proposed Actions would also align with the goals identified in the City's *Housing Our Neighbors: A Blueprint for Housing and Homelessness* report; more specifically, the Blueprint's goal to redevelop underutilized government-owned land. Additionally, City of Yes for Housing Opportunity, a city-wide zoning text amendment aimed at addressing the City's housing crisis by increasing housing availability across all neighborhoods, was adopted in December 2024. The initiative enhances flexibility and incentives for diverse and affordable housing types while reducing regulatory hurdles for development, including the establishment of new higher density zoning districts. By introducing residential units, including permanently affordable units on the Development Site where none currently exist, the Proposed Project would address and further the City's goals and initiatives aimed at responding to the historic housing shortage.

In addition to its residential offerings, the Proposed Project would also provide non-residential uses benefiting the neighborhood. A site selection and acquisition combined action is proposed to facilitate the relocation of a clinic and office space for DOHMH. By incorporating neighborhood-serving retail and commercial office and/or community facility spaces, the Proposed Project would align with the established character of the Fulton Mall corridor, extending its existing dynamic mixed-use activity. This uniquely transit-rich area is well-suited for a mix of retail establishments which would not only support the area's existing commercial strength but also encourage further economic growth and accessibility, providing benefits to existing and future residents and visitors.

Furthermore, the Proposed Actions would add to the neighborhood's public amenities by providing approximately 4,745 sf of unenclosed publicly accessible open space located along Fulton Street on the southern end of the Development Site and a sidewalk widening along the Development Site's Flatbush Avenue Extension frontage.

The Proposed Actions are an appropriate reflection of the need to revitalize the site and existing building to provide much needed housing and commercial development consistent with the current housing goals of the City as well as the goals established by the DB. Additionally, the Proposed Project's site planning incorporates a balanced design approach by providing ground floor retail alongside a large publicly accessible open space along the entire Fulton Street frontage to provide for much needed open space in the neighborhood and active streetscape for pedestrians.

The combination of affordable housing and public open space access facilitated by the Proposed Actions would support the "Thriving Neighborhoods" initiative of *OneNYC 2050*, which aims to foster communities that have safe and affordable housing and are well-served by parks, cultural resources, and shared spaces. The Proposed Project seeks to transform an underutilized site in Downtown Brooklyn into a mixed-use, vibrant community hub, that aims to provide much-needed affordable housing, commercial amenities, and public open space.

Analysis Framework

The *2021 City Environmental Quality Review (CEQR) Technical Manual* will serve as guidance on the methodologies and impact criteria for evaluating the potential environmental effects of the Proposed Project that would result from the Proposed Actions. If the Proposed Actions allow for a range of possible scenarios that are considered reasonable and likely, the scenario with the worst environmental consequences is chosen for CEQR analysis. This is considered to be the reasonable worst-case development scenario (RWCDS), the use of which ensures that, regardless of which scenario actually occurs, its impacts would be no worse than those considered in the environmental review. The CEQR assessment examines the incremental differences between the RWCDS of the future without the Proposed Actions in place (No-Action condition) and the future with the Proposed Actions in place and the associated development operation (With-Action condition).

For the purpose of the environmental analyses, the No-Action condition represents the future absent the Proposed Actions and serves as the baseline by which the Proposed Project (or With-Action condition) is compared to determine the potential for significant environment impacts. The difference between the No-Action and With-Action conditions represents the increment to be analyzed in the CEQR process.

Analysis (Build) Year

The analysis year for the Proposed Project is 2032. It is anticipated that the Proposed Project would be completed and occupied in 2032 following completion of the land use review process in 2026, expiration of all existing tenant leases by 2028, and approximately 60 months of construction.

Future No-Action Condition

In the No-Action condition, it is expected that the existing seven-story commercial office and retail building currently occupying the Development Site would remain as under existing conditions and be fully occupied (see **Table ES-1**).[4]

Future With-Action Condition

In the future With-Action condition, the Applicant would construct the Proposed Project on the Development Site, as described previously.

However, for conservative analysis purposes, the With-Action condition assumes a development that would include slightly more commercial office and retail spaces that would maximize the permitted 23.0 total FAR (including 19.0 residential FAR). As such, under With-Action condition, the Development Site would be redeveloped with a 72-story (840-foot-tall, including bulkhead),1,552,605-gsf (1,130,388 zsf; 23 FAR) mixed-use building, including 1,233,950 gsf (933,820 zsf; 19.0 FAR) of residential space and 217,500 gsf (196,568 zsf) of non-residential space. The non-residential space would include 88,500 gsf of commercial office space and/or community facility space that may be dedicated for future city use, and 129,000 gsf of commercial retail space (see

[4] The Development Site's maximum permitted residential FAR under the existing C6-4 (DB) district is 12.0 (607,146 zsf) in MIH areas or other affordable or senior housing. Considering that the existing lot coverage is over 50 percent and that the remaining FAR is less than 50 percent of maximum allowed FAR, the Development Site is unlikely to be redeveloped within the underlying zoning district (C6-4 (DB)). Additionally, as the existing floor plates are unsuitable for residential conversion, the existing commercial building is expected to remain unchanged and would continue to function as an office building with ground-floor retail.

Table ES-1).[5] Like the Proposed Project, development under the With-Action condition would include approximately 101,155 gsf of mechanical space on the cellar, fifth, 23rd, 42nd, and 65th floors. No accessory parking spaces would be provided in the With-Action condition. The With-Action condition will include 1,263 residential units, of which 253 to 379[6] units would be permanently income-restricted, with an income requirement at an average of 60 to 80 percent of area median income (AMI), pursuant to MIH Options 1 and 2.

An approximately 4,745 sf publicly accessible open space would be provided in the With-Action condition.

Increment for Analysis

The program details under the No-Action condition, the With-Action condition, and increments over the No-Action condition for the Proposed Project are presented in **Table ES-1**.

Table ES-1 Future No-Action and With-Action Comparison

		No-Action Condition	With-Action Condition	Increment
Commercial Office or Community Facility (GSF)		293,370	88,500[2]	-204,870
Commercial Retail (GSF)		35,548	129,000	+93,452
Residential	GSF	0	1,233,950	+1,233,950
	Dwelling Units (DUs)	0	1,263	+1,263
	Affordable DUs[1]	*0*	*253 to 379*	*+253 to 379*
Parking (SF)		46,190	0	-46,190
Parking (Spaces)		*140*	*0*	*-140*
TOTAL Proposed Project GSF		**375,108**	**1,552,605[3]**	**+ 1,177,497**
Publicly Accessible Open Space SF		0	4,745	+4,745
Residential Population		0	2,564	+2,564
Non-Residential Population		1,283	792	-491

Notes
[1] For CEQR analysis purposes, affordable units are identified as those at or below 80 percent of AMI.
[2] As described above, while the future non-residential tenants are not known at this time, they could include community facility tenants; the use that would generate the most conservative result would be used in any given technical area.
[3] Total floor area for the Proposed Project includes 101,155 gsf of mechanical space.

Principal Conclusions of Environmental Analysis

The potential for the Proposed Actions to result in significant adverse impacts is evaluated in Chapters 2 through 17 of this EIS. The Proposed Actions would not result in significant adverse

[5] The future non-residential tenants are not known at this time, they could include community facility tenants; the use that would generate the most conservative result would be used in any given technical area.

[6] The number of affordable DUs reflects the possible range of affordability under MIH Option 1 (25 percent of residential floor area affordable to households at an average of 60 percent AMI), Option 2 (30 percent of residential floor area at an average of 80 percent AMI), and Option 3 (20 percent of residential floor area at an average of 40 percent AMI). Where applicable, the MIH Option that reflects the RWCDS for any given technical area will be analyzed to ensure a conservative analysis.

impacts in the following technical areas: land use, zoning, or public policy, socioeconomics, community facilities or public services, open space, shadows, historic or cultural resources, urban design or visual resources, hazardous materials, air quality, noise, greenhouse gas emissions, public health, neighborhood character, or disadvantaged communities.

However, the Proposed Actions have the potential to result in significant adverse impacts to transportation (traffic and pedestrian) and construction (traffic, pedestrian, and noise) (see **Table ES-2**):

Table ES-2 Summary of Impacts[1]

Technical Area	Summary of Impacts	Mitigation Measure(s) if Applicable[2]
Transportation – Traffic	› Seven intersections during the Weekday AM hours; › Five intersections during the midday hours; › Six intersections during the Weekday PM hours; and › Ten intersections during the Saturday peak hours.	Partially mitigable with standard traffic capacity improvements that are typically implemented by NYC DOT
Transportation – Pedestrian	› One crosswalk element during the weekday AM and PM peak hours and two crosswalk elements during the Saturday peak hour.	Mitigable, implementation of the pedestrian mitigation measures is within the jurisdiction of NYC DOT.
Construction – Traffic	› Temporary impacts at nine intersections during the AM construction peak hour of 6 AM to 7 AM; › Temporary impact at three intersections during the PM construction peak hour of 3PM to 4 PM.	Partially mitigable with standard traffic capacity improvements that are typically implemented by NYC DOT
Construction – Pedestrian	› Temporary impacts along the north sidewalk of DeKalb Avenue between Flatbush Avenue Extension and Hudson Avenue during the weekday AM and PM peak hours (6 AM to 7 AM, 3 PM to 4 PM) during the construction	No mitigation identified, and could remain an unavoidable adverse impact during the construction
Construction – Noise	› Temporary impacts at five receptors	No mitigation identified, and could remain an unavoidable adverse impact during the construction

Notes:

[1] As detailed below, all mitigations for transportation related impacts (operation and construction) are studied and reviewed by NYC DOT

[2] The potential for additional mitigation will be considered further between the Draft EIS and Final EIS, in coordination with the lead agency

Land Use, Zoning, and Public Policy

The analysis presented in this chapter concludes that the Proposed Actions would not result in significant adverse impacts on land use, zoning, or public policy.

Land Use and Zoning

The Proposed Actions would result in an expansion of existing land uses in the study area and the Proposed C6-12 zoning district would reflect appropriately the unique nature of the Development Site encompassing an entire block situated in a transit-rich area and surrounded by other high-density mixed-use buildings in the study area. The permitted bulk and height under the Proposed Actions would help revitalize the Development Site to increase housing capacity, furthering the current housing goals of New York City as well as the goals of the DB. Alongside its residential offerings, the Proposed Project would also provide non-residential uses, such as local retail space, office space, and/or community facility space serving the local community, enhancing the pedestrian experience, and serving the goals of the DB. The Proposed Actions would also enable much needed public realm improvements, such as an open space that would be made available to the public. The mix of ground-floor retail and open space is expected to continue to support the area's existing commercial activities while improving the pedestrian experience, benefiting area residents and visitors. The Proposed Actions would not conflict with the current surrounding zoning or existing uses. Rather, the Proposed Actions would facilitate developments that would integrate well with this transit-rich area and the existing zoning framework within the study area. Therefore, the Proposed Actions would not adversely affect surrounding land uses, zoning, or public policy (see below).

Public Policy

The Proposed Actions would be supportive of several New York City policies, including the goals set forth in the *Brooklyn Center Urban Renewal Plan (URP), Brooklyn Cultural District, Business Improvement Districts, Housing Our Neighbors: A Blueprint for Housing and Homelessness; OneNYC 2050, Where We Live NYC/Fair Housing Together* Plan, and City of Yes initiatives (including City of Yes for Housing Opportunity, Economic Opportunity, and Carbon Neutrality). The Proposed Actions would facilitate more housing development, including permanently affordable housing, along with other local retail uses, commercial offices, and/or community facility space serving the local community and enhancing the pedestrian experience within the Downtown Brooklyn neighborhood and DB. Additionally, the redevelopment of the Development Site offers new retail opportunities at commercial corridors, supporting the recovery of local retail. The Proposed Project would also seek to incorporate a multitude of sustainable measures and integrate high-performance building strategies, furthering the City's sustainability goal.

Socioeconomic Conditions

The analysis presented in this chapter concludes that the Proposed Actions would not result in significant adverse impacts on socioeconomic conditions.

The Proposed Actions would introduce a residential population of approximately 2,564 persons at the Development Site. Since development under the Proposed Actions would increase the residential population of the quarter-mile study area by 9.1 percent compared to the 2032 No-Action condition (an increase greater than 5 percent), a half-mile study area was used for the assessment of indirect residential displacement, per *CEQR Technical Manual* guidance.

The 2020 residential population of the half-mile study area was 52,159 persons per the 2020 US Census (adjusted to 57,220 when taking into account development since 2020), while the 2022 median household income was $132,541 (per the 2018-2022 American Community Survey [ACS] 5-year estimates), higher than that of Brooklyn and New York City as a whole. The analysis found that

the third quartile of market-rate rents in the study area are roughly $3,800 for studios, $4,900 for one-bedroom units, $7,000 for two-bedroom units, and $12,100 for three-bedroom units.

In the No-Action condition, anticipated residential development projects would increase the study-area population to 72,638. In the future With-Action conditions, the Proposed Actions would result in 2,564 residents being added to the study area population, further increasing the population of the half-mile study area to 75,202, a 3.5-percent increase compared to the No-Action condition. MIH Option 2 is assumed for the purpose of a conservative analysis because it would result in a residential population with a higher average household income compared to Options 1 or 3 when calculated using the methodology in the *CEQR Technical Manual*. Under Option 2, 30 percent of residential floor area (equivalent to approximately 379 DUs) would be set aside for residents with incomes averaging 80 percent Area Median Income (AMI). Anticipated affordable rents and average household size were used to estimate the average household income for the residents of the affordable units at $99,812, while observed third-quartile market rents and unit sizes in the study area were used to estimate the average household income for residents of the market-rate units at $222,782. The weighted average income for residents of all incremental units was estimated to be $185,881. This is higher than the average household income for the study area of $132,541.

Though the estimated weighted average incomes of the new population are expected to be higher than the average incomes of the study area populations, the estimated new population would represent an increase of less than 5 percent over No-Action conditions (approximately 3.5 percent). This level of population increase would not be expected to introduce or accelerate a trend leading to the displacement of vulnerable populations or create a significant indirect residential displacement adverse impact. Therefore, the Proposed Actions would have no significant adverse impacts related to socioeconomic conditions.

Community Facilities and Services

The Proposed Actions were considered for their potential to directly or indirectly affect existing community facilities, including publicly supported early childhood programs, libraries, public schools, healthcare facilities, and fire and police protection services. The Proposed Actions would not result in direct effects to community facilities. Based on *CEQR Technical Manual* thresholds, the Proposed Actions did not warrant analysis of public high schools, libraries, healthcare facilities, or fire and police protection services.

Early Childhood Programs

Based on the multipliers for estimating the number of children eligible for early childhood programs according to the New York City Department of Education (DOE), the Proposed Actions are anticipated to generate the need for approximately 68 childcare slots, and a detailed analysis was undertaken. Based on a detailed analysis, early childhood programs in the study area would be under capacity with a surplus of 744 slots in the With-Action condition. The utilization rate would be approximately 66 percent, and the change in utilization rate would be approximately 4.2 percent in comparison to the No-Action condition. Since the collective utilization rate for early childhood programs would be less than 100 percent in the future with the Proposed Actions, the Proposed Actions would not result in a significant adverse impact on publicly funded early childhood programs, and no further analysis is warranted.

Public Schools

The Proposed Actions would result in over 50 elementary and intermediate school students, indicating that further analysis is warranted. However, the Proposed Actions would not introduce 150 high school students, indicating that no impact to high schools would occur. Following the methodologies in the *CEQR Technical Manual*, the study area for the analysis of elementary and intermediate schools is Community School District13, Subdistrict 2 in which the Development Site is located. Under the With-Action condition, the utilization rate of elementary and intermediate schools would not exceed 100 percent, nor would the Proposed Actions generate more than 100 elementary- or intermediate-school aged students. Therefore, based on *CEQR Technical Manual* guidelines, the Proposed Actions would not result in significant adverse impacts to elementary and intermediate schools.

Open Space

The analysis presented in this chapter concludes that the Proposed Actions would not result in significant adverse impacts on open space.

According to the *CEQR Technical Manual*, a project may have a significant adverse indirect impact on open space resources if it significantly reduces the open space ratio (OSR), thereby overburdening existing facilities or exacerbating a deficiency in open space. Given that the Proposed Actions are anticipated to introduce an increment of approximately 2,527 residents over the No-Action condition, an open space analysis for a residential half-mile study area was conducted in accordance with *CEQR Technical Manual* guidelines.

In the 2032 analysis year, the active OSR would decrease 3.387 percent from 0.068 in the No-Action condition to 0.066 in the With-Action condition. The passive OSR would decrease 3.137 percent from 0.552 in the No-Action condition to 0.535 in the With-Action condition. The total OSR would decrease 3.165 percent from 0.620 in the No-Action condition to 0.600 in the With-Action condition. Therefore, based on CEQR's quantitative thresholds, the Proposed Actions would result in a significant adverse quantitative impact. However, the Development Site is located in a Walk-to-a-Park Service Area and would continue to be served by nearby open space resources not accounted for in the quantitative assessment. Additionally, the Proposed Actions would introduce 4,745 sf of new open space available to the public. Furthermore, the Proposed Actions would introduce private amenity space for the building's residents, including no less than 28,000 sf of private active recreational space and 5,000 sf of private passive recreational space. These amenities would help to absorb a portion of the incremental demand on active and passive open spaces within the study area. Therefore, considering both the quantitative and qualitative assessment, the Proposed Actions would not result in significant adverse impact to open space.

In terms of the potential for direct impacts on open space resources (from air quality, noise, or shadows), the Proposed Actions would not result in direct impacts (see **Chapter 6, Shadows**; **Chapter 13, Air Quality**; and **Chapter 15, Noise**; for additional information).

Shadows

The analysis presented in this chapter concludes that the Proposed Actions would not result in significant adverse shadows impacts.

A detailed shadows analysis was conducted based on the methodology set forth in the *CEQR Technical Manual* and determined that the Proposed Actions would not result in a significant adverse

impact related to shadows. Because future development on the Development Site is expected to exceed 50 feet in height, the *CEQR Technical Manual* threshold for a shadows analysis, Tier 1 through Tier 3 and detailed shadows analyses were undertaken for the Proposed Actions. As described below, several sunlight-sensitive resources were identified within the Tier 3 shadow sweep that were advanced to a detailed analysis. These resources consist of 12 open space resources: Walt Whitman Park (O3), University Place (O9), Cadman Plaza Park (O12), Greenstreet at Brooklyn Bridge Boulevard (O17), Fort Greene Park (O18/H7)[7], Edmonds Playground (O24), Greenstreet at Carlton Avenue (O26), P.S. 261 Playground (O27), MetroTech Plaza (O28), Albee Square (O29), Abolitionist Place (O30), and Avalon Fort Greene Plaza (O33); and five historic resources: Evangelical Lutheran Church of the Holy Trinity (H1), First Free Congregation Church (H3), Mary of Nazarene Roman Catholic Church (H6), Fort Greene Park (H7/O18), and Simpson Methodist Episcopal Church (H9). No natural resources warrant a detailed analysis.

A detailed analysis was conducted for the resources that could receive incremental shadow on one or more of the analysis days. For the open space resources that were studied in the detailed shadows analysis, incremental shadows would be of limited duration and would occur on spaces that either receive uninterrupted sunlight during other periods of the analysis day or on spaces that do not receive uninterrupted sunlight under existing/No-Action conditions. Thus, it was determined that incremental shadows would not adversely impair the public's enjoyment of the space or the viability of vegetation of these resources. For the historic resources studied in the detailed shadows analysis, it was determined that incremental shadows either would not reach sunlight-sensitive features of the historic resources or would not last long enough to affect their use or enjoyment by the public. Based on the foregoing, no adverse impacts to sunlight sensitive resources would occur due to shadows from future development under the Proposed Actions.

Historic Resources

The analysis presented in this chapter concludes that the Proposed Actions would not result in significant adverse impacts to historic and cultural resources.

Based on an environmental review letter provided by LPC on February 11, 2025 (see **Appendix A**), the Development Site does not have archaeological significance. As such, an assessment of archaeological resources is not warranted and no significant adverse impacts would result from the Proposed Actions.

None of the architectural resources within the study area are within 90 feet of the Development Site and as such, the Proposed Actions would not result in direct impacts to historic resources. Although the Proposed Project will introduce a new building that is taller than the existing building on the Development Site, this new development would be consistent with the ongoing growth and transformation of Downtown Brooklyn. As a result, it is not expected that construction of the Proposed Project would significantly alter the setting, visual relationship or publicly accessible views of historic resources within the study area.

Additionally, as described in **Chapter 6, Shadows**, it was determined that incremental shadows either would not reach sunlight-sensitive features of historic resources within the study area or would not last long enough to affect their use or enjoyment by the public. As such, the Proposed Actions

[7] Fort Greene Park is both a sunlight-sensitive open space resource and a sunlight-sensitive historic resource.

would not result in significant adverse shadow impacts on any architectural resources containing sunlight-sensitive features in the study area.

Therefore, there would be no significant adverse impacts to architectural resources as a result of the Proposed Actions.

Urban Design and Visual Resources

The analysis presented in this chapter concludes that the Proposed Actions would not result in significant adverse impacts to urban design or visual resources.

Urban Design

The Proposed Actions would not result in significant adverse impacts to urban design in either the primary or secondary study areas. The proposed With-Action building on the Development Site would be constructed on an existing block and would not entail any changes to block shapes, street pattern and hierarchy, topography, open space, or natural features in the primary or secondary study area. The Proposed Actions would not create land uses or structures that would be substantially incompatible with existing and emerging character of the surrounding area. As described below, the proposed With-Action building would be of a similar height and bulk to buildings that have been recently completed and buildings that would be completed by the 2032 build year. The Proposed Actions would activate the streetscape by introducing a 24-hour population to the Development Site. Furthermore, the Proposed Actions would introduce several public realm improvements that increase pedestrian safety and circulation (as well as improving access to public transit through improvements to the DeKalb Avenue subway station entrance) and enhance the pedestrian experience of the Development Site and primary study area.

Visual Resources

Visual resources within the primary and secondary study area include the Williamsburgh Savings Bank, located south of the Development Site. An analysis of the Proposed Actions' impact on significant view corridors to the Williamsburgh Savings Bank identified one significant view corridor within the study area. As detailed below, development under With-Action conditions at the Development Site would not obstruct any significant view corridors to the Williamsburgh Savings Bank. Therefore, no significant adverse impacts to visual resources would occur as a result of the Proposed Actions.

Hazardous Materials

The Proposed Actions would not result in significant adverse impacts related to hazardous materials considering the existing (E)-Designation (E-124) on the Development Site.

A Phase I Environmental Site Assessment (ESA) dated March 25, 2025, revealed one Recognized Environmental Condition (REC) in connection with the Development Site, which pertains to historic off-site activity. To address this condition during site redevelopment, the Proposed Actions would adhere to requirements of the existing (E)-Designation for hazardous materials (E-124), which was applied to Brooklyn Block 2093, Lot 1 as part of the 2004 Downtown Brooklyn Development project. The implementation of the remedial measures required under the (E)-Designation would reduce the potential for significant adverse hazardous materials impacts due to the Proposed Actions.

Compliance with the (E)-Designation protocol would use the Phase I ESA to the extent practicable. Any testing and sampling required by OER for the Development Site would be followed in accordance with the requirements of the OER (E)-Designation process.

In addition to the (E)-Designation on the Development Site, regulatory requirements pertaining to the disturbance and handling of any lead-based paint (LBP), asbestos-containing materials (ACM), and PCB-containing building materials would be followed. As such, implementation of the Proposed Actions would not result in significant adverse impacts related to hazardous materials.

Transportation

The analysis presented in this chapter concludes that the Proposed Actions would not result in significant adverse impacts to subway operations and parking. However, there would be significant adverse impacts to traffic and pedestrian elements. Additionally, high-crash locations were identified at the traffic and pedestrian analysis locations.

Traffic

Traffic analyses were performed for 19 intersections. The Proposed Actions would result in significant adverse traffic impacts to seven, six, six, and ten intersections during the weekday AM, midday, PM, and Saturday peak hours, respectively. Mitigation measures that could be implemented to mitigate these significant adverse traffic impacts are discussed in **Chapter 18, Mitigation**.

New York City Department of Transportation (NYC DOT) is currently in the process of developing the Flatbush Avenue Bus Priority plan that would implement bus lanes along Flatbush Avenue between Livingston Street to the north and Grand Army Plaza to the south, portions of which fall within the traffic study area for the Proposed Project. As currently proposed, the plan would convert two Flatbush Avenue travel lanes to center-running bus lanes with the goals of improving bus speeds, reliability, and safety along the corridor; the plan would also implement concrete bus boarding islands and would extend the curb at selected locations to provide additional pedestrian spaces.

NYC DOT is also in preliminary planning stage for the DeKalb-Lafayette Avenues Bus and Safety Improvements project to improve bus service and street safety along the DeKalb Avenue and Lafayette Avenue corridors between Flatbush Avenue Extension and Broadway. Portions of the DeKalb Avenue corridor fall within the traffic study area for the Proposed Project. As preliminarily indicated, NYC DOT is exploring the feasibility of implementing bus priority measures, which might include curbside bus lanes similar to those that were temporarily implemented along DeKalb Avenue in the summer of 2024, and other improvements focused on improving safety for pedestrians and bicyclists.

If implemented, these preliminary plans have the potential to change future conditions, including travel patterns such as vehicle routing and mode choice, and may result in additional significant adverse impacts at traffic analysis locations due to the reduction in roadway capacity for general vehicle traffic. These changes could affect intersections along Flatbush Avenue between Livingston Street and Atlantic Avenue, DeKalb Avenue between Flatbush Avenue Extension and Ashland Place, and nearby upstream or downstream intersections.

At the time of the publication of the Draft EIS, these two plans remain in development. As such, for the purposes of the traffic analysis, the Draft EIS uses the existing roadway configuration (e.g., number of travel lanes, parking lanes, etc.) and signal timing plans on the Flatbush Avenue and DeKalb Avenue corridors to model the future conditions by the Proposed Project's Analysis Year.

The proposed Flatbush Avenue Bus Priority project and DeKalb-Lafayette Avenues Bus and Safety Improvements project would be implemented at NYC DOT's discretion. Once the design of the aforementioned projects is complete, NYC DOT would conduct post-implementation monitoring studies to assess traffic conditions, which would include, but is not limited to monitoring vehicle speeds and traffic volumes for a defined period of time. Based on the findings of these studies, NYC DOT may refine components of the project to optimize roadway conditions.

Parking

Under With-Action conditions, no on-site parking would be provided at the Development Site. Therefore, project-generated auto trips would need to park at off-site, off-street parking facilities within the study area. The peak off-site parking demand of 382 parking spaces during the Saturday afternoon period could be accommodated by the 1,968 off-site parking spaces available in the study area. The study area would be expected to have a parking utilization of 74 percent during the weekday midday period.

Subways

Fare control areas and stairways were analyzed at the DeKalb Avenue subway station located under the Development Site during the commuter peak hours. The analysis determined that the fare control areas and stairs analyzed would operate at acceptable levels of service (LOS) during both peak hours. Therefore, the Proposed Actions would not result in significant adverse subway impacts.

Pedestrians

Pedestrian analyses were performed for four sidewalk elements, four crosswalk elements, and five corner elements at key intersections for the weekday AM, midday, PM, and Saturday peak hours. Of the 13 pedestrian elements analyzed, the Proposed Actions would result in significant adverse impacts at one crosswalk element during the weekday AM and PM peak hours and two crosswalk elements during the Saturday peak hour. Significant pedestrian impacts are not expected during the weekday midday peak hour. Mitigation measures that could be implemented to mitigate these significant adverse pedestrian impacts are discussed in **Chapter 18, Mitigation**.

Vehicular and Pedestrian Safety

Ten of the 19 traffic and pedestrian analysis locations have been identified as high-crash locations according to the *CEQR Technical Manual* criteria. Eight analysis intersections are located along the Vision Zero Priority Corridors and experienced at least three pedestrian/bicyclist crashes within a consecutive 12-month period. One of these intersections is also a Vision Zero Priority Intersection. Two other Vision Zero Priority Intersections were identified in the study area.

Air Quality

The Proposed Actions would not result in significant adverse air quality impacts on the surrounding sensitive receptors, nor would nearby emission sources significantly impact the Proposed Project.

The mobile source analysis determined that project-generated traffic resulting in concentrations of carbon monoxide (CO) and fine particulate matter ($PM_{2.5}$) at the analyzed intersections would not

result in any violations of National Ambient Air Quality Standards (NAAQS). Further, the 24-hour and annual incremental $PM_{2.5}$ concentrations were predicted to be below the City's *de minimis* criteria.

A Land Disposition Agreement and/or Regulatory Agreement requiring the Proposed Project to have an all-electric central heating, ventilation and air-conditioning (HVAC) and hot water system would be executed between HPD and the Lessee prior to construction of the Proposed Project. Therefore, a stationary source analysis is not warranted, and no significant adverse impacts would occur.

The analysis of existing light industrial/manufacturing uses in the surrounding study area determined that emissions of air toxic compounds would not result in any potential significant adverse air quality impacts. An analysis of the cumulative health risk impacts of existing industrial sources on the Development Site was also performed. Maximum concentration levels at the Development Site were found to be below the applicable health risk criteria.

The analysis of existing large and major emissions sources within 1,000 feet of the Development Site concluded that this source would not result in significant adverse air quality impacts on With-Action development.

Noise

A noise assessment was conducted to determine whether the Proposed Actions would significantly increase sound levels from mobile and stationary sources at existing noise receptors, and if new noise receptors that would be introduced would be in an acceptable ambient sound level environment. With the implementation of the attenuation requirements described below, no significant adverse noise impacts form mobile or stationary sources would occur as a result of the Proposed Actions.

Stationary Source

The Proposed Actions would introduce a new active recreational space as a stationary source on the rooftop of the building podium. Besides that, no other substantial stationary source noise generators are anticipated to be introduced as the result of the Proposed Actions. The design and specifications for the With-Action building's mechanical equipment would incorporate sufficient noise reduction devices that would comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Control Code.

The noise analysis for existing and new receptors evaluates whether receptors would be introduced into an environment with acceptable ambient noise conditions. With-Action noise levels have been evaluated at new receptors based on ambient noise measurements, mobile source proportional noise modeling, and detailed modeling of noise from the With-Action development. Based on the modeling results, With-Action sound levels are expected to increase by up to 3.6 A-weighted decibels (dBA) over No-Action levels. However, as the noise level increases in exceedance of 3 dBA were found at the locations where With-Action condition noise levels (L_{eq}) are less than 65 dBA, these increments are not considered as significant impacts. Therefore, the Proposed Actions would not result in a significant adverse noise impact due to new mobile and stationary sources.

The existing (E)-Designation (E-124) on the Development Site would be updated to require a window/wall attenuation of 28 to 33 dBA for the four façades of the With-Action building (northern façade facing DeKalb Avenue, western façade facing Flatbush Avenue Extension, southern façade facing Fulton street, and eastern façade facing Hudson Avenue)(see **Table ES-3**). Additionally, a

minimum outdoor-to-indoor composite window/wall sound attenuation of 33 dBA would be required on the top of the podium facing the proposed active open space.

Table ES-3 Predicted With-Action Noise Level and Required Building Attenuation Value

Façade	Maximum Noise Level L_{10} (dBA)	Peak Period	Required Attenuation (dBA)*
North	76.7	AM	33
West	75.8	Midday	31
South	73.1	AM	31
East	71.2	Saturday	28
Podium	76.0	Midday	33

Source: VHB, 2025

Note:

*For future commercial office uses, the required attenuation along each respective facade would be 5 dBA lower in order to maintain an interior noise level (L10) not greater than 50 dBA for commercial office use

With the implementation of the attenuation requirements described above, no significant adverse noise impacts would occur as a result of the Proposed Actions.

Open Space

The Proposed Actions would introduce approximately 4,745 sf of open space available to the public on the southern portion of the Development Site. Future noise levels (L_{10}) within the newly created open space would be above 55 dBA. This exceeds the 55 dBA (L_{10}) guideline for outdoor areas requiring serenity and quiet contained in the *CEQR Technical Manual*. However, this relatively low noise level is often not achieved in outdoor areas due to the level of nearby noise sources (e.g., nearby roadway, train, and aircraft activity, as well as activities within the outdoor space itself) at most New York City outdoor public open space areas and parks. Furthermore, under existing and No-Action conditions, noise levels at the future location of the project-generated open space at the southern portion of the Development Site fronting Fulton Street currently exceed—and in the future would continue to exceed—55 dBA (L_{10}). This level of existing noise is comparable to noise levels in a number of passive open space areas that are within range of substantial noise sources, including Fort Greene Park, Prospect Park, and Brooklyn Bridge Park. The proposed uses of the project-generated open space do not require serenity and quiet. Therefore, the proposed open spaces are not considered sensitive.

Greenhouse Gas Emissions

The Proposed Actions would be consistent with the applicable City's GHG emissions reduction and climate change goals, and there would be no significant adverse GHG emission or climate change impacts as a result of the Proposed Actions.

Following the methodology provided in the *CEQR Technical Manual*, it is estimated that development under the With-Action condition would result in approximately 7,811 metric tons of carbon dioxide equivalent (CO_2e) emissions from its annual operations and 235 metric tons a year of CO_2e emissions from mobile sources. This represents less than 0.02 percent of the City's overall 2022 GHG emissions of 53.7 million metric tons.

Development under the With-Action condition would comply with the 2020 Energy Conservation Construction Code of New York State and 2020 New York City Energy Conservation Code, which govern performance requirements of heating, ventilation, and air-conditioning systems, as well as the exterior building envelope of new buildings. The Proposed Project under With-Action conditions would comply with the Local Law 97 requirements and would contribute toward the NYC GHG reduction goals.

Public Health

The Proposed Actions would not result in any significant adverse public health impacts as defined in the *CEQR Technical Manual*. During operation, the Proposed Actions would not result in unmitigated significant adverse impacts in the areas of air quality, noise, water quality, or hazardous materials. While significant adverse noise impacts could occur during construction, these impacts would be temporary and would result from conditions that are common during the construction of high-rise buildings in densely populated areas of New York City. Excessive noise can affect health through the disruption of sleep or hearing. While noise during the construction period would reach applicable *CEQR Technical Manual* impact thresholds at several receptors, these thresholds are based on quality-of-life considerations as opposed to public health considerations. Noise levels during the construction period would not be high enough to constitute a public health concern. The impacts would occur only during the construction period, after which noise levels would be below the relevant *CEQR Technical Manual* impact thresholds. While the Proposed Actions would have the potential to result in a significant adverse construction noise impact that would remain unmitigated, the temporary nature of the noise levels during the construction period combined with the attenuation provided by building conditions would not cause a significant adverse public health impact.

Neighborhood Character

The Proposed Actions would not result in a significant adverse impact to neighborhood character. As outlined in the *CEQR Technical Manual*, the assessment of neighborhood character is based on the impacts on the defining features of the neighborhood and potential impacts found in other technical areas. The Proposed Actions would not result in significant adverse impacts in the technical areas of land use, zoning and public policy; socioeconomic conditions; community facilities and services; open space; historic and cultural resources; urban design and visual resources; shadows; or noise. The Proposed Actions would result in significant impacts to transportation (traffic and pedestrians). Therefore, a preliminary assessment of neighborhood character is provided.

The Proposed Actions would result in the development of new, mixed-use building which would include affordable housing and align with the Downton Brooklyn trend towards residential and mixed-use development without significantly affecting the neighborhood's defining features or existing open spaces. New development under the Proposed Actions would enhance the pedestrian experience and preserve visual corridors while introducing new public open space. Regarding the significant impacts on traffic and pedestrians, as described in **Chapter 18, Mitigation**, some of the significant impacts could be mitigated through various measures while others would remain unmitigated or could only be partially mitigated. Overall, although there would be an increase in transportation activity due to the Proposed Actions, the resulting conditions would be similar to those typically found in the urban neighborhood defining the study area and would not result in density of activity or service conditions that would be out of character with the surrounding

neighborhood. As such, the Proposed Actions would not result in significant adverse impacts on neighborhood character.

Disadvantaged Communities

The Proposed Actions would not have significant adverse impacts related to their effects on disadvantaged communities. Based on the technical analyses presented in the EIS pursuant to *CEQR Technical Manual* guidance, the Proposed Actions would not have the potential to result in significant adverse impacts in any technical areas other than transportation (traffic and pedestrian) and construction (transportation and noise). All potential impacts would occur in both non-DAC census tracts or DACs with "lower burdens and vulnerabilities". Although not all transportation and construction impacts could be mitigated, none of these significant adverse impacts would cause or increase a disproportionate pollution burden on a DAC, either alone or in conjunction with other technical areas.

Construction

The analysis presented in this chapter concludes that the Proposed Actions would result in significant adverse impacts to construction, particularly in terms of traffic congestion, pedestrian movement, and noise. Governmental oversight of construction in New York City is extensive and involves a number of City, State, and Federal agencies, each with specific areas of responsibility. Construction at the Development Site would be subject to government regulations and oversight described in **Chapter 17, Construction** and would employ the general construction practices described therein. The Proposed Project would also comply with the requirements of the New York City Noise Control Code.

Transportation

Traffic

The peak quarter for construction was identified as the third quarter of 2030 when a daily average of 638 construction workers and 49 trucks would be generated by construction activity. In this quarter, construction activities would generate 151 construction worker vehicle trips and 22 construction truck trips during the AM construction peak hour, and 151 construction worker vehicle trips and six construction truck trips during the PM construction peak hour. A detailed traffic analysis was performed for 18 key intersections for the AM and PM construction peak hours within the traffic study area. These analyses determined that nine of the 18 analysis intersections would be significantly impacted during the AM construction peak hour of 6 AM to 7 AM, and three of the 18 analysis intersections would be significantly impacted during the PM construction peak hour of 3 PM to 4 PM. The following intersections would be significantly impacted:

- Flatbush Avenue Extension and Tillary Street (AM peak hour)
- Flatbush Avenue Extension and DeKalb Avenue (PM peak hour)
- Flatbush Avenue Extension and Fulton Street (AM hour)
- Flatbush Avenue and Lafayette Avenue (AM peak hour)
- Flatbush Avenue and 4th Avenue (PM peak hour)
- Flatbush Avenue and Atlantic Avenue (AM peak hour)

- Fulton Street and Hudson Avenue (AM and PM peak hours)
- Fulton Street and Rockwell Place (AM peak hour)
- DeKalb Avenue and Ashland Place (AM peak hour)
- Fulton Street and Ashland Place (AM peak hour)
- Schermerhorn Street and 3rd Avenue (AM peak hour)

Standard traffic capacity improvements typically implemented by NYC DOT, such as signal timing modifications, would provide full mitigation at some of the significantly impacted intersections. Implementation of traffic improvements measures are subjected to NYC DOT's review and approval. Traffic capacity improvements were identified and could fully mitigate four of the nine significantly impacted intersections during the AM construction peak hour (five intersections would remain unmitigated) and two of the three significantly impacted intersections during the PM construction peak hour (one intersection would remain unmitigated).

As discussed in **Chapter 10, Transportation** and described above, NYC DOT is currently in the process of developing the Flatbush Avenue Bus Priority plan and the DeKalb-Lafayette Avenues Bus and Safety Improvements project. If implemented, these preliminary plans have the potential to change future conditions, including travel patterns such as vehicle routing and mode choice, and may result in additional significant adverse impacts at traffic analysis locations due to the reduction in roadway capacity for general vehicle traffic.

At the time of the publication of the Draft EIS, these two plans remain in development. As such, for the purposes of the traffic analysis, the Draft EIS uses the existing roadway configuration (e.g., number of travel lanes, parking lanes, etc.) and signal timing plans on the Flatbush Avenue and DeKalb Avenue corridors to model the future conditions by the Proposed Project's Analysis Year.

The proposed Flatbush Avenue Bus Priority project and DeKalb-Lafayette Avenues Bus and Safety Improvements project would be implemented at NYC DOT's discretion. Once the design of the aforementioned projects is complete, NYC DOT would conduct post-implementation monitoring studies to assess traffic conditions, which would include, but is not limited to: monitoring vehicle speeds and traffic volumes for a defined period of time. Based on the findings of these studies, NYC DOT may refine components of the project to optimize roadway conditions.

Parking

Construction workers would generate an estimated peak daily parking demand of 189 spaces during the third quarter of 2030, the peak construction quarter. This level of parking demand could be accommodated by available capacity at the three off-street parking facilities nearest the site. Overall, after accounting for construction parking demand and diversion of existing demand from the Development Site that would be relocated to other facilities, there would be approximately 1,403 spaces available for the public during the weekday overnight period and 463 spaces available during the weekday midday period in the off-street parking study area. Therefore, no parking shortfall would occur as a result of project-generated construction activity.

Transit and Pedestrians

Construction worker activities would be highest during the third quarter of 2030 and would generate approximately 225 construction worker transit trips during the AM and PM construction peak hours. These construction-related transit trips would occur outside of the peak periods of transit ridership

and as the Development Site is located above the DeKalb Avenue subway station and the study area is well served by public transit, construction activities are not expected to result in transit impacts.

As multiple worker entrances will be provided around the Development Site, construction worker pedestrian trips are not expected to exceed the 200 pedestrian *CEQR* thresholds for detailed analysis. However, there is a potential for detours as a result of sidewalk closures. A level of service analysis was conducted for the north sidewalk of DeKalb Avenue between Flatbush Avenue Extension and Hudson Avenue. The level of service analysis, which was conducted for the peak commuter and midday periods – periods when pedestrian activity is highest during the day - concluded that there would be a potential for a significant adverse impact on this sidewalk as a result of sidewalk closure-related detours during the weekday AM and PM peak hours. These impacts would be unmitigable.

Air Quality

Measures required to reduce pollutant emissions during construction include all applicable laws, regulations, and the City's building codes. These include dust suppression measures, idling restrictions, and the use of ultra-low sulfur diesel (ULSD) fuel. With the implementation of these emission reduction measures, the dispersion modeling analysis of construction-related air emissions for both on-site and on-road sources determined that particulate matter ($PM_{2.5}$ and PM_{10}), annual-average nitrogen dioxide (NO_2), and carbon monoxide (CO) concentrations would be below their corresponding *de minimis* thresholds or National Air Quality Ambient Standards (NAAQS), respectively. Therefore, construction of the Proposed Project would not result in significant adverse air quality impacts during construction.

Noise

Construction of the phased development would involve standard construction activities and practices for buildings in New York City. Foundation installation and superstructure phases of construction are typically when the noisiest activities occur. The exterior and interior fit-out phases of construction typically involve minimal exterior equipment and substantially quieter noise conditions. The Development Site is near existing residential, community facility, and commercial land uses, and the introduction of new residences would occur throughout construction of the proposed development. Based on the proximity of these noise-sensitive land uses, there is the potential for construction to cause significant adverse noise impacts.

To assess the potential for the Proposed Project to result in noise impacts during construction, a quantified noise analysis was conducted.

Construction noise from mobile sources was evaluated for the 6:00 AM to 7:00 AM peak period, when construction traffic would be greatest. Construction noise from mobile sources would not increase by 3 dBA or more, the applicable analysis threshold, and there would be no significant adverse noise impact due to construction mobile sources.

Construction noise from stationary sources was evaluated for five phases of construction, since there would be overlapping activities for demolition, construction of the building foundation, construction of the core and shell, and interior phases of construction associated with the Proposed Project. Construction of the Proposed Project is predicted to result in elevated noise levels at several of the analyzed receptors during limited periods of time during the overall construction period. To the west of the Development Site, at the residential building (R03) located at 540 Fulton Street, construction is predicted to result in noise level increases up to approximately 13.6 dBA for up to 27 months. To the

north of the Development Site, at the Long Island University (LIU) facilities (R13 and R14) along DeKalb Avenue, construction is predicted to result in noise level increases up to 17.7 dBA for up to 32 months. To the east of the Development Site, at the residential buildings (R15 and R16) along Hudson Avenue, construction is predicted to result in noise level increases of up to approximately 29.2 dBA over a 49-month period. To the south of the Development Site, at the residential buildings along Fulton Street located at 1 Flatbush Avenue, construction is predicted to result in noise level increases up to approximately 10.3 dBA over an 11-month period. Such exceedances may be intrusive but would be temporary and would typically occur during weekdays during construction activities. At each of these locations, since all of the buildings have HVAC systems or a similar closed-window condition, approximately 30 to 35 dBA attenuation (depending on the building) can be achieved with a closed-window condition resulting in interior noise levels that are close to or exceed the CEQR interior noise level threshold for these types of uses (i.e., 45 dBA (L_{10}) for residential and community facility uses and 50 dBA (L_{10}) for office or equivalent spaces).

Since noise level increases due to construction would exceed the CEQR exterior noise level thresholds at several existing sensitive receptors, and since the CEQR interior noise levels would also be exceeded at some of these receptors, construction of the Proposed Project would result in significant adverse construction noise impacts. All construction noise impacts would occur at existing residential and/or community facility buildings located close to the Development Site, including the following sensitive receptors: R03, R13, R14, R15, and R16. Interior noise levels at these receptors, which include a mix of residential and community facility receptors, would primarily experience an exceedance of the CEQR interior noise level impact criteria during the demolition, excavation/foundation, and core and shell phases of construction.

Therefore, the Proposed Actions would have the potential to result in a significant adverse noise impact that would remain unmitigated.

Vibration

Construction activities have the potential to generate ground-borne vibration that can potentially cause structural or architectural damage or annoy people in nearby vibration-sensitive spaces, such as residences. The most substantial sources of construction vibration are equipment associated with the excavation and foundation phase, such as pile drivers, drill rigs, bulldozers, and jack hammers.

There are no buildings within the Project Area listed by the New York City Landmarks Preservation Commission (LPC) or the State and/or National Register of Historic Places (S/NR) which would require special protection from potential damage due to vibration.

As the existing real estate of utility company (REUC) easement prevents pile driving too deep on the southern portion of the site due to the proximity to the MTA subway station, caisson rigs would be used instead if possible. Additionally, these construction activities would only occur for limited periods of time at any particular location and there would be no significant adverse impact as a result of construction vibration.

Other Technical Areas

Land Use and Neighborhood Character

While construction of the new buildings under the Proposed Actions would cause temporary disruption, particularly related to traffic and noise, it is expected that such effects in any given area

would be relatively short in duration and therefore would not create a neighborhood character impact. Therefore, no significant adverse construction impacts to land use and neighborhood character are expected.

Socioeconomic Conditions

Construction could, in some instances, temporarily affect pedestrian and vehicular access on street frontages immediately adjacent to the Development Site; however, long-term lane and/or sidewalk closures are not expected during construction and therefore, would not restrict access to any existing or planned retail businesses. Utility service would also be maintained to all businesses, although there may be very short-term interruptions. Overall, construction of the Proposed Project is not expected to affect surrounding businesses or to result in any significant adverse impacts on socioeconomic conditions.

Community Facilities

The construction sites would be surrounded by construction fencing and barriers that would limit the potential for impacts of construction on nearby community facilities. Construction of the proposed buildings would not block or restrict access to facilities in the area and would not affect emergency response times of the New York City Police Department (NYPD) and New York City Fire Department (FDNY) given the geographic distribution of the police and fire facilities and their respective coverage areas. Therefore, construction impacts are not expected to result in any significant adverse impacts on community facilities.

Open Space

As described in **Chapter 5, Open Space**, there are no existing publicly accessible open spaces on the Development Sites. While University Place is located directly northwest of the Development Site, access to this publicly accessible open space would not be impeded during construction. In addition, measures would be implemented to control air emissions, dust, noise, and vibration on the construction site. Therefore, no significant adverse construction impacts to open space are expected.

Historic and Cultural Resources

As discussed in **Chapter 7, Historic and Cultural Resources**, the Development Site has no archaeological significance, nor are there any identified architectural resources located within 90 feet of the Development Site. Therefore, construction would not affect any archaeological or architectural resources.

Natural Resources

The Development Site does not contain and is not adjacent to any natural resources, as defined in the *CEQR Technical Manual*. Therefore, no significant adverse impacts related to natural resources would occur during construction of the Proposed Project.

Hazardous Materials

As discussed in greater detail in **Chapter 9, Hazardous Materials**, the Proposed Actions would adhere to requirements of the existing (E)-Designation for hazardous materials (E-124), which was applied to Brooklyn Block 2093, Lot 1 as part of the 2004 Downtown Brooklyn Development project.

The implementation of the remedial measures required under the (E)-Designation would reduce the potential for significant adverse hazardous materials impacts due to the Proposed Actions. Any testing and sampling required by OER for the Development Site would be followed in accordance with the requirements of the OER (E)-Designation process. In addition to the (E)-Designation on the Development Site, regulatory requirements pertaining to the disturbance and handling of any lead-based paint (LBP), asbestos-containing materials (ACM), and PCB-containing building materials would be followed. As such, implementation of the Proposed Actions would not result in significant adverse impacts related to hazardous materials.

Water and Sewer Infrastructure

The Development Site is not adjacent to any water resources. Therefore, construction of the Proposed Project would not have an impact on water quality. During construction, the Applicants would comply with all applicable regulations governing on-site stormwater management and disposal into the sewer system, including the NYC Construction Code, NYC Plumbing Code, Unified Stormwater Rule (USWR), and Local Law 97 of 2017. As described in **Section 3, Water and Sewer Infrastructure** of the EAS, the incorporation of the appropriate sanitary flow and stormwater source control storm management practices would reduce the overall volume of sanitary sewer discharge and stormwater runoff as well as the peak stormwater runoff rate from the Development Site. As such, construction associated with the Proposed Actions is not expected to result in a significant adverse impact on the City's water and sewer infrastructure.

Mitigation

As detailed in preceding sections, the Proposed Actions have the potential to result in significant impacts to transportation (traffic and pedestrian) and construction (traffic, pedestrian, and noise). Potential measures for these impacts are still being developed in consultation with the lead and expert agencies and are summarized below, see **Table ES-4**:

Table ES-4 Impact and Potential Mitigations Summary

Impact Category	Significant Impact	Mitigation Measure(s) if Applicable
Transportation – Traffic	› Seven intersections during the weekday AM peak hour; › Six intersections during the weekday midday peak hour; › Six intersections during the weekday PM peak hour; and › Ten intersections during the Saturday peak hour	Standard traffic capacity improvements typically implemented by NYC DOT, such as signal timing modifications, could partially mitigate some of these traffic impacts
Transportation – Pedestrian	› One pedestrian element during the weekday AM and PM peak hours, and › Two pedestrian elements during the Saturday peak hour	Improvements in the form of crosswalk widening were identified and would mitigate these impacts.
Construction—Traffic	Temporary traffic impact at: › Nine intersections during the AM construction peak hour, and › Three intersections during the PM construction peak hour.	Standard traffic capacity improvements typically implemented by NYC DOT, such as signal timing modifications, could partially mitigate some of these temporary traffic impacts
Construction-Noise	Noise sensitive receptors at existing residential and/or community facility buildings located close to the Development Site	The potential for additional mitigation will be considered further between the Draft EIS and Final EIS, in coordination with the lead agency
Construction-Pedestrian	Temporary pedestrian impact at the north sidewalk of DeKalb Avenue between Flatbush Avenue Extension and Hudson Avenue during the weekday AM and PM peak hours	These impacts would be unmitigable.

Transportation

Traffic

Of the 19 intersections analyzed, the Proposed Actions would result in significant adverse traffic impacts at seven intersections (at eight traffic movements) during the weekday AM peak hour, six intersections (at eight traffic movements) during the weekday midday peak hour, six intersections (at nine traffic movements) during the weekday PM peak hour, and ten intersections (at 16 traffic movements) during the Saturday peak hour. Standard traffic capacity improvements typically implemented by NYC DOT, such as signal timing modifications, could fully mitigate traffic impacts at four intersections during the weekday midday peak hour (one additional intersection would be partially mitigated), two intersections during the weekday PM peak hour (one intersection would be partially mitigated), and four intersections during the Saturday peak hour (one intersection would be

partially mitigated); significant traffic impacts during the weekday AM peak hour would remain unmitigated. Significant traffic impacts to the intersections listed below would remain unmitigated (see **Table ES-5**).

- Flatbush Avenue Extension and Tillary Street (AM, PM, and Saturday)
- Flatbush Avenue Extension and Myrtle Avenue (AM)
- Flatbush Avenue Extension and DeKalb Avenue (AM, PM, and Saturday)
- Flatbush Avenue Extension and Fulton Street (AM, midday, PM, and Saturday)
- Flatbush Avenue and Lafayette Avenue (AM and Saturday)
- Fulton Street and Hudson Avenue (AM, PM, and Saturday)
- DeKalb Avenue and Ashland Place (AM)
- Schermerhorn Street and Third Avenue (midday and Saturday)

Table ES-5 Transportation- Traffic Impact Summary

Intersection with significant Impact	Impact	Mitigation Measure(s) if Applicable
Flatbush Avenue Extension and Tillary Street	Weekday AM, PM, and Saturday Peak Hours	Standard traffic capacity improvements typically implemented by NYC DOT, such as signal timing modifications could mitigate or partially mitigate some of the significant impacts
Flatbush Avenue Extension and Myrtle Avenue	Weekday AM, PM, and Saturday Peak Hours	
Flatbush Avenue Extension and DeKalb Avenue	Weekday AM, Midday, PM,and Saturday Peak Hours	
Flatbush Avenue Extension and Fulton Street	Weekday AM, Midday, PM, and Saturday Peak Hours	
Flatbush Avenue and Lafayette Avenue	Weekday AM, Midday, and Saturday Peak Hours	
Flatbush Avenue and Atlantic Avenue	Weekday PM and Saturday Peak Hours	
Fulton Street and Hudson Avenue	Weekday AM, PM, and Saturday Peak Hours	
Fulton Street and Rockwell Avenue	Saturday Peak Hour	
DeKalb Avenue and Ashland Place	Weekday AM Peak Hour	
Fulton Street and Ashland Place	Saturday Peak Hour	
Lafayette Avenue and Ashland Place	Weekday Midday Peak Hour	
Schermerhorn Street and Third Avenue	Weekday Midday, and Saturday Peak Hours	
Nevins Street and Schermerhorn Street	Weekday Midday Peak Hour	

Shading denotes that no mitigation measures were identified, significant impact on traffic movements would remain unmitigated

Pedestrians

As discussed in **Chapter 10, Transportation**, the Proposed Project would result in significant impacts at one pedestrian element during the weekday AM and PM peak hours and two pedestrian elements during the Saturday peak hour. Improvements in the form of crosswalk widening were identified and

would mitigate these impacts. Implementation of the pedestrian mitigation measures is within the jurisdiction of NYC DOT.

Construction

Construction Transportation

As discussed in **Chapter 17, Construction**, 18 key intersections were analyzed for potential significant traffic impacts during the construction traffic peak hours. Significant impacts were identified at nine intersections during the AM construction peak hour and three intersections during the PM construction peak hour. Where impacts during construction may occur, traffic capacity improvements in the form of signal timing modifications were proposed to provide full mitigation at some intersections. Significant traffic impacts could be fully mitigated at four of the eight significantly impacted intersections during the AM construction peak hour (four intersections would remain unmitigated) and three of the four significantly impacted intersections during the PM construction peak hour (one intersection would remain unmitigated).

As described above, NYC DOT is currently in the process of developing the Flatbush Avenue Bus Priority plan and the DeKalb-Lafayette Avenues Bus and Safety Improvements project. If implemented, these preliminary plans have the potential to change future conditions, including travel patterns such as vehicle routing and mode choice, and may result in additional significant adverse impacts at traffic analysis locations due to the reduction in roadway capacity for general vehicle traffic.

At the time of the publication of the Draft EIS, these two plans remain in development. As such, for the purposes of the traffic analysis, the Draft EIS uses the existing roadway configuration (e.g., number of travel lanes, parking lanes, etc.) and signal timing plans on the Flatbush Avenue and DeKalb Avenue corridors to model the future conditions by the Proposed Project's Analysis Year.

The proposed Flatbush Avenue Bus Priority project and DeKalb-Lafayette Avenues Bus and Safety Improvements project would be implemented at NYC DOT's discretion. Once the design of the aforementioned projects is complete, NYC DOT would conduct post-implementation monitoring studies to assess traffic conditions, which would include, but is not limited to: monitoring vehicle speeds and traffic volumes for a defined period of time. Based on the findings of these studies, NYC DOT may refine components of the project to optimize roadway conditions.

Noise

Since noise levels during construction would have the potential to exceed the thresholds for exterior increases in noise, there would be potential for the project to result in high exterior and interior noise levels at existing noise receptors located in the vicinity of the Development Sites. As described in **Chapter 17, Construction**, all construction noise impacts would occur at existing residential and/or community facility buildings located close to the Development Site, including the following sensitive receptors: R03, R13, R14, R15, and R16. Interior noise levels at these receptors, which include a mix of residential and community facility receptors, would primarily experience an exceedance of the CEQR interior noise level impact criteria during the demolition, excavation/foundation, and core and shell phases of construction.

With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, an 8-foot

construction noise barrier has been included in the modeling. However, construction noise would continue to exceed the thresholds for significant construction noise impact prior to mitigation.

The primary sources of construction noise causing significant adverse impacts include the rigs during the foundation phases of construction and concrete mixer trucks during the foundation and superstructure phases of construction. Since the impacted residential buildings are generally 10 or more stories tall, increasing the height of the perimeter wall would provide limited benefit compared to the standard 8-foot wall. Concrete mixer trucks would be located along Hudson Avenue or DeKalb Avenue depending on the specific phase of construction. As the impacted receptors are relatively tall, it would not be feasible to introduce a noise barrier between the receptor buildings and the Development Site.

The potential for additional mitigation will be considered further between the Draft EIS and Final EIS, in coordination with the lead agency; however, if no further feasible or practicable mitigation measures are identified, the Proposed Actions would result in a significant adverse noise impact due to construction that would remain unmitigated.

Alternatives

No-Action Alternative

The No-Action Alternative assesses the future conditions on the Development Site in absence of the Proposed Actions (i.e., none of the discretionary approvals proposed as part of the Proposed Actions would be adopted). In the 2032 future under the No-Action Alternative, it is expected that the existing seven-story commercial office and retail building currently occupying the Development Site would remain as under existing conditions and be fully occupied with approximately 293,370 gsf of commercial office space, 35,548 gsf of commercial retail space, and a 46,190-gsf accessory parking garage with approximately 140 spaces. The proposed public realm improvements (a new public open space, an expanded sidewalk, and surface improvements around the existing DeKalb Avenue subway station entrance) would not be carried out. These conditions are referred to throughout the EIS as the No-Action Condition or the Future Without the Proposed Actions.

The anticipated significant adverse impacts of the Proposed Actions related to traffic, pedestrians, construction transportation (traffic and pedestrians), and construction noise would not occur under the No-Action Alternative. However, the No-Action Alternative would not meet the goals and objectives of the Proposed Actions. Under the No-Action Alternative, there would be no residential development on the Development Site, and there would be a substantial lost opportunity to create a large number of affordable and market-rate housing units on a single site in Downton Brooklyn. The existing zoning would not permit residential uses of any kind, and MIH would not be mapped on the Project Area, meaning that no affordable or market rate housing would be developed. In addition, under the No-Action Alternative, there would be no public realm improvements to the Development Site, including the project-generated publicly accessible open space located on the southern portion of the Development Site, the expanded sidewalk along the Development Site's Flatbush Avenue Extension frontage, or the surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site. Therefore, the No-Action Alternative would fail to meet the objectives of the Proposed Actions.

No Unmitigated Significant Adverse Impacts Alternative

The No Unmitigated Significant Adverse Impacts Alternative assesses a scenario in which the Proposed Actions are modified such that future development would avoid the unmitigable significant adverse impacts associated with the Proposed Actions, as identified in the EIS. As discussed in **Chapter 18, Mitigation,** and **Chapter 20, Unavoidable Significant Adverse Impacts,** the Proposed Actions would result in unmitigable significant adverse impacts due to operational traffic as well as traffic and noise levels during the temporary construction period. In order to eliminate these impacts, the Proposed Actions would have to be modified to such a point where their principal goals and objectives would not be realized, such as by seeking a lower density zoning district or removing or modifying some of all of the proposed zoning waivers.

Unavoidable Significant Adverse Impacts

As described in **Chapter 20, Mitigation**, the Proposed Actions have the potential to result in significant adverse traffic and pedestrian impacts as well as construction related traffic, pedestrian and noise impacts at certain locations. To the extent practicable, mitigation has been proposed for these identified significant adverse impacts. However, in some instances no practicable mitigation has been identified to fully mitigate the significant adverse impacts, and there are no reasonable alternatives to the Proposed Actions that would meet the purpose and need, eliminate potential impacts, and not cause other or similar significant adverse impacts.

Growth-Inducing Aspects of the Proposed Project

As discussed in **Chapter 21, Growth Inducing Aspcts**, all Proposed Actions would be limited to the Development Site only and are not expected to add substantial new land uses, new residents, or new employment to the surrounding area. The Proposed Actions are not expected to cause any significant secondary impacts (such as indirect residential displacement, increased infrastructure demand related to water, sanitation services, or energy) that would lead to substantial new development in the surrounding area. Therefore, the Proposed Actions would not induce significant new growth in the surrounding area.

Irreversible and Irretrievable Commitments of Resources

As discussed in **Chapter 22, Irreversible and Irretrievable Commitments of Resources,** the Proposed Project would constitute a long-term commitment of land resources and funds committed by the project sponsor to the design, construction, and operation of the Proposed Project. However, the Proposed Actions would transform an underutilized site in Downtown Brooklyn into a mixed-use, vibrant community hub, that aims to provide much-needed affordable housing, commercial and/or community facility spaces, and open space available to the public. The Proposed Actions would not result in an immediate or long-term loss of environmental resources. The long-term commitment of land resources needed for the Proposed Project would be balanced by the project's benefits and alignment with City policy goals.

1

Project Description

This chapter provides descriptive information about the requested discretionary land use actions and the development project that could be facilitated by the requested actions. The purpose of this chapter is to convey project information relevant to environmental review.

Introduction

The New York City Department of Housing Preservation and Development (HPD), in conjunction with the New York City Department of Health and Mental Hygiene (DOHMH) and the Department of Citywide Administrative Services (DCAS) (each a co-applicant, and collectively, the Applicant) is seeking approval for a zoning map amendment, zoning text amendments, disposition of City-owned property, site selection and acquisition of real property interest, certification to establish and facilitate a transit volume, and an amendment to the Brooklyn Center Urban Renewal Plan (URP) (collectively, the Proposed Actions). The Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with an approximately 1,544,875 gross-square-foot (gsf) (1,075,100 zoning-square-foot [zsf], 21.87 floor-area-ratio [FAR]), 72-story (840-foot-tall) mixed-use building (the Proposed Project) in the Downtown Brooklyn neighborhood of Brooklyn, Community District (CD) 2. The Proposed Project would include 1,233,950 gsf (933,820 zsf, 19.0 FAR) of residential floor area and 209,770 gsf (141,280 zsf, 2.87 FAR) of non-residential floor area. The non-residential floor area would comprise 128,255 gsf of retail space and 81,515 gsf for commercial office and/or community facility use that may be dedicated for future City use. Additionally, the Proposed Project would provide 4,475 square feet (sf) of open space available to the public, along with other public realm improvements detailed below.

The Proposed Project would introduce 1,263 dwelling units, of which 325 to 379 units would be designated as permanently affordable for households with incomes averaging between 60 percent and 80 percent area median income (AMI) pursuant to applicable requirements of the City's Mandatory Inclusionary Housing (MIH) Program option 1 or 2, respectively.

The Proposed Project would also include public realm improvements, including approximately 4,745 sf of open space available to the public on the southern portion of the Development Site, an expanded sidewalk along the Development Site's Flatbush Avenue Extension frontage, and surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site. Additionally, the Proposed Project would include private amenity spaces for building residents, consisting of no less than 28,000 sf of active recreational space (including but not limited to gym and play areas) and 5,000 sf of passive recreational space (including but not limited to lounge areas, a roof deck, and dog run). Such amenities would be located throughout the building, including potential use of terrace and rooftop areas.

Development Site

The Development Site (Brooklyn Block 2093, Lot 1) is owned by the City of New York, and has a lot area of approximately 49,153 sf.[1] As shown in **Figure 1-1**, the Development Site is bounded by DeKalb Avenue to the north with approximately 193 feet of frontage, Fulton Street to the south with approximately 130 feet of frontage, Hudson Avenue to the east with approximately 365 feet of frontage, and Flatbush Avenue Extension to the west with approximately 334 feet of frontage.

The Development Site, subject to a long-term lease with Fulton DeKalb Associates L.P., is currently improved with a seven-story, 375,108 gsf (307,949 zsf) commercial building with 293,370 gsf (274,431 zsf) of commercial office space, 35,548 gsf (33,518 zsf) of ground floor retail, and 46,190 gsf of below-grade parking (which accommodates 140 public parking spaces). Constructed in 1974, the existing building currently houses a Verizon call center in its office space. The ground floor retail space is primarily tenanted with local retail chains. All current leases, which are between Fulton DeKalb Associates, L. P. and sublessee, are expected to terminate before 2028, and all tenants will vacate the building by January 1, 2028.

An entrance to the DeKalb Avenue subway station (B/Q/R lines) is located at the northwest corner of the Development Site. This entrance includes a street elevator and two staircases that lead out to the plaza entrance. Additionally, there are three curb cuts located along the Hudson Avenue frontage: two of which serve the existing building's loading areas, with the third curb cut provides access to a public parking garage. The two for loading purposes measure approximately 20 feet and 60 feet in width each and are separated by approximately 50 feet, whereas the curb cut for parking garage access measures approximately 40 feet in width. An existing Real Estate of Utility Companies (REUC) easement granted by Metropolitan Transit Authority (MTA) (REUC No. B119-E271) extends diagonally west to east in the Development Site which restricts development that exceeds a depth of approximately 6 feet below grade where the MTA subway lines are situated.

The rezoning area is coterminous with the centerline of the streets surrounding the Development Site, which is in a C6-4 zoning district within the Special Downtown Brooklyn District (DB), which permits a maximum commercial FAR of 10.0 and a maximum residential FAR of 10.0 which can be increased to 12.0 FAR in MIH areas or other qualifying affordable or senior housing. The Development Site is also within the Brooklyn Center Urban Renewal Area (URA) which was originally established in 1970 and remains in effect until July 2044.[2] The goals of the Brooklyn Center URP are to develop the Brooklyn Center URA in a comprehensive manner, removing blight and maximizing

[1] The lot size is based on a site survey dated December 4, 2024.

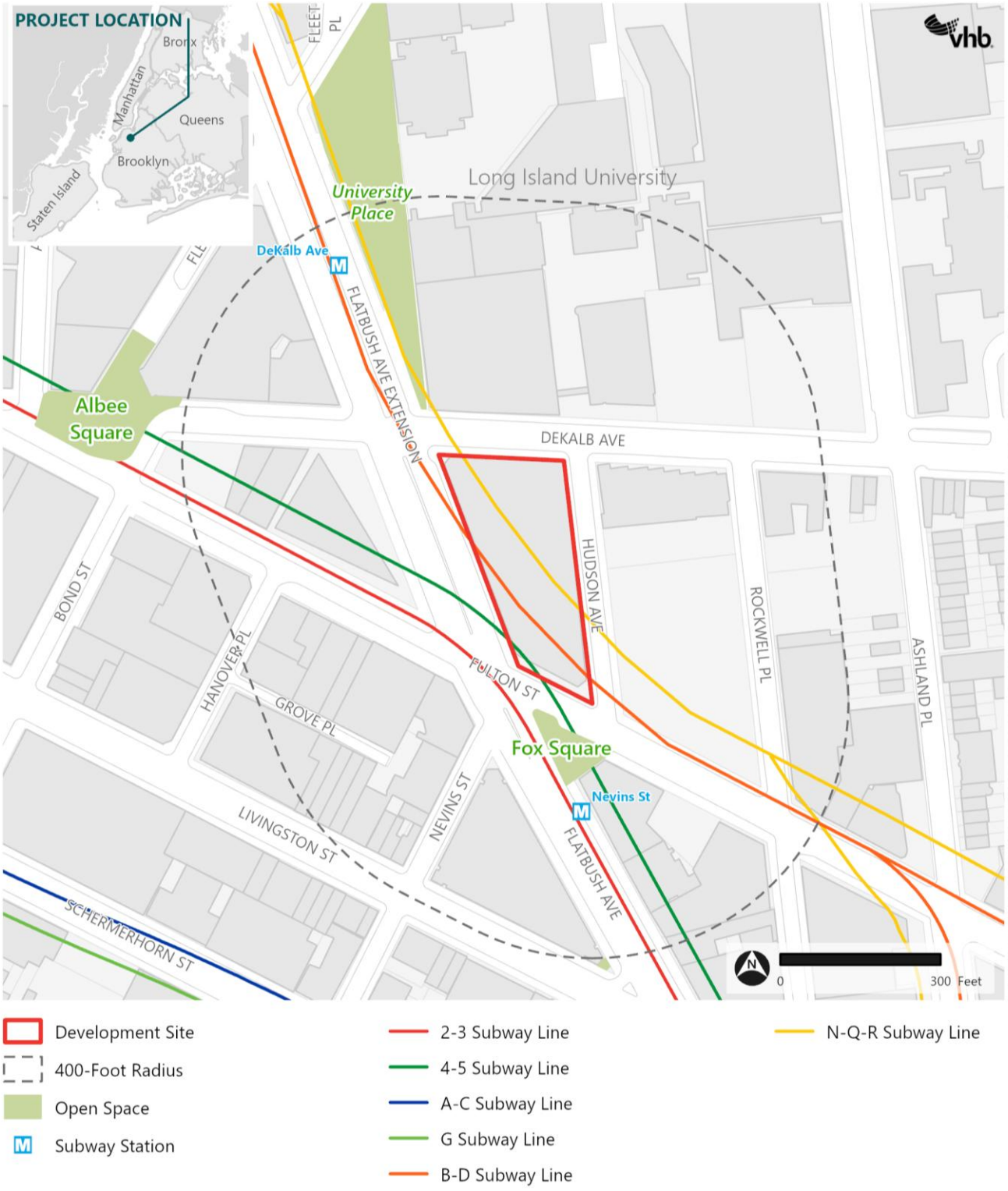
[2] Fifth Amended Urban Renewal Plan of Brooklyn Center Urban Renewal Area, The City of New York Department of Housing Preservation and Development. Published in September; revised in April 2004.

appropriate land uses such as high-quality housing, community facilities and retail uses. The URP also aims to strengthen the tax base of the city by encouraging development and employment opportunities in the area. There are a total of 28 sites within the Brooklyn Center URA that have been or would be acquired by the City for redevelopment pursuant to the Fifth Amended Brooklyn Center URP, the majority of which are designated for commercial, residential, and community facility uses, with the remainder being preserved for public space uses which also permit below-grade parking and accessory uses.[3] The Development Site is identified as Site 2 in the Brooklyn Center URA. In addition, the Development Site lies within the Inner Transit Zone, a Food Retail Expansion to Support Health (FRESH) Zone, and the MetroTech Business Improvement District (BID).

The Development Site's western frontage, Flatbush Avenue Extension, is a 120-foot-wide principle arterial road that runs north-south through Brooklyn with multiple lanes of traffic, pedestrian islands, and street parking on the east side. Fulton Street, the Development Site's southern frontage, is an 80-foot-wide principle arterial and a major east-west commercial street with four lanes of traffic and bus lanes. DeKalb Avenue, the Development Site's northern frontage, is a 70-foot-wide principle arterial road with two lanes of westbound traffic, a bike lane, and landscaped sidewalks. Hudson Avenue, the Development Site's eastern frontage, is a 50-foot-wide roadway with one northbound lane (with the exception of a small northern segment providing two-way traffic and southbound traffic access to the parking garage) with approximately 13-foot-wide sidewalks and three curb cuts that provide access to the building's loading and parking areas (as is described above).

[3] ULURP No. C040173 HUK and N040176 HGK

Figure 1-1 Site Location Map



Source: NYC DCP (2024); NYC Parks (2024)

Neighborhood Context

The Development Site is situated in the center of the DB, New York City's third-largest Central Business District (CBD). Approved in 2004, the DB (ULURP No. N 040171 ZMK) provides special height and setback regulations and urban design guidelines, which have allowed for some of the largest and highest density developments in the city while promoting and supporting the continued growth of Downtown Brooklyn as a unique mixed-use area. The Development Site was identified in the Downtown Brooklyn Development EIS (CEQR No. 03DME016K) as Projected Development Site S. Some recent notable developments nearby and within the DB district include the 74-story, 1,066-foot-tall Brooklyn Tower at 9 DeKalb Avenue, constructed in 2022; a 43-story, 497-foot residential tower with ground floor retail at 540 Fulton Street, constructed in 2023; a 52-story, 575-foot-tall, mixed-use residential commercial building at 589 Fulton Street, constructed in 2023; and the 27-story, 268-foot-tall Brooklyn Grove at 10 Nevins Street, constructed in 2019. City Point, a mixed-use multi-building residential and commercial complex, just to the north of the Development Site, was completed in 2020, featuring three towers that vary from 19 stories to 68 stories, and from 361 feet to 720 feet in height. Other nearby developments include the Hub (constructed in 2020), a 50-story, 577-foot-tall mixed-use residential commercial building at 333 Schermerhorn Street, as well as the Toren (constructed in 2009), a 38-story, 399-foot-tall mixed-use residential commercial building at 150 Myrtle Avenue.

As a result of the establishment of the DB and related rezonings, the vicinity of the Development Site (within a radius of 400 feet) has become a growing mixed-use area with diverse land uses, including residential, commercial, and mixed residential and commercial buildings. Institutional uses, hotels, and community facility uses are also nearby. The area to the west includes Fulton Mall regional shopping corridor, the 5.5 million-sf MetroTech commercial and academic campus, and the 1.9 million-sf City Point mixed-use development and shopping center. To the north are two full-block institutional campuses, including the Downtown Brooklyn campus of the Long Island University (LIU) and the Brooklyn Hospital. To the east and southeast is the area known as the Brooklyn Cultural District, with more than 50 cultural institutions anchored by several Brooklyn Academy of Music theaters. This area includes the Brooklyn Academy of Music Historic District, designated in 1978 (LP-01003).

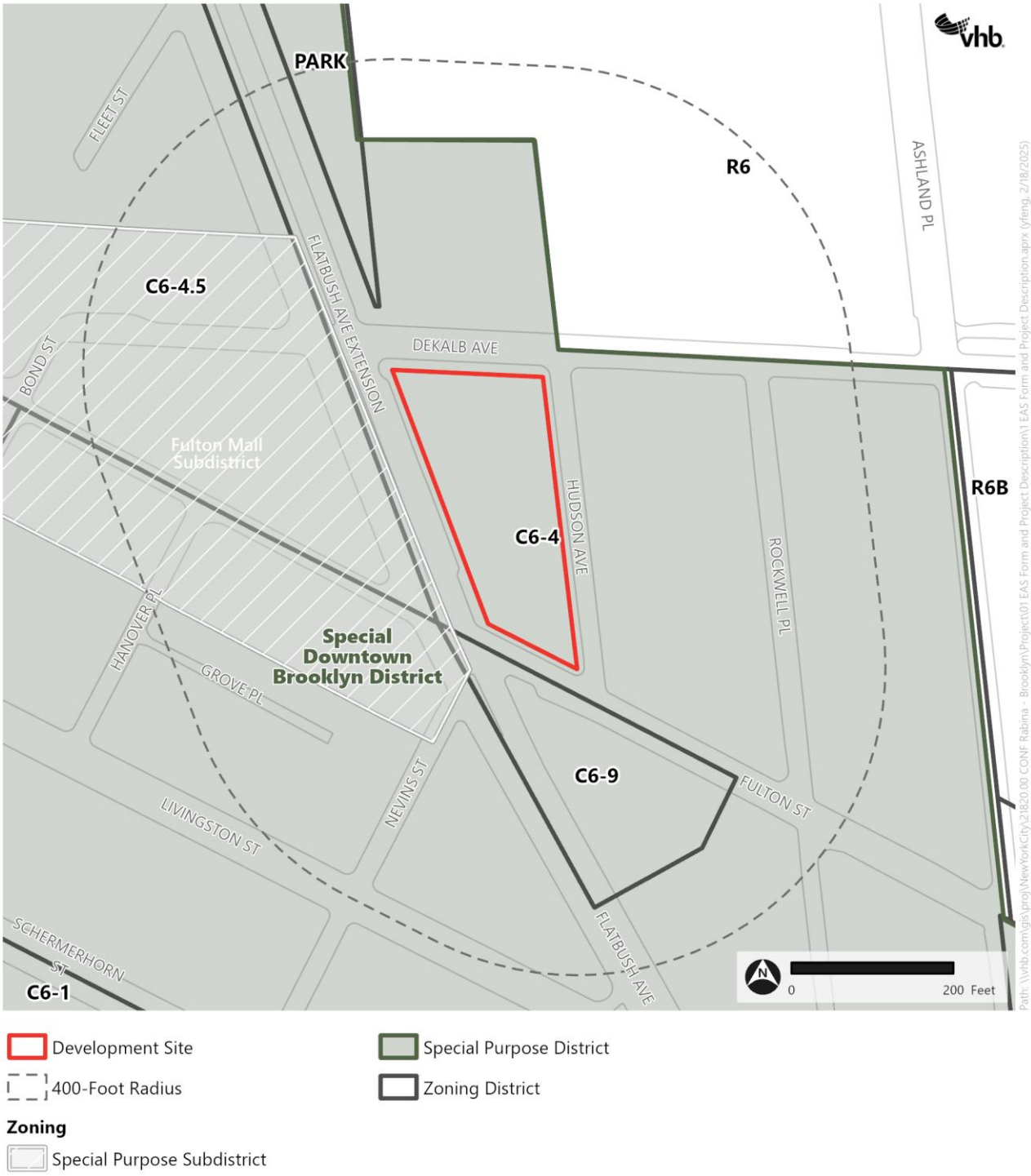
As shown in **Figure 1-2**, the vicinity of the Development Site is primarily within C6-4, C6-4.5 and C6-9 zoning districts within the DB, which all have the residential district equivalent of an R10 district. R10 districts permit up to 12.0 Residential FAR in MIH areas or other qualifying affordable or senior housing. Additionally, the area to the northeast of the Development Site is in an R6 district, which permits a maximum residential FAR of 3.9 in MIH areas or other qualifying affordable or senior housing. The majority of the surrounding area is also within the DB. The current DB has two subdistricts: Atlantic Avenue and Fulton Mall. The Atlantic Avenue subdistrict has bulk and use regulations intended to preserve the scale and character of Atlantic Avenue, including certain architectural features, while Fulton Mall subdistrict's bulk and use regulations are intended to create an attractive shopping environment within the Fulton Mall subdistrict. Fulton Mall subdistrict is mapped directly west of the Development Site.

The study area surrounding the Development Site is entirely located within the boundary of the Brooklyn Center URA. Additionally, several sites within the study area were identified by the Brooklyn Center URA as being properties that either are or are to be acquired by the City for urban renewal, including Block 162, Lots 1, 3, 5, and 6 (Site 1); Block 161, Lots 47 and 50 (Site 3A); Block 149, Lots 14,

15, 17, 19, 22-25, and 50 (Site 4); Block 149, Lots 26, 28, 30-34 (Site 4A); Block 2106, Lots 1, 4-7, 9, 16, 19, 24, 26, 29, 35, and 40 (Site 5); and Block 2080, Lots 1, 5, and 13 (Site 9).

The surrounding area is exceptionally well served by public transportation. In addition to the DeKalb Avenue subway station (B/Q/R lines) entrance within the Development Site, the Nevins Street subway station (2/3/4/5 lines) is just south of the Development Site. Less than a half mile away are the Fulton Street subway station (G line) and the Atlantic Terminal/Barclay Center subway station (B/Q lines), along with the Atlantic Terminal Long Island Rail Road (LIRR) station. Additionally, MTA New York City Transit (NYCT) operates several bus routes in the vicinity, including the B25, B26, B38 B41, B45, B52, B67, B69, and B103 buses. A dedicated bus lane runs along Fulton Street, adjacent to the Development Site. A Citi Bike station with 71 docking stations is also located along the Development Site's northern frontage facing DeKalb Avenue. Within the surrounding area, there are five Citi Bike docks and bike lanes on Asheland Place, DeKalb Avenue, Bond Street, Schermerhorn Street, and Lafayette Avenue.

Figure 1-2 Existing Zoning Map



Source: NYC DCP (2024); NYC Parks (2024)

Proposed Actions

The Applicant is seeking the following actions to facilitate development of the Proposed Project:

Actions proposed by HPD:

- A Zoning Map Amendment to rezone the Development Site (and extending to the centerline of the street) from a C6-4 district to a C6-12 district (Project Area);
- Zoning text amendments to the Zoning Resolution of the City of New York (ZR) to:
  - Amend the DB (ZR 101-00 et. seq.) as following:
    - Modify ZR 101-00 et. seq. to establish a C6-12 district and modify ZR 101-21 to permit a maximum permitted FAR of 19.0 for residential and 23.0 for mixed uses on lots that are greater than 30,000 sf with at least one full block street frontage or occupy an entire block.
    - Modify ZR 101-222 and ZR 101-224 to modify setback requirements for large qualifying lots that have below grade transit infrastructure occupying more than 30 percent of the lot.
    - Modify ZR 101-41 to provide exemptions from the street wall location and continuity requirements for lots meeting a certain lot size threshold that provide open space.
  - Amend Appendix F: Mandatory Inclusionary Housing Areas and Former Inclusionary Housing Designated Areas for Brooklyn Community District 2 to establish the Project Area as an MIH area, Options 1 and 2;
- An Amendment to the Brooklyn Center URP; and
- Chairperson Certification pursuant to ZR 66-21(c) to establish and facilitate a transit volume on the Development Site as determined by the Metropolitan Transit Authority (MTA).

Action proposed by DCAS and HPD:

- Disposition approval of City-owned property, Brooklyn Block 2093, Lot 1

Action proposed by DCAS and DOHMH:

- Combined Site Selection and Acquisition approval of real property interest of Brooklyn Block 2093, Lot 1

In conjunction with the Proposed Actions, additional approvals are being sought at the Public Design Commission (PDC) to facilitate certain elements of the Proposed Project. After PDC approval is obtained, the Applicant intends to seek a compliance determination from the Department of City Planning for the proposed Publicly Accessible Open Space signage pursuant to Chapter 11 of Title 62 of the Rules of the City of New York (POPS Rules).

Proposed Project

The Proposed Actions would facilitate the redevelopment of the Development Site (Brooklyn Block 2093, Lot 1). The existing building on the Development Site would be demolished (with the exception of several columns located over the MTA easement, which will be retained) and redeveloped with a 72-story (840-foot-tall, including an allowance for 40 feet of mechanical bulkhead), mixed-use building. The existing entrance on the Development Site to the DeKalb Avenue subway station (B/Q/R lines) would be maintained. The proposed building would consist of approximately 1,544,875

gsf (1,075,100 zsf, 21.87 FAR) of which 1,233,950 gsf (933,820 zsf, 19.0 FAR) would be residential floor area and 209,770 gsf (141,280 zsf, 2.87 FAR) would be non-residential floor area designated for commercial (office and retail) and/or community facility uses (the Proposed Project). A total of 128,255 gsf (65,915 zsf) of retail and/or community facility space would be provided in the subcellar, cellar, first, and second floors, with 81,515 gsf (75,365 zsf) of commercial office and/or community facility space on the first, second, third and fourth floors. The portion of community facility space that may be dedicated for future City use would be located on the third and fourth floors.[4] The fifth floor, 23rd, and 65th floors, as well as the roof are planned for residential amenities, and residential units would be provided on the remainder of floors six and above. Additionally, the Proposed Project would include 101,155 gsf of mechanical space primarily located in the cellar and on the fifth, 23rd, 42nd, and 65th floors.

The Proposed Project would introduce 1,263 apartments, of which 325 to 379 units would be designated as permanently affordable for households with incomes averaging between 60 percent to 80 percent AMI pursuant to applicable requirements of the City's MIH Program Option 1 or 2, respectively. Similar to existing conditions, the Proposed Project's loading berths are proposed to be located along the Development Site's Hudson Avenue frontage. Access to the Proposed Project's office and residential uses would be located along the site's DeKalb Avenue frontage, and the Proposed Project's retail uses would be accessed along DeKalb Avenue, Flatbush Avenue, Fulton Street, and portions of Hudson Avenue.

The building's podium would have a maximum base height of 80 feet with the tower expected to reach a height of 800 feet, with another 40 feet allowance for the building bulkhead, for a total height of 840 feet.

The Proposed Project would also include a number of public realm improvements, including:

- An approximately 4,745 sf open space available to the public on the southern portion of the Development Site;
- An expanded sidewalk along Flatbush Avenue Extension; and
- Improvements to the surface area around the DeKalb Avenue subway station on the Development Site.

Additionally, the Proposed Project would include private amenity spaces for building residents, consisting of no less than 28,000 sf of active recreational space (including but not limited to gym and play areas) and 5,000 sf of passive recreational space (including but not limited to lounge areas, a roof deck, and dog run). Such amenities would be located throughout the building, including potential use of terrace and rooftop areas.

Project Purpose and Need

The Development Site, which is City-owned, is located in the Special Downtown Brooklyn District, New York City's third-largest CBD. Downtown Brooklyn is a unique mixed-use area with some of the tallest and highest density developments—both residential and commercial—in the city. The Proposed Project would revitalize a City-owned land that currently houses underperforming commercial uses into a vibrant mixed-use development. This transformation will generate new

[4] This space is currently contemplated to be occupied by the DOHMH with anticipated uses including a medical clinic, office space, community facility space, and laboratories.

housing opportunities, including permanently affordable units, alongside state-of-the-art spaces for commercial (office and retail) and/or community facility uses, providing additional job opportunities for nearby residents and benefiting the surrounding neighborhoods. The Proposed Project strategically capitalizes the Development Site's proximity to various public transportation options and the neighborhood's existing mixed-use land use character.

Given the existing housing crisis in New York City and the capacity of the Development Site to support new residential and commercial and/or community facility uses, the Proposed Actions would result in more appropriate land uses and density on the Development Site in a transit-rich area of Downtown Brooklyn, compared to the conditions absent the Proposed Actions. Development of the Proposed Project would enliven the pedestrian experience at the Development Site by introducing residential uses (including permanently affordable residential units) and would be compatible with the surrounding neighborhood and CBD by preserving commercial office and retail uses.

The additional affordable housing units generated by the Proposed Actions would also align with the goals identified in the City's *Housing Our Neighbors: A Blueprint for Housing and Homelessness* report; more specifically, the blueprint's goal to redevelop underutilized government-owned land. Additionally, City of Yes for Housing Opportunity, a city-wide zoning text amendment aimed at addressing the city's housing crisis by increasing housing availability across all neighborhoods, was adopted in December 2024. The initiative enhances flexibility and incentives for diverse and affordable housing types while reducing regulatory hurdles for development, including the establishment of new higher density zoning districts. By introducing residential units, including permanently affordable units on the Development Site where none currently exist, the Proposed Project would address and further the City's goals and initiatives aimed at responding to the historic housing shortage.

In addition to its residential offerings, the Proposed Project would also provide non-residential uses benefiting the neighborhood. DCAS and DOHMH are seeking combined site selection and acquisition approval to facilitate a potential City use on the Development Site in the future. The potential use contemplated by the DOHMH include a medical clinic, office space, community facility space, and laboratories. By incorporating neighborhood-serving retail and commercial office and/or community facility spaces, the Proposed Project would align with the established character of the Downtown Brooklyn neighborhood, extending its existing dynamic mixed-use activity. This uniquely transit-rich area is well-suited for a mix of retail establishments which would not only support the area's existing commercial strength but also encourage further economic growth and accessibility, providing benefits to existing and future residents and visitors.

Furthermore, the Proposed Actions would add to the neighborhood's public amenities by providing approximately 4,745 sf of unenclosed open space available to the public located along Fulton Street on the southern end of the Development Site and a sidewalk widening along the Development Site's Flatbush Avenue Extension frontage.

The Proposed Actions are an appropriate reflection of the need to revitalize the site and existing building to provide much needed housing and commercial development consistent with the current housing goals of the City as well as the goals established by the Special Downtown Brooklyn District. Additionally, the Proposed Project's site planning incorporates a balanced design approach by providing ground floor retail alongside a large open space available to the public along the entire Fulton Street frontage to provide for much needed open space in the neighborhood and active streetscape for pedestrians.

The combination of affordable housing and public open space access facilitated by the Proposed Actions would support the "Thriving Neighborhoods" initiative of *OneNYC 2050*, which aims to foster communities that have safe and affordable housing and are well served by parks, cultural resources, and shared spaces. The Proposed Project seeks to transform an underutilized site in Downtown Brooklyn into a mixed-use, vibrant community hub, that aims to provide much-needed affordable housing, commercial amenities, and public open space.

Analysis Framework

The *2021 City Environmental Quality Review (CEQR) Technical Manual* will serve as guidance on the methodologies and impact criteria for evaluating the potential environmental effects of the Proposed Project that would result from the Proposed Actions. If the Proposed Actions allow for a range of possible scenarios that are considered reasonable and likely, the scenario with the worst environmental consequences is chosen for CEQR analysis. This is considered to be the reasonable worst-case development scenario (RWCDS), the use of which ensures that, regardless of which scenario actually occurs, its impacts would be no worse than those considered in the environmental review. The CEQR assessment examines the incremental differences between the RWCDS of the future without the Proposed Actions in place (No-Action condition) and the future with the Proposed Actions in place and the associated development operation (With-Action condition).

For the purpose of the environmental analyses, the No-Action condition represents the future absent the Proposed Actions and serves as the baseline by which the Proposed Project (or With-Action condition) is compared to determine the potential for significant environment impacts. The difference between the No-Action and With-Action conditions represents the increment to be analyzed in the CEQR process.

Additionally, as described in the Proposed Actions, the proposed zoning text amendment to the Special Downtown Brooklyn District (ZR 101-00 et. seq.) would only apply to "large qualifying lots."[5] As of the publication of this Draft Environmental Impact Statement (DEIS), no other "large qualifying lots" have been identified beyond the Development Site. Therefore, a conceptual analysis is not warranted.

Analysis (Build) Year

The analysis year for the Proposed Project is 2032. It is anticipated that the Proposed Project would be completed and occupied in 2032 following completion of the land use review process in 2026, expiration of all existing tenant leases by 2028, and approximately 60 months of construction.

[5] Lots that are greater than 30,000 sf with at least one full block street frontage or occupy an entire block.

Future No-Action Condition

In the No-Action condition, it is expected that the existing seven-story commercial office and retail building currently occupying the Development Site would remain as under existing conditions and be fully occupied (see **Table 1-1**).[6]

Future With-Action Condition

In the future With-Action condition, the Applicant would construct the Proposed Project on the Development Site, as described previously.

However, for conservative analysis purposes, the With-Action condition assumes a development that would include slightly more commercial office and retail spaces that would maximize the permitted total FAR to 23.0 (including 19.0 residential FAR). As such, under With-Action conditions, the Development Site would be redeveloped with a 72-story (840-foot-tall, including bulkhead),1,552,605-gsf (1,130,388 zsf; 23.0 FAR) mixed-use building, including 1,233,950 gsf (933,820 zsf; 19.0 FAR) of residential space and 217,500 gsf (196,568 zsf) of non-residential space. The non-residential space would include 88,500 gsf of commercial office space and/or community facility space that may be dedicated for future City use currently contemplated for DOHMH, and 129,000 gsf of commercial retail space (see **Table 1-1**).[7] Similar to the Proposed Project, development under the With-Action condition would include approximately 101,155 gsf of mechanical space on the cellar, fifth, 23rd, 42nd, and 65th floors. No accessory parking spaces would be provided in the With-Action condition. The With-Action condition will include 1,263 residential units, of which 253 to 379[8] units would be permanently income-restricted pursuant to MIH Options.

An approximately 4,745 sf open space available to the public would be provided in the With-Action condition.

Increment for Analysis

The program details under the No-Action condition, the With-Action condition, and increments over the No-Action condition for the Proposed Project are presented in **Table 1-1**.

[6] The Development Site's maximum permitted residential FAR under the existing C6-4 (DB) district is 12.0 (607,146 zsf) in MIH areas or other affordable or senior housing. Considering that the existing lot coverage is over 50 percent and that the remaining FAR is less than 50 percent of maximum allowed FAR, the Development Site is unlikely to be redeveloped within the underlying zoning district (C6-4 [DB]). Additionally, as the existing floor plates are unsuitable for residential conversion, the existing commercial building is expected to remain unchanged and would continue to function as an office building with ground-floor retail.

[7] The future non-residential tenants are not known at this time. They could include community facility tenants; the use that would generate the most conservative result would be used in any given technical area.

[8] The number of affordable dwelling units (DUs) reflects the possible range of affordability under MIH Option 1 (25 percent of residential floor area affordable to households at an average of 60 percent AMI), Option 2 (30 percent of residential floor area at an average of 80 percent AMI), and Option 3 (20 percent of residential floor area at an average of 40 percent AMI). Where applicable, the MIH Option that reflects the RWCDS for any given technical area will be analyzed to ensure a conservative analysis.

Table 1-1 Future No-Action and With-Action Comparison

		No-Action Condition	With-Action Condition	Increment
Commercial Office and/or Community Facility (GSF)		293,370	88,500[2]	-204,870
Commercial Retail (GSF)		35,548	129,000	+93,452
Residential	GSF	0	1,233,950	+1,233,950
	Dwelling Units (DUs)	0	1,263	+1,263
	Affordable DUs[1]	*0*	*253 to 379*	*+253 to 379*
Parking (SF)		46,190	0	-46,190
Parking (Spaces)		*140*	*0*	*-140*
TOTAL Proposed Project GSF		**375,108**	**1,552,605[3]**	**+ 1,177,497**
Open Space Available to the Public (SF)		0	4,745	+4,745
Residential Population		0	2,564	+2,564
Non-Residential Population		1,283	792	-491

Notes
[1] For CEQR analysis purposes, affordable units are identified as those at or below 80 percent of AMI.
[2] As described above, while the future non-residential tenants are not known at this time, they could include community facility tenants; the use that would generate the most conservative result would be used in any given technical area.
[3] Total floor area for the Proposed Project includes 101,155 gsf of mechanical space.

Public Review Process

The Proposed Project described above are subject to public review under the Uniform Land Use Review Procedure (ULURP), Section 200 of the City Charter, as well as CEQR procedures.

The City's ULURP process, mandated by Sections 197-c and 197-d of the New York City Charter, is designed to allow public review of ULURP applications at four levels: Community Board, Borough President, the City Planning Commission (CPC), and the City Council. The process begins with certification by NYC DCP that the ULURP application is complete. The application is then referred to the relevant Community Board (in this case, Brooklyn Community Board 2). The Community Board has up to 60 days to review (or 90 days if certification takes place in the month of June) and discuss the proposal, hold a public hearing, and adopt an advisory resolution on the ULURP application. The Borough President then has up to 30 days to review the application. The CPC then has up to 60 days, during which time a public hearing is held on the ULURP application. If approved by the CPC, the application is then forwarded to the City Council, which has 50 days to review the ULURP application. In the event the Council seeks to modify the application, the modifications are referred to the CPC for consideration, and the time for City Council action is extended to 65 days.

Additionally, the Proposed Project is subject to review by the NYC PDC, the City's regulatory design agency with jurisdiction over City-owned property. The Proposed Project has completed both the pre-submission and conceptual review phases. Following the ULURP process and City Council approval, PDC will conduct preliminary and final design reviews, with final sign-off occurring after construction is completed.

Environmental Review Process

CEQR and SEQRA

CEQR is a process by which agencies review discretionary actions for the purpose of identifying the effects those actions may have on the environment. The City of New York established CEQR regulations in accordance with the State Environmental Quality Review Act (SEQRA). In addition, the City has published a guidance manual for environmental review, the *CEQR Technical Manual*. The SEQRA and CEQR rules guide environmental review through the following steps:

- *Establish a Lead Agency*. Under CEQR, the "lead agency" is the public entity responsible for conducting environmental review. In accordance with CEQR rules, HPD is serving as the lead agency for environmental review.
- *Environmental Review and Determination of Significance*. The lead agency determines whether the proposed actions may have a significant impact on the environment. To do so, an Environmental Assessment Statement (EAS) must be prepared. This EAS is reviewed by the lead agency, which determines if the Proposed Actions and development have the potential to result in any significant adverse impacts on the environment. As the Proposed Actions are classified as a "Type I Action" and the EAS identified the potential for significant adverse impacts on the environment in certain impact categories, an EIS is required and must be prepared and a determination of significance must be issued. A Positive Declaration will be issued by HPD as lead agency.
- *Draft Scope of Work*. A Draft Scope of Work (DSOW) is required for the preparation of an EIS and will contain a description of the Proposed Actions and the tasks that will be undertaken to analyze the potential environmental impact of the Proposed Project. The issuance of the DSOW marks the beginning of the public comment period. The scoping process allows the public a voice in framing the scope of the EIS. The scoping document sets forth the analyses and methodologies that will be utilized to prepare the EIS. During the public comment period, those interested in reviewing the DSOW may do so and give their comments to the lead agency. The public, interested agencies, and elected officials are invited to comment on the DSOW, either in writing or orally, at a public scoping meeting.
- *Final Scope of Work*. Comments received during the scoping meeting and written comments received up to 10 days after the meeting will be considered and incorporated, as appropriate, into the Final Scope of Work (FSOW). The FSOW will incorporate all relevant comments made on the DSOW and revise the extent or methodologies of the studies, as appropriate, in response to comments made during the CEQR scoping process.
- *Draft EIS*. The DEIS will be prepared in accordance with the FSOW. Once the lead agency is satisfied that the DEIS is complete, the document will be made available for public review and comment. A public hearing will be held on the DEIS in conjunction with the CPC hearing on the land use applications to afford all interested parties the opportunity to submit oral and written comments.
- *Final EIS*. At the close of the public review period, a Final EIS (FEIS) will be prepared. Comments made on the DEIS will be responded to and incorporated into the FEIS, as appropriate. Once the lead agency certifies that the FEIS is complete, it issues a Notice of Completion (NOC) describing the FEIS, the project, and how to obtain copies of the FEIS. The lead and any involved agencies must allow at least ten (10) calendar days after the publication of the NOC to consider the findings in the FEIS before a decision is made. To demonstrate that the responsible City decision-maker has

taken a hard look at the impacts, alternatives, and mitigation measures, the lead and each involved agency must adopt a formal set of written findings, known as a "Statement of Findings," setting forth its decision regarding the action it will take and drawing its conclusions about any significant adverse environmental impacts and how to avoid or mitigate them. Each lead or involved agency is responsible for its own Statement of Findings; once each adopts its findings, the CEQR process is concluded, and the agencies may then take their actions.

2

Land Use, Zoning, and Public Policy

This section considers the potential for the Proposed Actions to result in significant adverse impacts to land use, zoning, and public policy. Under the guidelines of the *2021 City Environmental Quality Review (CEQR) Technical Manual*, this analysis evaluates the uses in the area that may be affected by the Proposed Actions and determines whether the Proposed Project is compatible with land use, zoning, and public policy conditions, or may otherwise affect them. The analysis also considers the Proposed Project's compatibility with zoning regulations and other public policies Applicable to the area.

Introduction

The New York City Department of Housing Preservation and Development (HPD) in conjunction with the New York City Department of Health and Mental Hygiene (DOHMH) and the Department of Citywide Administrative Services (DCAS) (each a co-applicant, and collectively, the Applicant), is seeking approval for a zoning map amendment, zoning text amendments, disposition of City-owned property, site selection and acquisition of real property interest, certification to establish and facilitate a transit volume, and an amendment to the Brooklyn Center Urban Renewal Plan (URP) (collectively, the Proposed Actions) to facilitate a mixed-use development in the Downtown Brooklyn neighborhood of Brooklyn, Community District (CD) 2. The Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with approximately 1,544,875 gross square feet (gsf), 72-story (840-foot-tall) mixed-use building (the Proposed Project) in the Downtown Brooklyn neighborhood of Brooklyn, Community District (CD) 2. As described in **Chapter 1, Project Description**, for conservative analysis purposes, the With-Action condition assumes a development that would include slightly more commercial office and retail spaces that would

maximize the permitted 23.0 FAR (including 19.0 residential FAR). As such, under With-Action conditions, the building would have a total of approximately 1,552,605 gsf, including 1,233,950 gsf (1,263 dwelling units [DUs]) of residential floor area, 129,000 gsf of retail space, and 88,500 gsf of office space and/or community facility space that may be dedicated for future City use.

The Proposed Project would also include public realm improvements, including an approximately 4,745 square foot (sf) open space available to the public on the southern portion of the Development Site, an expanded sidewalk along the Development Site's Flatbush Avenue Extension frontage, and surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site.

Principal Conclusions

The analysis presented in this chapter concludes that the Proposed Actions would not result in significant adverse impacts on land use, zoning, or public policy.

Land Use and Zoning

The Proposed Actions would result in an expansion of existing land uses in the study area, and the Proposed C6-12 zoning district would reflect appropriately the unique nature of the Development Site encompassing an entire block situated in a transit-rich area and surrounded by other high-density mixed-use buildings in the study area. The permitted bulk and height under the Proposed Actions would help revitalize the Development Site to increase housing capacity, furthering the current housing goals of New York City as well as the goals of the Special Downtown Brooklyn District (DB). Alongside its residential offerings, the Proposed Project would also provide non-residential uses, such as local retail space, office space, and/or community facility space serving the local community, enhancing the pedestrian experience, and serving the goals of the DB. The Proposed Actions would also enable much needed public realm improvements, such as an open space that would be made available to the public. The mix of ground-floor retail and open space is expected to continue to support the area's existing commercial activities while improving the pedestrian experience, benefiting area residents and visitors. The Proposed Actions would not conflict with the current surrounding zoning or existing uses. Rather, the Proposed Actions would facilitate developments that would integrate well with this transit-rich area and the existing zoning framework within the study area. Therefore, the Proposed Actions would not adversely affect surrounding land uses, zoning, or public policy (see below).

Public Policy

The Proposed Actions would be supportive of several New York City policies, including the goals set forth in the *Brooklyn Center Urban Renewal Plan*; the *Brooklyn Cultural District* and *Business Improvement Districts*; *Housing Our Neighbors: A Blueprint for Housing and Homelessness* (Housing Blueprint); *OneNYC 2050*; the *Where We Live NYC/Fair Housing Together* Plan; and City of Yes initiatives (including City of Yes for Housing Opportunity, Economic Opportunity, and Carbon Neutrality). The Proposed Actions would facilitate more housing development, including permanently affordable housing, along with other local retail uses, commercial offices, and/or community facility space to serve the local community and enhance the pedestrian experience within the Downtown Brooklyn neighborhood and DB. Additionally, the redevelopment of the Development Site would

offer new retail opportunities at commercial corridors, supporting the recovery of local retail. The Proposed Project would also seek to incorporate a multitude of sustainable measures and integrate high-performance building strategies, furthering the City's sustainability goal.

The proposed public realm improvements facilitated by the Proposed Actions would consist of a publicly accessible open space and an expansion of the sidewalk along the portion of Flatbush Avenue Extension fronting the Development Site. The Proposed Project would also provide surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site. The proposed mixed-use development would introduce an additional 24-hour population to the Development Site and its surrounding neighborhood, activating the area with new residents, workers and visitors and contributing to a more resilient local economy in this neighborhood.

Methodology

This analysis of land use, zoning, and public policy follows the guidelines set forth in the *CEQR Technical Manual* for a preliminary assessment (Section 320). According to the *CEQR Technical Manual*, a preliminary land use and zoning assessment:

- Describes existing and future land uses and zoning information, and describes any changes in zoning that could cause changes in land use;
- Characterizes the land use development trends in the area surrounding the project site that might be affected by the proposed action; and
- Determines whether the proposed project is compatible with those trends or may alter them.

The following assessment method was used to determine the potential for the Proposed Actions to result in significant adverse impacts on Land Use, Zoning, and Public Policy:

1. Establish a "study area", a geographic area surrounding the project site to determine how the proposed project may affect the immediate surrounding area. For this assessment, a study area of 400 feet surrounding the development site was used.
2. Identify data sources, including any public policies (formal plans, published reports) to be used to describe the existing and No-Action conditions related to Land Use, Zoning, and/or Public Policy.
3. Assess the Proposed Actions' potential effects on Land Use, Zoning and Public Policy to determine whether the proposed project is consistent with or conflicts with area land uses, zoning, or the identified policies.
    - If a proposed project could conflict with the identified policies, a detailed assessment would be conducted; or
    - If the proposed project is found to not conflict with the identified policies, no further assessment is needed.

Study Area Definition

According to the *CEQR Technical Manual*, the appropriate study area for land use, zoning, and public policy is related to the type and size of a proposed project, as well as the location and context of the area that could be affected by the project. Study area radii vary according to these factors, with suggested study areas ranging from 400 feet for a small project to 0.5 miles for a very large project.

In accordance with CEQR guidelines, for the Proposed Actions, land use, zoning, and public policy are described and analyzed within the 400-foot study area (see **Figure 2-1**).

Assessment

Existing Condition

Land Use

Development Site and Study Area

As detailed in the **Chapter 1 Project Description**, the Development Site (Brooklyn Block 2093, Lot 1) is owned by the City of New York, and has a lot area of approximately 49,153 sf.[1] As shown in **Figure 2-1**, the Development Site is bounded by Dekalb Avenue to the north, with approximately 193 feet, 2 inches of frontage; Fulton Street to the south, with approximately 129 feet, 8 inches of frontage; Hudson Avenue to the east, with approximately 365 feet, 1 inch of frontage; and Flatbush Avenue Extension to the west, with approximately 333 feet, 7 inches of frontage.

The Development Site, subject to a long-term lease with Fulton DeKalb Associates L.P., is currently improved with a seven-story, 372,214-gsf commercial building containing 293,370 gsf of commercial office space, 32,654 gsf of ground floor retail, and 46,190 gsf of below-grade parking (which accommodates 140 public parking spaces). Constructed in 1974, the existing building houses a Verizon call center in its office space. The ground floor retail space is primarily tenanted with local retail chains. All current leases, which are between Fulton DeKalb Associates, L. P. and sublessees, are expected to terminate before 2028, and all tenants will vacate the building by January 1, 2028.

An entrance to the Dekalb Avenue subway station (B/Q/R lines) is located at the northwest corner of the Development Site. This entrance includes a street elevator and two staircases that lead out to the station's mezzanine. Additionally, there are three curb cuts located along the Hudson Avenue frontage—two of which serve the existing building's loading areas, with the third providing access to a public parking garage. One of the two curb cuts for loading purposes measures approximately 20 feet and the other 60 feet in width; they are separated by approximately 50 feet. The curb-cut for parking garage access measures approximately 40 feet in width. An existing Real Estate of Utility Companies (REUC) easement granted by MTA (REUC No. B119-E271) extends diagonally west to east on the Development Site. This easement restricts development that exceeds a depth of approximately six feet below grade, where the Metropolitan Transit Authority (MTA) subway lines are situated (see **Figure 2-2**).

Study Area

As described above, the study area encompasses a 400 feet radius around the Development Site, characterized by a diverse mix of land uses. As indicated in **Figure 2-1** and **Table 2-1**, mixed residential and commercial uses make up the majority of lots in the study area. It also contains public facilities and institutions uses, transportation and utility, open space and outdoor recreation, and vacant land.

[1] The lot size is based on a site survey dated December 4, 2024.

The mixed commercial and residential buildings include the 35-story mixed-use tower at 625 Fulton Street that is near completion; the 74-story, 1,066-foot-tall Brooklyn Tower at 9 DeKalb Avenue, constructed in 2022; a 43-story, 497-foot residential tower with ground floor retail at 540 Fulton Street, constructed in 2023; and the 27-story, 268-foot-tall Brooklyn Grove at 10 Nevins Street (constructed in 2019). Additionally, the southeastern portion of the study area is the Brooklyn Culture District, which houses over 50 cultural institutions anchored by several Brooklyn Academy of Music (BAM) theaters.[2] The western and southwestern sections along Fulton Street are the Fulton Mall regional shopping corridor. Separately from the Proposed Actions, the Downtown Brooklyn Partnership (DBP) and NYC Parks Department are currently upgrading the Fulton Mall streetscape to create a greener and more aesthetically pleasing shopping destination.

Public facilities and institutional uses are generally found in the northern portion of the study area, which features the Downtown Brooklyn campus of Long Island University and the Brooklyn Hospital Center.

In terms of open space, to the north of the Development Site is University Place, is a 1.16-acre triangle/plaza adjacent to and directly west of the Long Island University campus. University Place features benches, open seating, and a large modernist sculpture. Additionally, directly south of the Development Site is Fox Square, a 0.45-acre public plaza, which features benches, landscaping, and street trees and is maintained by DBP.

Table 2-1 Study Area Generalized Land Use

Land Use		Number of Lots[2]	Percentage of Total Lots	Lot Area (sf)	Percentage of Total Land Area
Residential	Multi-Family Walk-Up Buildings	1	2.1%	2,010	0.2%
	Multi-Family Elevator Buildings	1	2.1%	16,469	1.9%
Mixed Residential & Commercial Buildings		25	53.2%	332,849	37.9%
Commercial & Office Buildings		11	23.4%	161,870	18.4%
Transportation & Utility		1	2.1%	6,094	0.7%
Public Facilities & Institutions		4	8.5%	300,992	34.2%
Open Space & Outdoor Recreation		1	2.1%	7,364	0.8%
Parking Facilities		1	2.1%	32,800	3.7%
Vacant Land		2	4.3%	18,905	2.1%
Grand Total		**47**	**100.0%[1]**	**879,353**	**100.0%[1]**

Source: NYC DCP, *Map PLUTO 24v4*

[1] Number may not add up to 100 percent due to rounding.

[2] All Lots intersecting the 400-foot radius study area were included in analysis.

There are two vacant lots within the 400 feet study area—Block 149, Lot 30 and Block 2095, Lot 10. The structure on Block 149, Lot 30 was demolished in 2019, and it does not have any active DOB job

[2] The Brooklyn Cultural District: The Brooklyn Cultural District - Downtown Brooklyn, accessed on March 10, 2025

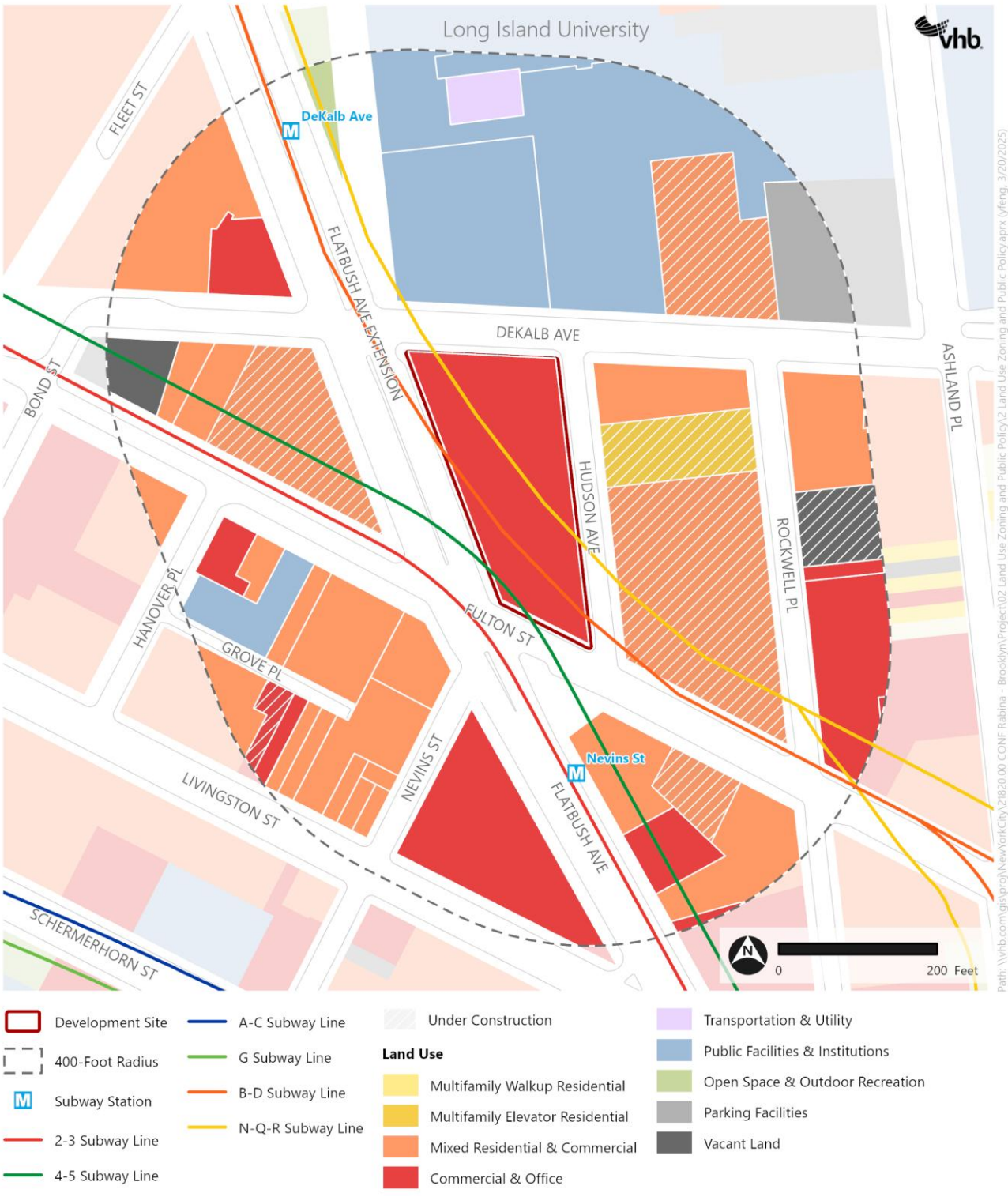
filings. Block 2095, Lot 10 (19 Rockwell Place) is currently under construction with a 27-story residential building. To the northeast is a parking lot that serves the Brooklyn Hospital Center.

The mixed land uses are encouraged by the three Business improvement Districts (BIDs) that encompass the study area. To the east of the Flatbush Avenue Extension is the MetroTech BID, to the southwest is the Court-Livingston-Schermerhorn (CLS) BID, and to the west of the Flatbush Avenue Extension is the Fulton Mall Improvement Association BID. Managed by the DBP, all three BIDs focus on enhancing the area's attractiveness, economic vitality, and quality of life through supporting business and retention, public space and street scape development, and promoting cultural assets and community engagement. The Development Site is within the MetroTech BID, which was founded in 1992 and expanded in 2016.

The study area is exceptionally well served by public transportation. In addition to the Dekalb Avenue subway station (B/Q/R lines) entrance within the Development Site, the Nevins Street subway station (2/3/4/5 lines) is just south of the Development Site. Additionally, MTA New York City Transit (NYCT) operates several bus routes in the vicinity, including the B25, B26, B38 B41, B45, B52, B67, B69, and B103 busses. A dedicated bus lane runs along Fulton Street, adjacent to the Development Site. A CitiBike station with 71 docking stations is also located along the Development Site's northern frontage facing DeKalb Avenue. Within the 400 feet study area, there are five CitiBike docking stations, as well as several bike lanes along Asheland Place, DeKalb Avenue, and Bond Street (see **Photo 2-1** through **Photo 2-4**).

Three principal arterials roads are in the study area—Flatbush Avenue Extension, Fulton Street, and DeKalb Avenue. Flatbush Avenue Extension is a 120-foot-wide principle arterial road that runs north-south through Brooklyn with multiple lanes of traffic, pedestrian islands, and street parking on the east side. Fulton Street, the Development Site's southern frontage, is an 80-foot-wide principle arterial and a major east-west commercial street with four lanes of traffic and bus lanes. DeKalb Avenue, the Development Site's northern frontage, is a 70-foot-wide principle arterial road with two lanes of westbound traffic, a bike lane, and landscaped sidewalks (see **Photo 2-5** through **Photo 2-8**). Additionally, Hudson Avenue, the Development Site's eastern frontage, is a 50-foot-wide roadway with one northbound lane (with the exception of a small northern segment providing two-way traffic allowing southbound access to the parking garages at both the Development Site and the neighboring building at 80 DeKalb Avenue), approximately 13-foot-wide sidewalks, and the three curb cuts described above that provide access to the building's loading and parking areas.

Figure 2-1 Land Use Map



Source: NYC DCP (2024); NYC Parks (2024)

Photo 2-1 View of the Development Site Looking Southwest at the Intersection of Dekalb Avenue



Photo 2-2 View of the Development Site Looking North Along Fulton Street



Photo 2-3 View towards the Development Site at the Intersection of Flatbush Avenue and Fulton Street



Photo 2-4 View Towards the DeKalb Avenue Subway Entry



Photo 2-5 View from the Development Site at the Intersection of Fulton Street and Flatbush Avenue



Photo 2-6 View at the Development Site Looking Southeast along Fulton Street



Photo 2-7 View from the Development Site at the Intersection of Fulton Street and Flatbush Avenue

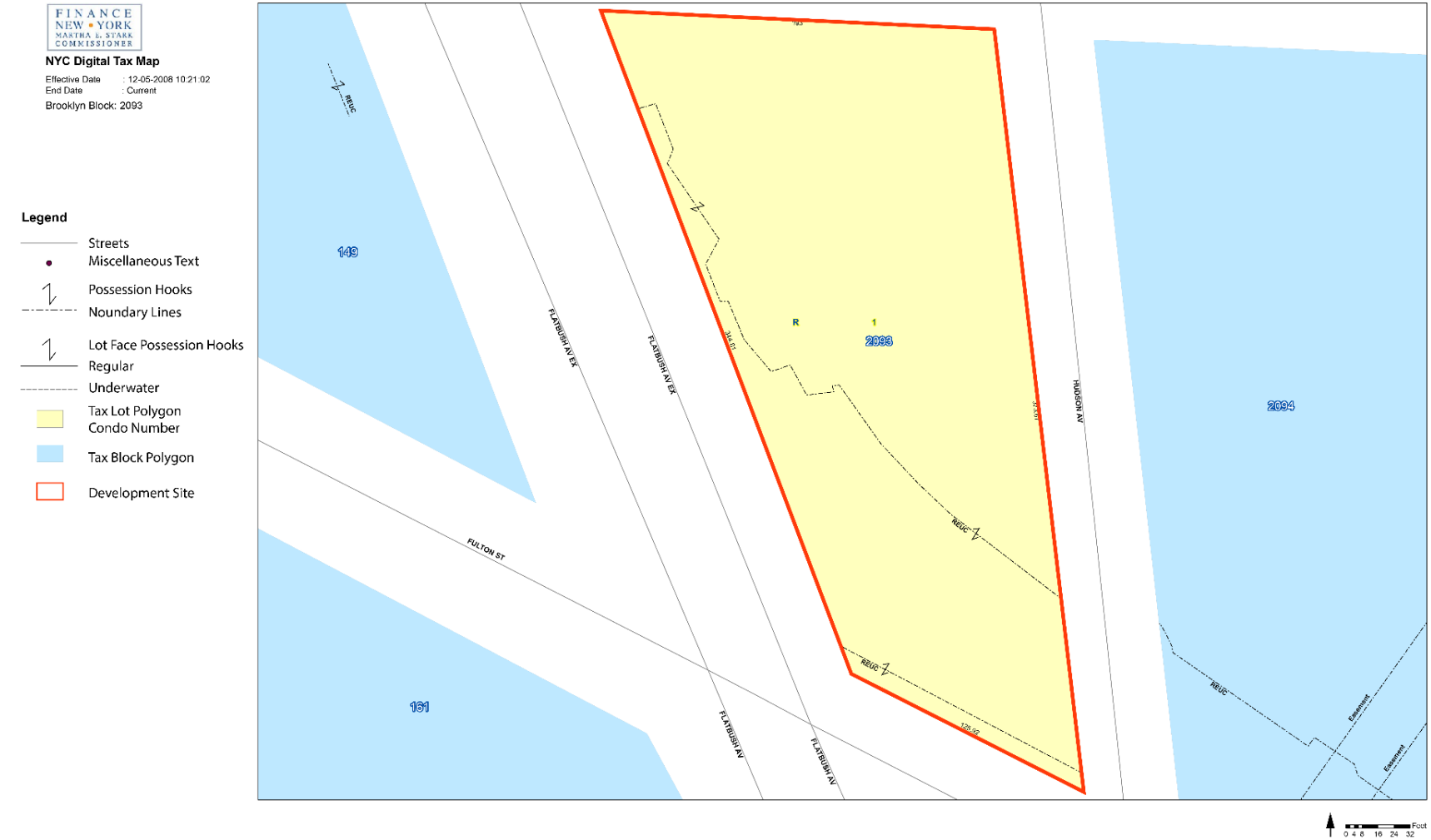


Photo 2-8 View from the Development Site at the Intersection of DeKalb Avenue and Hudson Avenue



Photos taken on March 7, 2025

Figure 2-2 Tax Map



Zoning

Development Site

The Development Site is in a C6-4 zoning district within the DB, which permits a maximum commercial Floor Area Ratio (FAR) of 10.0 and a maximum residential FAR of 10.0 that can be increased to 12.0 FAR in MIH areas or other qualifying affordable or senior housing. The Development Site is also within the Brooklyn Center Urban Renewal Area (URA) which was originally established in 1970 and will remain in effect until July 2044 (see **Figure 2-3**).[3] The goals of the Brooklyn Center URP are to develop the Brooklyn Center URA in a comprehensive manner, removing blighted area and maximizing appropriate land uses such as high-quality housing, community facilities and retail uses. There are a total of 28 sites within the Brooklyn Center URA that have been or would be acquired by the City for redevelopment pursuant to the Fifth Amended Brooklyn Center URP, the majority of which are designated for commercial, residential, and community facility uses, with the remainder being preserved for public space uses which also permit below-grade parking and accessory uses.[4] The Development Site is identified as Site 2 in the Brooklyn Center URA.

C6-4 districts are high-density non-contextual commercial districts that allow for a range of commercial uses as well as residential and community facility uses. These regulations accommodate a range of moderate- to high-density residential and commercial uses, generally resulting in either buildings with specified height limits or towers-on-a-base without height limits. In C6-4 districts, buildings are subject to a sky exposure plane regulation, which governs the massing of buildings by controlling how tall structures can rise, while allowing towers to penetrate the sky exposure. Furthermore, buildings in these districts are exempt from parking requirements for all permitted uses, reflecting the district's design for limited need for on-site parking due to proximity to transit and the dense urban setting.

As discussed, the Development Site is also mapped in the DB, which establishes goals of promoting public health, safety, and general welfare, with specific goals that include strengthening Downtown Brooklyn's business core by enhancing the working and living environment, fostering appropriate development and growth, and creating a transition between the commercial core and nearby residential communities. It encourages the design of new buildings that complement the area's character by establishing special use and bulk regulations, preserving the historic architectural character of certain streets, and supporting pedestrian-oriented ground-floor uses. Flexible height and setback regulations in this district facilitate development on lots in an irregular and varied street grid typical of Downtown Brooklyn. The district also aims to improve the quality of development by providing public amenities, enhancing visual amenity through special sign regulations, and promoting the most beneficial use of land to protect the value of properties and safeguard the City's tax revenues.

The Development Site is considered a "primary transit adjacent site" because it is located in an "eligible zoning district" (i.e., the underlying C6-4 district, which has an R10 residential equivalent), within 50 feet of a mass transit station (i.e., the DeKalb Avenue Station), and has a lot area greater than 5,000 square feet.

[3] Fifth Amended Urban Renewal Plan of Brooklyn Center Urban Renewal Area, The City of New York Department of Housing Preservation and Development. Published in September; Revised in April 2004.

[4] ULURP No. C040173 HUK and N040176 HGK

Figure 2-3 Existing Zoning Map



Source: NYC DCP (2024); NYC Parks (2024)

Study Area

As shown in **Figure 2-3,** the western portion of the study area is predominately zoned C6-4.5 and C6-4, with a C6-9 district mapped south of Fulton Street. The area north of the Development Site is zoned R6.

In addition to the C6-4 districts discussed above, C6-4.5 districts permit a maximum commercial or community facility FAR of 12.0. The C6-9 districts allow a maximum FAR of 18.0 for commercial or community facility uses. However, specific regulations limit the FAR to 12.0 for commercial or community facility and 9.0 for residential uses in the C6-9 district bounded by Flatbush Avenue, State Street, Third Avenue, and Schermerhorn Street. Both C6-4.5 and C6-9 districts have a residential equivalent of an R10, permitting a maximum residential FAR of 10.0 that can be increased to 12.0 FAR in MIH areas or other qualifying affordable or senior housing. The C6-4 districts do not have maximum heights but allow for towers to penetrate a sky exposure plane without requiring a contextual base. C6-4.5 and C6-9 districts have maximum building heights of 255 feet.

R6 districts are medium-density non-contextual residential districts that allow residential uses of all types and some community facility uses. Residential uses include single- and two-family buildings and larger multi-family apartment buildings. R6 districts permit a maximum community facility FAR of 4.8 and a residential FAR of 3.9 in MIH areas or other qualifying affordable or senior housing on both narrow and wide streets. There are two sets of bulk regulations in the R6 districts—standard regulations, which permit high lot coverage buildings with height limits, and height factor regulations, which allow for small multi-family buildings on small zoning lots and taller buildings on larger lots with setback from the street. Buildings developed pursuant to height factor regulations are often tall buildings set back from the street and surrounded by open space and on-site parking. The R6 districts within the study area are occupied by Long Island University buildings, including the Health Science Center, Athletic Fields, and multiple multi-purpose facility buildings. Most of these buildings were constructed prior to 1962, with the exception of the Conolly Residence Hall and the adjacent Athletic Filed, which were constructed and expanded in 2019. Additionally, public open space (University Place) is mapped west of the R6 district, where the entrance to the Long Island University is located.

The majority of the surrounding area is within the DB, New York City's third-largest Central Business District (CBD). Approved in 2004, the DB (ULURP No. N 040171 ZMK) provides special height and setback regulations and urban design guidelines which has allowed for some of the largest and highest density developments in the city while promoting and supporting the continued growth of Downtown Brooklyn as a unique mixed-use area. The higher density zoning districts (including C5-4, C6-4, C6-6, and C6-9 districts) allow either Quality Housing buildings with height limits or towers-on-a-base without height limits. The moderate-density zoning districts allow for flexible building envelopes with height limits. The DB district's mandatory district plan elements include special street wall location regulations that require street wall continuity, mandatory sidewalk widenings along Willoughby Street, and off-street relocation or renovation of a subway stair. The subway stair relocation is required for any development that is constructed on a zoning lot that is minimum 5,000 sf and fronts on a sidewalk containing a stairway entrance or entrances into a subway station. The current DB has two subdistricts—Atlantic Avenue and Fulton Mall. The Atlantic Avenue subdistrict has bulk and use regulations intended to preserve the scale and character of Atlantic Avenue, including certain architectural features, while Fulton Mall subdistrict's bulk and use regulations are intended to create an attractive shopping environment. The Fulton Mall subdistrict is mapped directly west of the Development Site and emphasizes retail continuity, human-scale design, pedestrian movement, and enhanced public spaces.

The entire study area is located within the Inner Transit Zone, where no parking requirements are mandated for new residential dwellings, emphasizing the site's proximity to mass transit and its suitability for dense, transit-oriented development. The study area east of the Flatbush Avenue Extension is also within the FRESH Zone, which provides zoning incentives for grocery stores and healthy food retail in underserved areas.

Recent rezonings affecting the study area include the Downtown Brooklyn Development (ULURP No. C 040171 ZMK; CEQR No. 03DME016K), and the 570 Fulton Street Rezoning (ULURP No. C 180459 ZMK; CEQR No. 18DCP011K). The Downtown Brooklyn Development rezoning increased the FAR for portions of the DB to allow for greater commercial and residential density in the DB, along with special height and setback regulations. The 570 Fulton Street Rezoning changed a portion of the C6-4 district to a C6-9 district, established a maximum FAR of 18.0 for commercial or community facility uses in C6-9 districts, and modified bulk regulations applicable to C6-9 districts within the DB.

In summary, the existing zoning districts within the study area reflect the ongoing growth and transformation of Downtown Brooklyn. The combination of high-density commercial zones, medium-density residential areas, and special districts for public-amenity and transit-oriented development ensure a balanced approach to fostering a dynamic, mixed-use community with access to vital public infrastructure and spaces.

Public Policy

Brooklyn Center Urban Renewal Plan (URP)

As discussed, the study area is within the Brooklyn Center URA, which was established in 1970 and authorizes the City to acquire sites in the Brooklyn Center URA for redevelopment in accordance with the Brooklyn Center Urban Renewal Plan (URP). The Brooklyn Center URP was modified in the Downtown Brooklyn Development ULURP application in 2004, with its effect assessed as part of the Downtown Brooklyn Development FEIS (CEQR No. 03DME016K). This amendment extended the expiration date of the plan from 2010 to 2044, expanded the Brooklyn Center URA, designated new proposed development sites, removed certain previously designated urban renewal sites, modified the definition of "Commercial" land use to permit residential and community facility use, and modified the definition of "Public Space" land use to permit below-grade parking and access uses. The Brooklyn Center URP aims to enhance commercial, retail, and residential spaces while also creating new opportunities for office, educational, cultural, manufacturing, and open space development. Additionally, this plan aims to improve traffic safety and streamline the circulation system by providing distinct separations for major pedestrian and vehicular flows.

Brooklyn Cultural District

The study area is within the Brooklyn Cultural District, a joint project between New York City Department of City Planning (NYC DCP), the New York City Economic Development Corporation (EDC), the New York City Department of Cultural Affairs (DCA), HPD, and the DBP. Development of the Brooklyn Cultural District is a key component of the Downtown Brooklyn Strategic Plan unveiled in July of 2012. The goal of the Brooklyn Cultural District is to support the existing concentration of established and emerging arts organizations and encourage economic and cultural development with new arts spaces, streetscape enhancements, and affordable housing. The Brooklyn Cultural District is anchored by BAM. Plans for the district include new performance and rehearsal spaces,

office space for a diverse group of local arts organizations, a public plaza for the community, a library, a cinema, and affordable housing.

Business Improvement Districts

A BID is a public-private partnership to stimulate economic development and improve the overall quality of life for merchants, residents, and patrons within a defined boundary. There are three BIDs within the study area—MetroTech BID, Fulton Mall BID, and CLS BID. The Development Site is located within the MetroTech BID. Managed by DBP, the three BIDs work in combination to attract new businesses and improve the environment for existing companies, facilitate the construction of public spaces and streetscapes that promote an active and cohesive community, support and promote Downtown Brooklyn's cultural assets, and encourage a sense of place and an engaged civic community. All BIDs provide supplementary sanitation and public safety services, marketing support, placemaking events at public plazas, and streetscape improvement and beautification.

Housing Our Neighbors: A Blueprint for Housing and Homelessness

Released by the City in 2022, the Housing Blueprint is a broad strategy to provide access to affordable, high-quality housing for all New Yorkers, including households experiencing homelessness, New York City Housing Authority (NYCHA) residents, families, single New Yorkers, renters, and homeowners alike. The Housing Blueprint aims to harness all the benefits that housing can provide to bolster access to opportunity, promote economic stability and mobility, improve health and safety, and increase racial equity.

The five key housing pillars outlined in the Blueprint are as follows:

- Transform NYCHA
- Address Homelessness and Housing Instability
- Create and Preserve Affordable Housing
- Improve the Health and Safety of New Yorkers
- Reduce Administrative Burden

The plan details the specific actions that agencies and stakeholders should undertake to address these goals. Similar to the previous administration's *Housing New York* plan, *Housing Our Neighbors* emphasizes the importance of building new housing and expanding the availability of different housing types, including affordable housing and senior housing. In addition, the plan emphasizes cooperation between numerous City agencies.

OneNYC 2050

In April 2015, the Mayor's Office of Sustainability and the Mayor's Office of Climate Resiliency released *OneNYC*, a comprehensive plan for a sustainable and resilient city. *OneNYC* represents a reworking of the sustainability plan known as "PlaNYC: A Greener, Greater New York." Like PlaNYC, growth, sustainability, and resiliency remain at the core of *OneNYC*, but promoting economic equity is a guiding principle throughout the plan. *OneNYC* has since been updated to *OneNYC 2050*, which was released in 2019 and consists of eight goals and thirty initiatives.

The goals of the plan are as follows:

- **A Vibrant Democracy:** through empowering participation, welcoming immigrants, promoting justice and equal rights, and promoting democracy and civic innovation;
- **An Inclusive Economy:** through good paying jobs and job training, economic security through fair wages and benefits, expanded decision making power of workers and communities;
- **Thriving Neighborhoods:** through affordable housing, access to neighborhood open spaces and cultural resources, community safety, and place-based community planning;
- **Healthy Lives:** through high quality, accessible health care, addressing health and mental health needs of communities, making healthy lifestyles easier, and designing a healthy physical environment;
- **Equity and Excellence in Education:** through early childhood education, equity in K-12 opportunity, and increasing integration, diversity, and inclusion in NYC schools;
- **A Livable Climate:** through carbon neutrality and clean electricity, resilience, economic opportunities through climate action, and climate accountability and justice;
- **Efficient Mobility:** through modern mass transit, safe and accessible streets, reduced congestion and emissions, and regional and global connections; and
- **Modern Infrastructure:** through investments in core physical infrastructure and hazard mitigation, digital infrastructure improvement, and best practices for asset maintenance and capital project delivery.

Where We Live NYC/Fair Housing Together Plan

The *Where We Live NYC Plan* is the City's blueprint for fair housing in the five boroughs to break down barriers to opportunity and build more integrated, equitable neighborhoods. This five-year plan seeks to make reparations for the years of unfair housing policies faced by minority communities.

The goals of the plan are as follows:

- Combating housing discrimination by securing more resources and protections for vulnerable populations;
- Encouraging development projects in all neighborhoods that increase accessible housing for low-income families;
- Preserving affordable housing and preventing displacement through enhanced tenant protections and new investment in affordable housing;
- Empowering families with rental assistance to utilize their benefits in neighborhoods with plentiful amenities;
- Creating better and more inclusive housing options for people with disabilities; and
- Investing in neighborhoods with structural disadvantages.

To achieve these goals, the City plans to employ various strategies, such as promoting equitable housing growth, expanding government housing programs, safeguarding tenants against harassment and eviction, facilitating affordable and accessible housing for people with disabilities, enhancing social resilience, reducing violence, fostering more diverse and integrated schools, and improving public transportation accessibility.

City of Yes

The City of Yes initiative, launched in June 2022, modernized zoning regulations to enhance carbon neutrality, economic growth, and housing access. NYC DCP, in collaboration with the Mayor's Office of Climate and Environmental Justice (MOCEJ), drafted zoning amendments to remove barriers and created opportunities for high-performance building retrofits, decarbonization retrofit projects, solar energy, electric vehicle charging, energy storage systems, and other measures to help achieve the City's ambitious climate goals across the following four broad categories: energy, buildings, transportation, and waste. To foster economic growth, NYC DCP proposed zoning changes to support small businesses and commercial corridors for post-pandemic recovery. The strategy includes removing barriers for businesses seeking new spaces, simplifying regulations for booming sectors like life sciences, revitalizing commercial areas by easing restrictions, and updating old zoning language for clarity. The initiative also seeks to expand housing opportunities by taking a citywide approach to diversifying the housing supply and ensuring equitable access for all New Yorkers. This includes amending regulations from highest to lowest density areas to accommodate diverse housing types, countering redlining and segregation legacies by encouraging two-family houses, accessory dwelling units, small and medium apartment buildings, and shared housing models. It aims to permit larger affordable housing developments than market-rate ones in most medium and high-density districts, adjust zoning for converting old offices and loft buildings to housing, reduce parking requirements, and facilitate building alterations for homeowners and small property owners.

No-Action Condition

Land Use

Development Site

Absent the Proposed Actions, the Applicant would not construct any new buildings on the Development Site. It is expected that the exiting seven-story commercial office and retail building currently occupying the Development Site would remain as under existing conditions and its commercial spaces would be fully occupied by office and retail tenants.

Study Area

By the 2032 Analysis Year, seven projects are expected to be completed and in operation within the study area (see **Figure 2-4** and **Table 2-2**). These projects would introduce approximately 2,314 residential units, 261,965 sf of commercial floor area, and 55,000 sf of community facility floor area.

Figure 2-4 No-Action Developments



Source: NYC DCP, Housing DB 24V4

Table 2-2 No-Action Projects Within 400-Foot Study Area

Map No.	Address	Net Change in DUs	Commercial Zoning Floor Area (SF)	Community Facility Zoning Floor Area (SF)
1	291 Livingston Street	--	50,914 (103-hotel keys)	--
2	625 Fulton Street*	1,044	--	--
3	12 Rockwell Place*	52	86,693	--
4	570 Fulton Street	163	87,000	--
5	589 Fulton Street	557	37,356	--
6	19 Rockwell Place	174	--	--
7	89 DeKalb Avenue (91 DeKalb)	324	--	55,000
	Total	**2,314**	**261,965 (103 hotel keys)**	**55,000**

Source: NYC DCP, Housing DB 24v4; New York YIMBY

Note: This list includes filed applications, approved applications, and projects permitted for construction. Excludes projects with no net change in uses.

*No. 2 and No. 3 are part of the same development.

Zoning

In the No-Action condition, no known changes to zoning are anticipated to affect the Development Site or the study area.

Public Policy

In the future No-Action Condition, there are no known public policy changes that are anticipated to affect the Development Site or the study area. Existing public policies are expected to remain in effect.

With-Action Condition

Land Use

Development Site

As detailed in Chapter **1, Project Description**, in the future with the Proposed Actions, the Applicant would construct the project under the With-Action condition, which would consist of a 72-story, 840-foot-tall (including an allowance for 40 feet mechanical bulkhead) mixed-used building consisting approximately 1,552,605 gsf (1,130,388 zsf, 23.0 FAR). The With-Action project would include approximately 1,233,950 gsf (933,820 zsf, 19.0 FAR) of residential floor area and 217,500 gsf (196,568 zsf;, 4.0 FAR) of non-residential floor area designated for commercial office and retail use. Retail spaces would be provided in the subcellar, cellar, first, and second floors, totaling 129,000 gsf (112,123 zsf). 88,500 gsf (84,445 zsf) of commercial office and/or community facility space that may be dedicated for future City use would be on the first, second, third and fourth floors,. The With-

Action condition would provide 1,263 DUs, of which 253 to 379[5] would be permanently income-restricted, with an income requirement at an average of 40 to 80 percent of area median income (AMI), pursuant to MIH Options 1, 2 and 3. No accessory parking spaces would be provided in the With-Action condition. A publicly accessible open space area (approximately 4,745 sf) would also be provided in the With-Action condition.

Compared to the No-Action Conditions, the With-Action conditions would introduce residential uses to the Development Site and more retail uses while providing less commercial office space.

Study Area

The Proposed Actions would not introduce any new or incompatible land uses that are not permitted currently in the study area. All proposed land uses, including residential, commercial office, retail (both local and destination), and/or community facility uses, would be consistent with the land use trends within the study area. The Proposed Actions are not expected to alter or accelerate the existing development patterns. Instead, the Proposed Actions would introduce new housing (including permanently affordable housing), active commercial uses (including local and destination retail), commercial office and/or community facility space that may be dedicated for future City use, a new publicly accessible open space on the southern portion of the Development Site, and sidewalk widenings along Flatbush Avenue Extension. The proposed publicly accessible open space to be located on the southern portion of the Development Site would be compatible with the proposed and existing residential and non-residential land uses and would be compatible with other open spaces in the study area, such as Albee Square and University Place. No other land use changes are anticipated within the surrounding study area, which will retain a mix of residential and commercial uses. This continues a trend of residential and commercial development seen in the Downtown Brooklyn neighborhood, such as the 9 DeKalb Avenue (a 73-story mixed residential and commercial building), 570 Fulton Street (a 23-story mixed residential and commercial building) and 91 DeKalb Avenue (a Long Island City University building for student housing with supporting community facility use). The Brooklyn Hospital Center is outside of but on the periphery of the study area. Therefore, the Proposed Actions are not expected to result in any significant adverse land use impacts.

Zoning

As described in **Chapter 1, Project Description**, the Applicant is seeking the following Proposed Actions to facilitate development of the Proposed Project:

- A Zoning Map Amendment to rezone the Development Site (and extending to the centerline of the street) from a C6-4 district to a C6-12 district (Project Area);
- Zoning text amendments to the Zoning Resolution of the City of New York (ZR) to:
  - Amend the DB (ZR 101-00 et. seq.) as follows:
    - Modify ZR 101-00 et. seq. to establish a C6-12 district and modify ZR 101-21 to permit a maximum permitted FAR of 19.0 for residential buildings with qualifying affordable or qualifying senior housing and 23.0 for mixed-use developments on lots that are greater

[5] The number of affordable DUs reflects the possible range of affordability under MIH Option 1 (25 percent of residential floor area affordable to households at an average of 60 percent AMI), Option 2 (30 percent of residential floor area at an average of 80 percent AMI), and Option 3 (20 percent of residential floor area at an average of 40 percent AMI). Where applicable, the MIH Option that reflects the RWCDS for any given technical area will be analyzed to ensure a conservative analysis.

than 30,000 square feet with at least one full block street frontage or occupy an entire block.

- Modify ZR 101-222 and ZR 101-224 to modify setback requirements for large qualifying lots that have below grade transit infrastructure occupying more than 30 percent of the lot.

- Modify ZR 101-41 to provide exemptions from the street wall location and continuity requirements for lots meeting a certain lot size threshold that provide publicly accessible area.

- Amend Appendix F: Mandatory Inclusionary Housing Areas and Former Inclusionary Housing Designated Areas for Brooklyn Community District 2 to establish the Project Area as a MIH area, Options 1 and 2;

› Disposition of City-owned property;

› An Amendment to the Brooklyn Center Urban Renewal Plan (URP);

› Combined Site Selection and Acquisition of real property interest; and

› Chairperson Certification pursuant to ZR 66-21(c) to establish and facilitate a transit volume on the Development Site as determined by the Metropolitan Transit Authority (MTA).

In conjunction with the Proposed Actions, additional approvals are being sought at the Public Design Commission (PDC) to facilitate certain elements of the Proposed Development. After PDC approval is obtained, the Applicant intends to seek a compliance determination from NYC DCP for the proposed publicly accessible open space signage, pursuant to Chapter 11 of Title 62 of the Rules of the City of New York (POPS Rules).

City of Yes for Housing Opportunity (N 240290 ZRY), a citywide zoning text amendment aimed at increasing housing development in response to New York City's housing crisis, was adopted on December 5, 2024 and established the newly created C6-12 zoning district. The recent changes to the ZR introduced new zoning districts that increased the permittable residential FAR up to 18.0. This was previously prohibited due to the New York State Multiple Dwelling Law capping residential development to 12.0 FAR, but this cap was eliminated in the Fiscal Year 2025 budget legislation.

The proposed C6-12 zoning district within the DB would be governed by the height and setback regulations of the Special District, which allow either standard height and setback regulations or tower regulations. Under the standard height and setback regulations, the maximum base height is 155 feet, above which a 10-foot setback (along a wide street) or 15-foot setback (along a narrow street) is required. The maximum height of a building containing standard residences or qualifying affordable or senior housing is limited to 325 feet and 395 feet, respectively. Under the tower regulations, towers located above the base in C6-12 zoning districts are regulated by lot coverage with no set maximum height limits. Developments that include residential uses under the C6-12 zoning district within the BD would follow standard C6-12 regulations, except for developments on lots that meet certain criteria[6] (aka "large qualifying site"). Development on a large qualifying site would be permitted with a maximum total FAR of 23.0 for mixed uses, whereby residential floor area for qualifying affordable or senior housing would be limited to 19.0 FAR.

[6] The proposed criteria for "large qualifying site" include 1) occupies an entire block; or 2) has a minimum lot area of 30,000 sf with at least one full block street frontage.

Under the proposed text amendment to amend the DB, in conjunction with the proposed rezoning, the total maximum permitted FAR on the Development Site will increase from 15.0 to 23.0, whereby the maximum permitted residential FAR on the Development Site will increase from 18.0 to 19.0. The increase in FAR would permit additional housing that would include affordable housing subject to the MIH program while also providing additional floor area that may be used for ground floor retail and additional commercial establishments that will help promote the streetscape character of the neighborhood and expand access to services, furthering the goals of the DB.

The Proposed Actions would permit greater overall density, driven by increased residential density at the Development Site. As described above, for conservative analysis purposes the With-Action condition assumes a development that would maximize the proposed maximum 23.0 FAR, including slightly more commercial office and retail spaces than the Proposed Project. As such, under With-Action conditions, the Development Site would be redeveloped with a 72-story (840-foot-tall, including bulkhead),1,552,605-gsf mixed-use building, including 1,233,950 gsf (933,820 zsf) of residential space, 129,000 gsf (112,123 zsf) of retail space, and 88,500 gsf (84,445 zsf) of office and/or community facility space that may be dedicated for future City use. In total, the With-Action condition would reach 23.0 FAR.

The increased overall density would facilitate the addition of much-needed residential units to Brooklyn Community District 2. It would also help create state-of-the-art spaces for commercial (office and retail) and/or community facility uses, providing additional job opportunities for nearby residents and benefiting the surrounding neighborhoods.

The height of the development under the With-Action condition is consistent with the heights of recent mixed-use developments, many of which are nearby and within the DB—such as the 74-story, 1,066-foot-tall Brooklyn Tower at 9 DeKalb Avenue. As discussed in the **Existing Condition** section, the DB provides special height and setback regulations and urban design guidelines that have allowed for some of the largest and highest-density developments in the city. The higher-density zoning districts (including C5-4, C6-4, C6-4.5, C6-6, and C6-9 districts) in the DB district allow either Quality Housing buildings with height limits or towers-on-a-base without height limits. C6-4, C6-4.5, and C6.9 districts are within the DB in the study area. While the Proposed Actions would establish a new zoning district—the C6-12 district—the bulk and use that would be permitted under C6-12 would not be inconsistent with the scale and use of current buildings or buildings proposed and/or constructed under the No-Action condition.

The proposed zoning map amendment would rezone the Development Site from a C6-4 district (an R10 equivalent district) to a C6-12 district (an R12 equivalent district). The proposed C6-12 district within the DB would be governed by the height and setback regulations of the Special District, which allow either standard height and setback regulations or tower regulations. Under the standard height and setback regulations, the maximum base height would be 155 feet, above which a 10-foot setback (along a wide street) or 15-foot setback (along a narrow street) would be required. The maximum height of a building would be limited to 395 feet. Under the tower regulations, towers located above the base in C6-12 districts would be regulated by lot coverage with no set maximum height limits. Within a C6-12 zoning district in the DB, mixed-use developments that include residential would be permitted a maximum total FAR of 23.0 on a "large qualifying site." Maximum residential FAR for a development on a "large qualifying site" would be 19.0 FAR for qualifying affordable and qualifying senior housings, whereby baseline C6-12 rules would apply, and residential use would be limited to 15.0 FAR (or 18.0 FAR for qualifying affordable or qualifying senior housing) if the development is not on a "large qualifying site." The proposed C6-12 district

would be appropriate for the Development Site as it encompasses an entire block in a transit-rich area of the Downtown Brooklyn neighborhood.

The proposed C6-12 district would be appropriate given the Project Area's proximity to transit access. Additionally, the Project Area contains two major wide street frontages along Flatbush Avenue Extension and Fulton Street that would be suitable for increased density. Flatbush Avenue Extension is a 120-foot-wide road that runs north-south through Brooklyn with multiple lanes of traffic, pedestrian islands, and street parking on the east side, while Fulton Street, is an 80-foot-wide major east-west commercial street with four lanes of traffic and bus lanes.

Therefore, the Proposed Actions would permit density and scales that are consistent with existing mixed-use residential and commercial developments in the study area and introduce appropriate density to the DB, a transit-rich area with some of the largest and highest-density developments in the city, such as the 74-story, 1,072-foot-tall (11.9 FAR) 9 DeKalb Avenue; the 52-story, 630-foot-tall, (11.8 FAR) 589 Fulton Street; and the 35-story, 538-foot-tall (12.0 FAR) 625 Fulton Street. The proposed C6-12 district is an appropriate reflection of the need to revitalize the Development Site to provide much needed housing and commercial development consistent with the City's current housing goals as well as the goals of the Special District. Additionally, the proposed MIH area would ensure permanent affordability is included in the Proposed Project. In addition to its residential offerings, the Proposed Project would also provide non-residential uses benefiting the neighborhood. A site selection and acquisition combined action is proposed to facilitate the relocation of a clinic and office space for DOHMH. By incorporating local retail and commercial office and/or community facility space, the Proposed Project would align with the existing mixed-use character of the area. Furthermore, the Proposed Actions would strengthen the ground-floor retail presence, encouraging future economic growth and job opportunities while providing additional benefits to existing and future residents and visitors with the potential DOHMH community facility space.

The proposed bulk modification would provide setback relief for the Proposed Project. The Development Site sits on an existing REUC easement granted by the MTA (REUC No. B119-E271), which extends diagonally west to east on the Development Site and comprises approximately 32 percent of the lot area. Thus, the location and orientation of the Proposed Project is restricted by the existing subway infrastructure located below the Development Site. The bulk modification would modify the setback requirement above the base along DeKalb Avenue, which would allow the Proposed Project to maximize the residential FAR permitted and provide maximum number of housing units.

Compared to the No-Action condition, the Proposed Actions would not introduce zoning districts that permit incompatible land uses or inconsistent density and scales. Therefore, the Proposed Actions are not anticipated to result in significant adverse impacts to surrounding zoning.

Public Policy

Brooklyn Center Urban Renewal Plan (URP)

Redevelopment of the Development Site under the Proposed Actions would meet the goals of the Brooklyn Center URP. Specifically, the redevelopment would replace the Development Site's existing underutilized office space with much-needed housing opportunities within the Brooklyn Center URA, which would be supported by appropriate nearby existing commercial uses as well as new, project-generated on-site commercial uses. The introduction of a 24-hour population would also bolster economic activities in the surrounding neighborhood. The potential community facility is also

expected to meet existing demand in the neighborhood. As such, the Proposed Actions would align with the goals of the Brooklyn Center URP and no significant adverse impacts to the Brooklyn Center URA are anticipated.

Brooklyn Cultural District

Although no cultural facility space is projected in the With-Action condition, the With-Action condition is still expected to contribute to Downtown Brooklyn's dynamic, mixed-use character by introducing a 24-hour population to the Development Site, which would otherwise remain underutilized under No-Action conditions. As such, the Proposed Actions would not be disruptive to the goals of the Brooklyn Cultural District and, therefore, would not result in any significant adverse impacts.

Business Improvement Districts

The With-Action condition would include a number of public realm improvements, including:

- A new, publicly accessible open space area (approximately 4,745 sf) on the southern portion of the Development Site; and
- An expanded sidewalk along Flatbush Avenue Extension.

Therefore, the Proposed Actions would facilitate a redevelopment of the Development Site that would contribute to the revitalization of the MetroTech BID area and support the goals of the MetroTech BID, the Fulton Mall BID, and the CLS BID by incorporating public realm improvements in the proposed mixed-use development on the Development Site. As such, no significant adverse impacts on study area BIDs would occur as a result of the Proposed Actions.

Housing Our Neighbors: A Blueprint for Housing and Homelessness

The Proposed Actions include the mapping of an MIH area coterminous with the proposed C6-12 (DB) district. The proposed MIH area would ensure the provision of permanently affordable units for any residential development at the Development Sites. Compared to the No-Action condition, The With-Action condition would provide 1,263 residential units, 253 to 379 units of which would be permanently income-restricted, with an income requirement at an average of 40 to 80 percent of AMI, pursuant to MIH Options 1, 2 and 3. The Proposed Actions would support the goals in the Housing Blueprint by expanding housing opportunities and creating affordable housing at a location in close proximity to public open space, public transportation, and commercial activities. Therefore, the Proposed Actions would be consistent with the goals outlined in *Housing Our Neighbors*,—such as bolstering access to opportunity and promoting economic stability and mobility through housing developments. Therefore, no significant adverse impacts to this policy are anticipated.

OneNYC 2050

The Proposed Actions would support Goal Three of *OneNYC 2050*—Thriving Neighborhoods through affordable housing, access to neighborhood open spaces and cultural resources, community safety, and place-based community planning. In each of the three development scenarios assessed in this chapter, the Proposed Actions would support mixed-use land use character of the Downtown Brooklyn neighborhood. The increased density would also activate the Development Site with new residents, workers, and visitors and create a more resilient local economy by bringing a 24-hour population to the Development Site—which would otherwise remain underutilized under No-Action

conditions. As such, the Proposed Actions would align with the goals of *OneNYC 2050* and, therefore, would not result in significant adverse impacts to this public policy.

Where We Live NYC/Fair Housing Together Plan

The Proposed Actions would map an MIH area coterminous with the proposed C6-12 (DB) district. The proposed MIH area would ensure the provision of permanently affordable units for any residential development at the Development Site. The additional permanently affordable units permitted under the Proposed Actions would increase accessible housing for low-income families and prevent displacement. With the increased residential density permitted on the Development Site, the With-Action condition would support housing development, particularly affordable housing development at a location in close proximity to public open space, public transit, and commercial activities. Therefore, the Proposed Actions would support the goals of *Where We Live NYC*, and no significant adverse impacts are anticipated.

City of Yes

The Proposed Actions would be consistent with the goals of the City of Yes initiative by maximizing housing opportunities in a transit-rich neighborhood, incentivizing economic growth, creating job opportunities, and incorporating energy-efficient building design strategies. By offering varied housing types, including affordable housing units, the building can address housing accessibility across different demographic and income levels, reducing legacies of segregation and fostering equity. In addition to the delivery of housing, the Proposed Project would introduce additional local retail space that would provide opportunities for small businesses and support economic recovery at this commercial corridor. The redevelopment of the Development Site would also offer opportunities for energy-efficient technologies to be incorporated in the Proposed Project. The building is anticipated to be 100 percent electric, and Passive House principles would be incorporated throughout the Proposed Project to reduce energy consumption and improve thermal performance, contributing to long-term operational efficiency and occupant comfort. A significant portion of the existing structure is anticipated to be reused as the podium of the Proposed Project—taking advantage of the embodied carbon of the existing building. Additionally, stormwater management strategies would be integrated into the design, while material reuse and construction waste reduction measures would be implemented where feasible to minimize environmental impact. The Proposed Project will also explore seeking LEED, WELL, and other sustainability certifications.

3

Socioeconomic Conditions

This chapter considers the potential for the Proposed Actions to result in significant adverse impacts to the socioeconomic character of the surrounding area, which includes its population, housing, and economic activity.

Introduction

According to the *2021 City Environmental Quality Review (CEQR) Technical Manual*, an analysis of socioeconomic conditions may be necessary when a project would directly or indirectly change an area's socioeconomic character (population, housing, and economic activity); the assessment usually considers the socioeconomic conditions of area residents separately from those of area businesses, although projects may affect both in similar ways. An assessment of socioeconomic conditions is warranted when a project would result in:

- Direct displacement of residential population on a development site;
- Direct displacement of existing businesses or institutions on a development site;
- Indirect displacement of residential population in a study area;
- Indirect displacement of businesses or institutions in a study area;
- Indirect displacement of businesses due to retail market saturation; and
- Adverse effects on specific industries.

As discussed in **Chapter 1, Project Description**, the Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with a new, approximately 1,552,605-gross-square-foot (gsf), 72-story, 840-foot-tall, mixed-use building. Under With-Action conditions, the building would include approximately 1,233,950 gsf of residential floor 129,000 gsf of retail space and 88,500 gsf of office and/or community facility space that may be dedicated for future City use.

The Proposed Actions would introduce approximately 1,263 dwelling units (DUs), of which approximately 253 to 379 would be designated as permanently affordable for households with incomes averaging between 40 and 80 percent area median income (AMI), pursuant to applicable requirements of the City's Mandatory Inclusionary Housing (MIH) Program option 1, 2, or 3. The 1,263 DUs introduced by the Proposed Actions would exceed the *CEQR Technical Manual* threshold of 200 DUs, thus warranting a preliminary analysis of indirect residential displacement. Since the Development Site is currently occupied by a seven-story commercial building containing office and retail space, an analysis of direct residential displacement is not warranted.

The existing commercial office space has been leased by Verizon since the building's construction in 1977. While the lease remains in force, Verizon's needs for physical office space have changed over time, especially since the pandemic, resulting in a very low occupancy rate. As discussed in **Chapter 1, Project Description,** all current leases are expected to terminate, and all tenants will vacate the building by 2028. Absent the Proposed Actions, it is assumed that the existing building would be fully reoccupied following the lease expiration.

While it is assumed that the Development Site's largely vacant commercial retail and office space would be re-tenanted under No-Action conditions, there are currently 61 workers employed at the building's tenanted commercial spaces under existing conditions, comprising approximately 43 retail workers and 15 office workers. As such, the Proposed Actions would not displace more than 100 employees. Therefore, further assessment of direct business displacement is not warranted. An assessment of potential indirect business displacement due to retail market saturation is not warranted because the Proposed Actions would not result in the addition of more than 200,000 square feet (sf) of retail. The Proposed Actions would not be expected to affect conditions within a specific industry, affect a substantial number of workers or residents who depend on the goods or services provided by affected businesses, or result in the loss or substantial diminishment of a particularly important product or service within the city. Therefore, an assessment of adverse effects on specific industries is not warranted.

Principal Conclusions

The Proposed Actions would introduce a residential population of approximately 2,564 people at the Development Site. Since development under the Proposed Actions would increase the residential population of the quarter-mile study area by 9.1 percent compared to the 2032 No-Action condition (an increase greater than 5 percent), a half-mile study area was used for the assessment of indirect residential displacement, per *CEQR Technical Manual* guidance.

The 2020 residential population of the half-mile study area was 52,159 per the 2020 US Census (adjusted to 57,220 when taking into account development since 2020), while the 2022 median household income was $132,541 (per the 2018-2022 American Community Survey [ACS] 5-year estimates), higher than that of Brooklyn and New York City as a whole. The analysis found that the third quartile of market-rate rents in the study area are roughly $3,800 for studios, $4,900 for one-bedroom units, $7,000 for two-bedroom units, and $12,100 for three-bedroom units.

In the No-Action condition, anticipated residential development projects would increase the study-area population to 72,638. In the future With-Action conditions, the Proposed Actions would result in 2,564 residents being added to the study area population, further increasing the population of the half-mile study area to 75,202, a 3.5-percent increase compared to the No-Action condition. MIH

Option 2 is assumed for the purpose of a conservative analysis because it would result in a residential population with a higher average household income compared to Options 1 or 3 when calculated using the methodology in the *CEQR Technical Manual*. Under Option 2, 30 percent of residential floor area (equivalent to approximately 379 DUs) would be set aside for residents with incomes averaging 80 percent area median income (AMI). Anticipated affordable rents and average household size were used to estimate the average household income for the residents of the affordable units at $99,812, while observed third-quartile market rents and unit sizes in the study area were used to estimate the average household income for residents of the market-rate units at $222,782. The weighted average income for residents of all incremental units was estimated to be $185,881. This is higher than the average household income for the study area of $132,541.

Though the estimated weighted average incomes of the new population are expected to be higher than the average incomes of the study area populations, the estimated new population would represent an increase of less than 5 percent over No-Action conditions (approximately 3.5 percent). This level of population increase would not be expected to introduce or accelerate a trend leading to the displacement of vulnerable populations or create a significant indirect residential displacement adverse impact. Therefore, the Proposed Actions would have no significant adverse impacts related to socioeconomic conditions.

Methodology

Under CEQR, the socioeconomic character of an area is defined by its population, housing, and economic activities. The assessment of socioeconomic conditions usually distinguishes between the socioeconomic conditions of an area's residents and businesses. However, proposed action(s) may affect either or both segments in the same ways; they may directly displace residents or businesses, or they may alter one or more of the underlying forces that shape socioeconomic conditions in an area and thus may cause indirect displacement of residents or businesses.

Direct displacement is defined as the involuntary displacement of residents, businesses, or institutions from the actual site of (or sites directly affected by) a proposed project. Indirect or secondary displacement is defined as the involuntary displacement of residents, businesses, or employees in an area adjacent or close to a development site that results from changes in socioeconomic conditions created by a proposed project. Examples include rising rents in an area that result from a new concentration of higher-income housing introduced by a project, which ultimately could make existing housing unaffordable to lower income residents.

The objective of the analysis is to disclose whether any potential changes created by the Proposed Actions would have a significant adverse impact compared with what would happen in the future without the Proposed Actions (i.e., the No-Action condition).

Analysis Format

Following *CEQR Technical Manual* guidelines, the analysis begins with an initial screen that considers threshold circumstances identified in the *CEQR Technical Manual* that can lead to socioeconomic changes warranting further assessment. If the initial screen determines that further assessment is warranted, a preliminary assessment is then undertaken. The purpose of the preliminary assessment is to learn enough about the effects of the proposed actions to either rule out the possibility of significant adverse impacts or determine that a more detailed analysis is required to resolve the issue.

Indirect Residential Displacement Methodology

Per *CEQR Technical Manual* guidelines, a preliminary assessment of a project's potential to cause indirect residential displacement is necessary to determine whether the proposed project may either introduce a trend or accelerate a trend of changing socioeconomic conditions that may potentially displace a vulnerable population to the extent that the socioeconomic character of a neighborhood would change.

The first step of the preliminary analysis is to determine if the Proposed Actions would add new population with higher average incomes compared to the average incomes of the existing populations and any new population expected to reside in the study area without the project. If the project would introduce a costlier type of housing compared to existing housing and the housing expected to be built in the future No-Action condition, then the new population may be expected to have higher incomes. If the expected average incomes of the new population would exceed the average incomes of the study area populations, then step 2 of the analysis is conducted. Step 2 is to determine if the increase in population caused by the Proposed Actions would be large enough relative to the size of the population expected to reside in the study area without the Proposed Actions to affect real estate market conditions in the study area. Per *CEQR Technical Manual* guidance, a population increase of less than 5 percent would not be expected to affect real estate market conditions, and further analysis would not be warranted. This preliminary assessment follows the step-by-step preliminary assessment guidelines described in Section 322.1 of the *CEQR Technical Manual*.

Study Area Definition

The *CEQR Technical Manual* states that a quarter-mile socioeconomic study area is appropriate unless the project could increase the population by more than 5 percent as compared with the population expected to reside in a quarter-mile study area in the future No-Action condition.

The Development Site is located within Brooklyn Census Tract 33. Using *CEQR Technical Manual* methodology, a quarter-mile study area for the Development Site would include Census Tracts 15.02, 31.01, 33, and 37.[1] These four Census Tracts had a total population of approximately 18,568 people according to the US Census Bureau's 2020 Census. Since 2020, it is estimated that new development has introduced approximately 4,107 additional people to this study area, for a total existing population of 22,675.[2] In the No-Action condition, this population is expected to increase to approximately 28,277 people. Based on the average household size for Brooklyn Community District 2 (2.03 people per household), the Proposed Actions would introduce 2,564 people, resulting in a residential population increase of 9.1 percent compared to the No-Action conditions. According to the *CEQR Technical Manual*, a project that would result in a relatively large increase in population may be expected to affect a larger study area, and a half-mile study area is appropriate for projects that would increase population by 5 percent over the expected population in the No-Action condition. Therefore, a half-mile study area is appropriate for this analysis. The half-mile study area comprises Census Tracts 11, 15.01, 15.02, 29.01, 31.01, 31.02, 33, 35, 37, 39, 41, 43, 181, 183, and 185.01 (see

[1] Census tracts that contain at least 50 percent of their area within a quarter-mile/half-mile radius were included in the respective study areas.

[2] Based on NYC Department of City Planning (DCP) Housing Database (24Q4). 2,023 net residential units were developed since 2020. Population is based on a rate of 2.03 people per household, the average household size for Brooklyn CD 2 per the 2020 US Census.

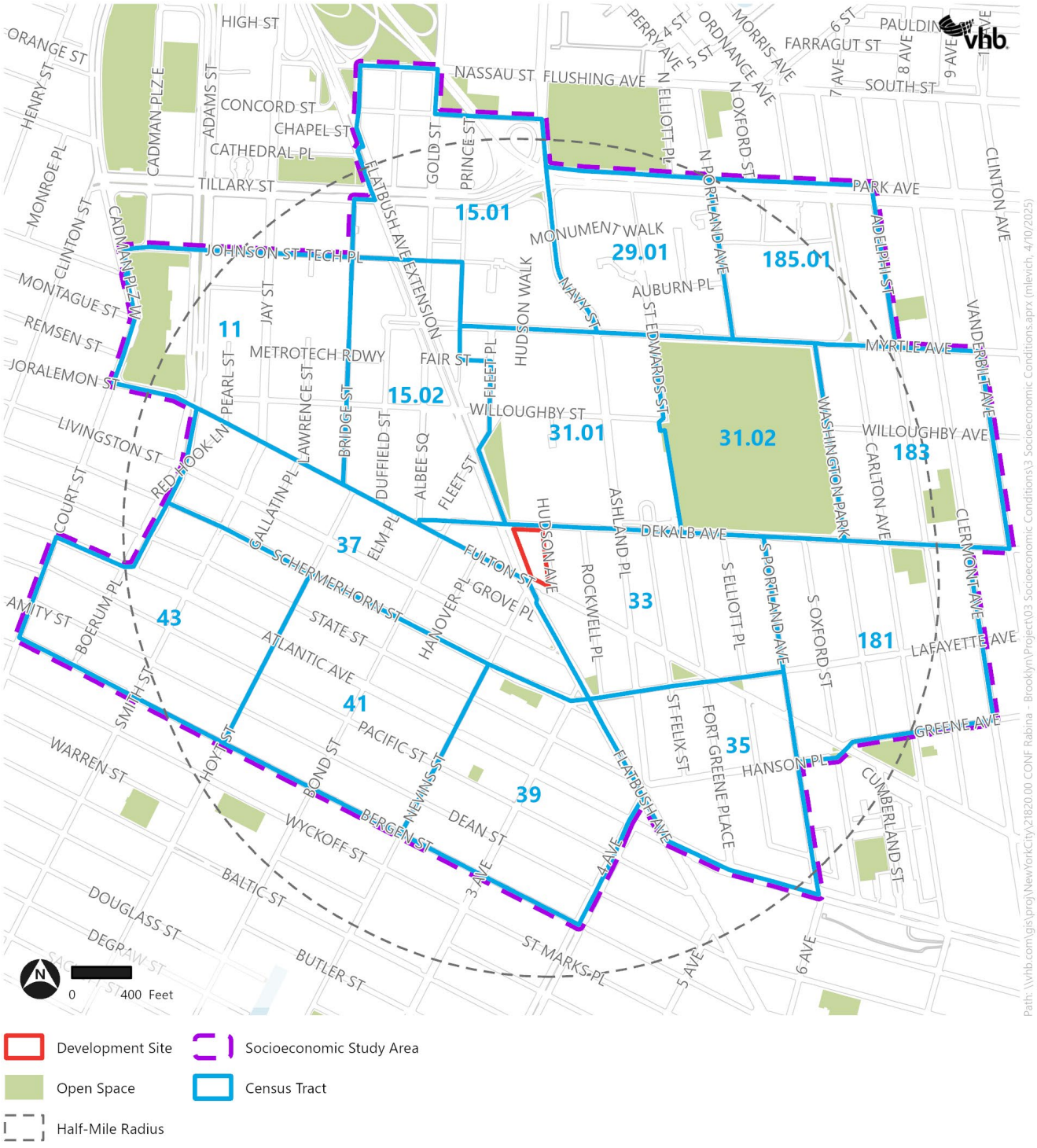
Figure 3-1). The 2020 Census population of the half-mile study was 52,159. It is estimated that development since the 2020 Census has increased the existing study-area population to 57,220.

Data Sources

Information used in the socioeconomic analysis includes data from the US Census Bureau's 2010 Census, 2020 Census, 2006–2010 American Community Survey (ACS), and 2018–2022 ACS, compiled through the NYC Population FactFinder. The 2018–2022 data reflects 5-year averages of income distribution, mean income, and median rent for the trailing 12 months in 2022 inflation-adjusted dollars. The mean income and median gross rent of each Census Tract were compiled by the NYC Population FactFinder. Census data for 2010 and 2020 were used for population estimates. The NYC DCP Housing Database (2024 Q4 version) was used to determine the amount of residential development in the study area that has occurred since the 2020 Census.

Real estate property listing data was obtained from www.streeteasy.com. AMI for the New York City region was obtained from the US Department of Housing and Urban Development (HUD).

Figure 3-1 Socioeconomic Study Area



Source: NYC DCP (2024); NYC Parks (2024)

Preliminary Assessment

Existing Conditions

The population of the half-mile study area was 52,159 (based on the 2020 US Census only, not accounting for developments since 2020), which represents an increase of 59.7 percent over the 2010 Census population of 32,644 people (see **Table 3-1**). The population of both Brooklyn and New York City as a whole has increased over the same time period by 9.2 percent and 7.7 percent, respectively. As noted above, the existing population accounting for residential development since the 2020 Census is 57,220. However, 2020 US Census data without adjustments are used for as the basis of comparison with 2010 Census data and other geographies.

Table 3-1 Area Population

Area	Population 2010	Population 2020	Percent Change
Study Area	32,664	52,159	59.7%
Brooklyn	2,504,700	2,736,074	9.2%
New York City	8,175,133	8,804,190	7.7%

Source: US Census Bureau via NYC Population FactFinder,, 2010 Census and 2020 Census

The number of households and housing units in the study area in 2020 were 25,187 and 27,264, respectively. In 2010, there were 14,399 households and 17,144 housing units (see **Table 3-2**), representing increases of 74.9 percent and 59 percent, respectively. Brooklyn and New York City showed 10.1 percent and 8.4 percent increases in the number of households, respectively, and increases of 7.7 percent and 7.3 percent, respectively, in the number of housing units.

Table 3-2 Household and Housing Data

Area	2010 Households	2020 Households	Percent Change	2010 Housing Units	2020 Housing Units	Percent Change
Study Area	14,399	25,187	74.9%	17,144	27,264	59.0%
Brooklyn	916,856	1,009,804	10.1%	1,000,293	1,077,654	7.7%
New York City	3,109,784	3,370,448	8.4%	3,371,062	3,618,635	7.3%

Source: US Census Bureau via NYC Population FactFinder, 2010 Census and 2020 Census

The majority of occupied housing units in the study area are rental units (83.0 percent) compared to owner-occupied units (17.0 percent); see **Table 3-3**. The percentage of occupied rental units in the study area is higher compared to Brooklyn (69.3 percent) and in New York City as a whole (66.8 percent).

Table 3-3 Housing Tenure

Area	Percent Vacant	Percent Renter-Occupied Units	Percent Owner-Occupied Units
Study Area	7.6%	83.0%	17.0%
Brooklyn	7.7%	69.3%	30.7%
New York City	9.5%	66.8%	33.2%

Source: US Census Bureau via NYC Population FactFinder,, 2020 US Census

Notes:
Percent Vacant, as defined by the US Census, includes vacant housing units for rent or sale, units that are occupied by persons who have a usual residence elsewhere, and vacant units held off the market

Median gross rent for the study area is $2,873, an increase of 76.1 percent from $1,631 in 2010 (see **Table 3-4**). Median gross rent in Brooklyn is $1,715, a 24.4 percent increase from 2010. Median gross rent for New York City is $1,714, an 18.6 percent increase from 2010. Current rental listings in the study area on www.streeteasy.com were used to approximate market-rate rents for new construction, which tend to be higher than the market rate, per *CEQR Technical Manual* guidance. Based on a review of this data source, current third-quartile rents in the study area are approximately $3,800 for studios, $4,900 for one-bedroom units, $7,000 for two-bedroom units, and $12,100 for three-bedroom units.[3]

Table 3-4 Median Gross Rent

Area	Years 2006-2010	Years 2018-2022	Change	Percent Change
Study Area	$1,631	$2,873	$1,242	76.1%
Brooklyn	$1,378	$1,715	$337	24.4%
New York City	$1,445	$1,714	$269	18.6%

Source: US Census Bureau via NYC Population FactFinder,, 2006-2010 ACS 5-year Estimate and 2018-2022 ACS 5-year Estimate

There are two public housing developments in the study area: the New York City Housing Authority (NYCHA) Whitman Houses with 1,659 housing units, and the NYCHA Ingersoll Houses with 1,840 for a total of 3,499 public housing units in the study area.[4]

Based on 2018-2022 ACS 5-year Estimates, average household income in the study area is $124,794, an increase of 51.2 percent from average household income in 2010. Based on the 2018-2022 ACS 5-year Estimates, median household income in the study area is $182,622, a 60.4 percent increase from 2010. Both the average and median incomes are higher than the average and median household incomes in Brooklyn ($114,302 and $74,692, respectively), and higher than the average and median household incomes in New York City ($122,667 and $76,607, respectively). See **Table 3-5**.

[3] www.streeteasy.com, accessed April 7, 2025.

[4] https://www.nyc.gov/assets/nycha/downloads/pdf/nychamap.pdf, accessed April 11, 2025.

Table 3-5 Average and Median Household Income

Area	2006-2010 Average Household Income	2018-2022 Average Household Income	Percent Change	2006-2010 Median Household Income	2018-2022 Median Household Income	Percent Change
Study Area	$124,794	$188,731	51.2%	$82,622	$132,541	60.4%
Brooklyn	$84,542	$114,302	35.2%	$58,785	$74,692	27.1%
New York City	$105,106	$122,667	16.7%	$67,850	$76,607	12.9%

Source: US Census Bureau via NYC Population FactFinder, 2006-2010 and 2018-2022 ACS 5-year Estimates

As shown in **Table 3-6**, the household income bracket containing the most households in the study area is the $150,000+ bracket. In comparison, the income bracket containing the most households in Brooklyn is the $50,000–$99,000 bracket, while the income bracket containing the most households citywide is also the $150,000+ bracket. In comparison to Brooklyn and the City as a whole, the study area has more households in the $150,000+ bracket (44.9 percent) and fewer in the lower brackets.

Table 3-6 Household Income Distribution

Area	<$25,000	$25,000-$49,999	$50,000-$99,999	$100,000-$149,999	$150,000+
Study Area	16.4%	10.5%	14.7%	13.4%	44.9%
Brooklyn	20.4%	16.2%	24.3%	15.3%	23.6%
New York City	20.0%	15.7%	24.4%	15.3%	24.6%

Source: US Census Bureau via NYC Population FactFinder, 2018-2022 ACS 5-year Estimates

No Action Condition

In the 2032 future without the Proposed Actions, it is assumed that no development would occur on the Development Site, and the existing building's commercial spaces would remain and be reoccupied with commercial retail and office tenants. Anticipated residential development would add approximately 7,595 net units in the half-mile study area, increasing the population by 15,418 to a total of 72,638 people (see **Table 3-7**).

Table 3-7 Population from No-Action Projects

No-Action Residential Category	Amount
Existing Population*	57,220
Total No-Action DUs	7,595
Total Population from No-Action DUs	15,418
Total No-Action Population	72,638

Notes:
* Adjusted to include population from new residential development since 2020
Source: US Census Bureau via NYC Population FactFinder, 2020 US Census; NYC DCP, Housing Database (24Q4)

With Action Condition

As described in detail in **Chapter 1, Project Description,** In the 2032 future with the Proposed Actions, the Development Site would be redeveloped with a 72-story mixed-use commercial and residential building with retail and office space as well as public realm improvements. The Proposed Actions would introduce 1,263 dwelling units, of which 253 to 379 units would be designated as permanently affordable for households with incomes averaging at or below 80 percent AMI, pursuant to applicable requirements of the City's MIH Program. Though the MIH Option to be mapped as part of the Proposed Actions is to be determined, MIH Option 2 is assumed for the purpose of a conservative analysis because Option 2 would introduce a residential population with a slightly higher average income compared to Option 1 or Option 3.[5] With MIH Option 2, 30 percent of residential floor area (equivalent to approximately 379 DUs) would be set aside for households at an average of 80 percent AMI. The levels of affordability are established by HUD and are subject to change. As shown in **Table 3-8,** the 80 percent AMI income limit per HUD is $86,960 for a family of one, $124,300 for a family of two, $139,800 for a family of three, $155,300 for a family of four, and $167,700 for a family of five.[6] The median household income for the study area is $132,541.

Based on the average household size of 2.03 persons per household in Brooklyn CD 2, a weighted average was calculated using the household income estimates listed above and in **Table 3-8** for a household size of between two and three using the method presented in Chapter 4 of the *CEQR Technical Manual*. With MIH Option 2—the most conservative option—it is estimated that the average income of households occupying the 379 affordable residential units at an average of 80 percent AMI would be $99,812.

Table 3-8 2024 New York City AMI

Family Size	30% AMI	40% AMI	50% AMI	60% AMI	80% AMI	100% AMI
1	$32,610	$43,480	$54,350	$65,220	$86,960	$108,700
2	$37,290	$49,720	$62,150	$74,580	$99,440	$124,300
3	$41,940	$55,920	$69,900	$83,880	$111,840	$139,800
4	$46,590	$62,120	$77,650	$93,180	$124,240	$155,300
5	$50,310	$67,080	$83,850	$100,620	$134,160	$167,700

Source: HUD via NYC Department of Housing Preservation, and Development (HPD)

The market-rate unit mix for the Proposed Project is not yet known; however, for the purposes of this analysis, a unit mix is assumed based on the listed market-rate units in the area. Based on this assumption, the With-Action development is expected to include approximately 26 percent studios, 45 percent one-bedroom units, 22 percent 2-bedroom units, and 7 percent three-bedroom units. Asking rents for the market-rate units in the Proposed Project are not yet known. As described in the **Existing Conditions** section above, the third quartile of rental listings for each unit size in the study area is used to estimate the asking rents, given that new construction tends to be at the higher end of the market. Rent is expected to range from $3,800 for a studio apartment to $12,100 for a three-

[5] The anticipated average household income for residents of the Proposed Project was calculated to be $185,771 under Option1, $185,881 under Option 2, and $184,729 under Option 3.

[6] https://www.nyc.gov/site/hpd/services-and-information/area-median-income.page, accessed April 13, 2025. FY 2024 Income Limits Summary for New York, NY HUD Metro FMR Area.

bedroom apartment.[7] Per *CEQR Technical Manual* guidance, the range of average incomes for the new tenants can be estimated by assuming that the new households would pay 30 percent of their income on housing. This ratio is based on the HUD definition of cost-burdened families, which states that those paying more than 30 percent of their income on housing may have difficulty affording other necessities.

Using these assumptions, it is estimated that households in the market-rate units would have average annual incomes ranging from $152,000 to $484,000 by unit size (see **Table 3-9**), with a weighted average of approximately $222,782 based on the assumed unit mix.

Table 3-9 Estimated Income for Market-Rate Units

Unit Type	Estimated Rent	Estimated Monthly Income	Estimated Average Annual Income
Studio	$3,800	$12,667	$152,000
1-Bedroom	$4,900	$16,333	$196,000
2-Bedroom	$7,000	$23,333	$280,000
3-Bedroom	$12,100	$40,333	$484,000

Note:
Average rent is based on rental listings as described in the **Existing Conditions** section; the higher estimates are used for this table. Estimated average monthly income and annual income assumes that the household pays 30 percent of income on rent.

Using a weighted average based on the anticipated number of affordable and market-rate units to be provided under MIH Option 2, the average income of households occupying the proposed residential units is estimated to be approximately $185,881. This is higher than the average household income for the study area of $132,541.

According to the *CEQR Technical Manual*, if a proposed project is expected to introduce new population with similar average incomes to the existing average income of the study area, then no further analysis is warranted; however, if the estimated income of the new population exceeds the average income of the study area population, then step 2 of the analysis should be conducted.

Step 2 of the Indirect Residential Displacement Preliminary Analysis, per the *CEQR Technical Manual*, is to determine if the project's increase in population is large enough to affect real estate market conditions in the study area. In the With-Action condition, the Proposed Actions would increase the population of the half-mile study area from 72,638 to 75,202, a 3.5-percent increase over the future No-Action condition. According to the *CEQR Technical Manual*, if the population increase is less than 5 percent within the study area, these conditions would not be expected to affect real estate market conditions, and no further analysis is warranted. Therefore, the Proposed Actions would not result in significant adverse impacts to the socioeconomic conditions of the study area.

[7] www.streeteasy.com, accessed April 7, 2025.

4

Community Facilities and Services

This section assesses the potential impacts of the Proposed Actions on community facilities and services, which are defined in the *2021 City Environmental Quality Review (CEQR) Technical Manual* as public or publicly funded facilities (i.e., schools, libraries, childcare centers, health-care facilities, and fire and police protection services).

Introduction

According to the *CEQR Technical Manual*, a community facilities assessment should be conducted if a project would directly or indirectly affect existing community facilities, including publicly supported daycare, libraries, public schools, health-care facilities, and fire and police protection services. A project may affect community services when it physically displaces or alters a community facility or causes a change in population that may affect the services delivered by a community facility, as might happen if a facility is already overutilized, or if a project is large enough to create a demand that could not be met by the existing facility.

As described in **Chapter 1, Project Description**, the Applicant is requesting several actions (the Proposed Actions) to facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with a new, approximately 1,552,605 gross-square-foot (gsf), 72-story, 840-foot-tall mixed-use building. Under With-Action conditions, the building would include approximately 1,233,950 gsf of residential floor area, 129,000 gsf of retail space, and 88,500 gsf of office and/or community facility space that may be dedicated for future City use.

The Proposed Actions would introduce approximately 1,263 dwelling units (DUs), of which approximately 253 to 379 would be designated as permanently affordable for households with incomes averaging between 40 and 80 percent area median income (AMI), pursuant to applicable requirements of the City's Mandatory Inclusionary Housing (MIH) Program option 1, 2, or 3. The 1,263 DUs introduced by the Proposed Actions would exceed the *CEQR Technical Manual* threshold of 200 DUs, thus warranting a preliminary analysis of indirect residential displacement. Since the

Development Site is currently occupied by a seven-story commercial building containing office and retail space, an analysis of direct residential displacement is not warranted.

Principal Conclusions

The Proposed Actions were considered for their potential to directly or indirectly affect existing community facilities, including publicly supported early childhood programs, libraries, public schools, healthcare facilities, and fire and police protection services. The Proposed Actions would not result in direct effects to community facilities. Based on *CEQR Technical Manual* thresholds, the Proposed Actions did not warrant analysis of public high schools, libraries, healthcare facilities, or fire and police protection services.

Early Childhood Programs

Based on the multipliers for estimating the number of children eligible for early childhood programs according to the New York City Department of Education (DOE), the Proposed Actions are anticipated to generate the need for approximately 68 childcare slots, and a detailed analysis was undertaken. Based on a detailed analysis, early childhood programs in the study area would be under capacity with a surplus of 744 slots in the With-Action condition. The utilization rate would be approximately 66 percent, and the change in utilization rate would be approximately 4.2 percent in comparison to the No-Action condition. Since the collective utilization rate for early childhood programs would be less than 100 percent in the future with the Proposed Actions, the Proposed Actions would not result in a significant adverse impact on publicly funded early childhood programs, and no further analysis is warranted.

Public Schools

The Proposed Actions would result in over 50 elementary and intermediate school students, indicating that further analysis is warranted. However, the Proposed Actions would not introduce 150 high school students, indicating that no impact to high schools would occur. Following the methodologies in the *CEQR Technical Manual*, the study area for the analysis of elementary and intermediate schools is CSD 13, Subdistrict 2 in which the Development Site is located. Under the With-Action condition, the utilization rate of elementary and intermediate schools would not exceed 100 percent, nor would the Proposed Actions generate more than 100 elementary- or intermediate-school aged students. Therefore, based on *CEQR Technical Manual* guidelines, the Proposed Actions would not result in significant adverse impacts to elementary and intermediate schools.

Preliminary Screening

Direct Effects

As discussed in the **Environmental Assessment Statement Part II: Supplemental Analyses (EAS Part II)** and the **Draft Scope of Work** for the Proposed Actions, there are no existing community facilities on the Development Site that would be displaced or altered by the Proposed Actions; therefore, an analysis of direct effects on community facilities is not warranted, and there would be no significant direct community facilities impact from the Proposed Actions.

Indirect Effects

As discussed in **EAS Part II** and the **Draft Scope of Work**, the *CEQR Technical Manual* provides thresholds to make an initial determination of whether detailed studies are necessary to determine potential indirect impacts on public schools, libraries, childcare centers, health-care facilities, and fire and police protection services.

As detailed in the Community Facilities section of **EAS Part II**, the Proposed Actions would not result in significant adverse impacts related to public high schools, libraries, health-care facilities, and fire and police protection services. Therefore, this analysis focused on childcare services and public elementary and intermediate schools.

Detailed Analysis: Early Childhood Programs

Methodology

Publicly financed early childhood education services under the DOE are available for eligible children five years old and younger (until the child is eligible to attend kindergarten for a fall start date). Early childhood programs comprise EarlyLearn NYC (Child Care and Early Head Start), 3-K, and Pre-K for All. While 3-K and Pre-K programs are free for all 3- and 4-year-old children in New York City, there are financial and social eligibility requirements for children to enroll in EarlyLearn NYC Child Care and Early Head Start programs. For the purposes of CEQR analyses, the early childhood program analysis is limited to EarlyLearn.

The existing conditions analysis presents the most recent capacity and enrollment data of existing publicly funded early childhood programs within the study area using information from DOE. The early childhood program enrollment in the future No-Action condition is estimated by multiplying the number of new affordable housing units targeted for incomes of 80 percent AMI or below expected in the study area (a proxy for the number of units that would have an early childhood program eligible population) by the CEQR multiplier for estimating the number of children under the age of 6 eligible for publicly funded early childhood services. For Brooklyn, the multiplier estimates 0.178 eligible children per affordable housing unit (*CEQR Technical Manual* Table 6-1a).[1]

The number of eligible children generated by the incremental, approximately 253 to 379 affordable, non-senior units under the With-Action condition is then added to the early childhood program enrollment calculated in the future No-Action condition above.

Study Area

According to the *CEQR Technical Manual*, the study area for the analysis of early childhood programs is typically defined as the area within 1.5 miles of the site. Although there are no locational requirements for enrollment in early childhood programs and parents/guardians can choose an early childhood program close to their employment rather than their residence, centers closest to the Development Site are more likely to be subject to increased demand. Therefore, a 1.5-mile study area around the Development Site was used for this analysis.

[1] Note that the *2021 CEQR Technical Manual* Table 6-1a multiplier pertains to children under 6 years old. This multiplier was used for a conservative analysis.

Data Sources

Consistent with the *CEQR Technical Manual,* the data obtained for this analysis is provided by DOE's Division of Early Childhood Education via the NYC Department of City Planning (DCP). DOE did not provide data on changes planned for early childhood programs or facilities in the study area under the No-Action condition.

Impact Criteria

According to the *CEQR Technical Manual*, a significant adverse impact may occur if a proposed project would result in both:

- A collective utilization rate of the early childhood programs in the study area that is greater than 100 percent in the With-Action condition; and,
- An increase of 5 percent or more in the collective utilization rate between the future No-Action and the future With-Action conditions.

Existing Conditions

There are 39 publicly funded early childhood program facilities within the 1.5-mile study area. These early childhood program facilities have a total capacity of 1,588 slots and have 671 available slots (57.7 percent utilization) (see **Table 4-1**). While family-based childcare facilities and informal care arrangements may provide additional seats in the study area, these slots are not included in the quantitative analysis for conservative analysis purposes.

Table 4-1 Publicly Funded Early Childhood Programs Serving the Study Area

ID	Program Name	Program Address	Capacity	Enrollment	Available Slots	Utilization Rate (%)
1	P.S. 020 Clinton Hill	225 Adelphi Street	77	54	23	70%
2	P.S. 046 Edward C. Blum	100 Clermont Avenue	39	27	12	70%
3	P.S. 067 Charles A. Dorsey	51 Saint Edwards Street	17	12	5	70%
4	P.S. 287 Bailey K. Ashford	50 Navy Street	21	15	6	70%
5	P.S. 307 Daniel Hale Williams	209 York Street	40	28	12	70%
6	P.S./I.S. 157 the Benjamin Franklin Health and Science Academy	850 Kent Avenue	34	24	10	70%
7	P.S. 261 Zipporiah Mills	314 Pacific Street	51	36	15	70%
8	BCS Laurie A. Cumbo Children's Enrichment Center	180 Myrtle Avenue	31	22	9	70%
9	Brooklyn Children and Family Services	25 Chapel Street	9	6	3	70%
10	Hanson Place Child Development Center Inc.	55 Hanson Place	9	6	3	70%
11	A. Fantis School	195 State Street	47	33	14	70%

Table 4-1 Publicly Funded Early Childhood Programs Serving the Study Area

ID	Program Name	Program Address	Capacity	Enrollment	Available Slots	Utilization Rate (%)
12	Our Children's Center- City Tech	55 Johnson Street	16	11	5	70%
13	Imagine Early Learning Centers at Dumbo	85 Adams Street	10	7	3	70%
14	Imagine Early Learning Centers at Brooklyn Heights	50 Monroe Place	29	20	9	70%
15	NY Kids Club and NY Preschool	182-184 Henry Street	21	15	6	70%
16	PNW Enterprises, LLC DBA NY Kids Club; Park Slope NY Preschool RFP	125 5th Avenue	29	20	9	70%
17	Bnos Square of Williamsburg	80 Skillman Street	79	55	24	70%
18	Kiddie Korner Daycare and Preschool	117 Remsen Street	21	15	6	70%
19	Eladia's Kids 266 Flatbush Avenue	266A Flatbush Avenue	11	8	3	70%
20	Cobble Hill Kindercare	112 Atlantic Avenue	29	20	9	70%
21	Bright Horizons at Dumbo	60 Walter Street	17	12	5	70%
22	Imagine Early Learning Center at Brooklyn Bridge Development Center	101 Willoughby Street	13	9	4	70%
23	District 13 Pre-K Center at 25 Dock Street	25 Dock Street	57	40	17	70%
24	Little Sun People, Inc	352 Classon Avenue	20	14	6	70%
25	Sunny Skies Prospect Corp	720 Washington Avenue	24	17	7	70%
26	Eladia's Kids	506 Washington Avenue	10	7	3	70%
27	Bumblebees-R-Us at 1068 Fulton Street	1068 Fulton Street	20	14	6	70%
28	The Learning Experience at Clinton Hill	339 Greene Avenue	19	13	6	70%
29	P.S. 011 Purvis J. Behan	419 Waverly Avenue	130	91	39	70%
30	P.S. 003 The Bedford Village	50 Jefferson Avenue	49	34	15	70%
31	P.S. 133 William A. Butler	610 Baltic Street	71	50	21	70%
32	Bedford Stuyvesant Early Childhood Development Center, Inc.	5 Quincy Street	12	18	-6	150%
33	Billy Martin Child Development Day Care Center, Inc	333 Classon Avenue	45	13	32	29%
34	Alonzo A. Daughtry Memorial Daycare Center	565 Baltic Street	52	0	52	0%
35	Park Slope North/ Helen Owen Carey Child Development Center	71 Lincoln Place	60	35	25	58%

Table 4-1 Publicly Funded Early Childhood Programs Serving the Study Area

ID	Program Name	Program Address	Capacity	Enrollment	Available Slots	Utilization Rate (%)
36	Young Minds Day Care Center	972 Fulton Street	77	25	52	32%
37	Warren Street Center for Children and Families	343 Warren Street	78	8	70	10%
38	Strong Place for Hope Day Care	460 Atlantic Avenue	93	26	67	28%
39	Friends of Crown Heights	34-52 Kosciuszko Street	107	57	50	53%
		Childcare Total	**1,588**	**917**	**671**	**57.7%**

Source: DOE EarlyLearn Contractor Centers Capacity and Enrollment as of 2023, obtained from the DCP.
Notes:
All publicly funded early childhood program facilities identified within the study area are located in Brooklyn.

No-Action Condition

Planned or proposed No-Action development projects in the early childhood programs study area are anticipated to introduce approximately 12,131 new affordable housing units by the analysis year (see **Table 4-2**). Based on the CEQR generation rates for the projection of children eligible for publicly funded day care, these developments would introduce approximately 432 children under the age of 6 who would be eligible for publicly funded childcare services.

Accounting for the estimated 432 publicly funded childcare-eligible children who would be introduced by the No-Action development projects, it is estimated that early childhood programs in the study area would operate at 84.9 percent utilization with a surplus of 239 slots (see **Table 4-3**).

Table 4-2 Childcare Eligible Children Anticipated in No-Action Development Projects

Project	Total Proposed DUs	Proposed Affordable Units[1]	Multiplier	Childcare Eligible Children[2]
19 Rockwell Place	174	35	0.178	6
570 Fulton Street	163	33		6
589 Fulton Street	557	111		20
89 DeKalb Avenue	324	65		12
17 Hanover Place	314	63		11
180 Ashland Place	569	114		20
240 Willoughby Street	360	72		13
285 Schermerhorn Street	84	17		3
370 Livingston Street	141	28		5
95 Rockwell Place	158	32		6
99 Fleet Place	294	59		10
188 Duffield Street	115	23		4

Table 4-2 Childcare Eligible Children Anticipated in No-Action Development Projects

Project	Total Proposed DUs	Proposed Affordable Units[1]	Multiplier	Childcare Eligible Children[2]
505 State Street	583	117		21
11 Hoyt Street	481	96		17
111 Willoughby Street	229	46		8
150 Lawrence Street	99	20		4
151 Carlton Avenue	58	12		2
151 South Elliott Place	101	20		4
323 Bergen Street	104	21		4
356 Fulton Street	363	73		13
51 Willoughby Street	293	59		10
540 Atlantic Avenue	159	32		6
71 Prince Street	465	93		17
96 Edwards Street	105	21		4
88 Schermerhorn Street	55	11		2
236 Gold Street	114	23	0.178	4
477 Smith Street	513	103		18
1057 Atlantic Avenue	456	91		16
488 Degraw Street	344	69		12
563 Sackett Street	338	68		12
192 Douglass Street	274	55		10
840 Atlantic Avenue	267	53		10
251 Douglass Street	261	52		9
540 Degraw Street	255	51		9
880 Atlantic Avenue	246	49		9
953 Dean Street	240	48		9
1042 Atlantic Avenue	237	47		8
69 Adams Street	231	46		8
218 Front Street	218	44		8
270 Nostrand Avenue	487	97		78
655 Union Street	193	39		7
178 4th Avenue	188	38		7
85 4th Avenue	188	38		7
205 Montague Street	136	27		5
680 Baltic Street	120	24		4
122 Sandford Street	120	24	0.178	4
161 Emerson Place	103	21		4

Table 4-2 Childcare Eligible Children Anticipated in No-Action Development Projects

Project	Total Proposed DUs	Proposed Affordable Units[1]	Multiplier	Childcare Eligible Children[2]
526 Baltic Street	99	20		4
213 3rd Avenue	80	16		3
7 Skillman Street	75	15		3
Total	**12,131**	**2,426[3]**		**432**

Notes:
[1] Proposed affordable units are conservatively assumed to be 20 percent of total units and do not include affordable senior units or supportive units that would not generate childcare eligible children.
[2] Rounded to the nearest whole number.
[3] Numbers may not add up due to rounding.

Table 4-3 No-Action Condition Estimated Publicly Funded Childcare Center Enrollment, Capacity and Utilization

Enrollment	Capacity	Available Slots	Utilization Rate (%)	Change in Utilization over Existing Conditions (%)
1,349	1,588	239	84.9%	27.2%

Future With-Action Condition

As stated above, 379 affordable DUs would be provided, resulting in an increment of approximately 68 additional childcare-eligible children. This would increase the projected enrollment to 1,416 children, with a resulting utilization of approximately 89.2 percent for early childhood program facilities (see **Table 4-4**). Compared to the No-Action condition, the utilization rate within the study area would increase by 4.2 percent.

Table 4-4 Publicly Funded Childcare Center Utilization Summary: No-Action, With-Action, Increment

	Enrollment	Capacity	Available Slots	Utilization Rate (%)
No-Action	1,349	1,588	239	84.9
With-Action	1,416	1,588	172	89.2%
Increment	67	0	-67	4.2%

Overall, the collective utilization rate for early childhood program facilities would be below 100 percent and the change in utilization between the No-Action and With-Action conditions would be below 5 percent. Therefore, no significant adverse impacts on early childhood program facilities would occur as a result of the Proposed Actions.

Detailed Analysis: Public Schools

Methodology

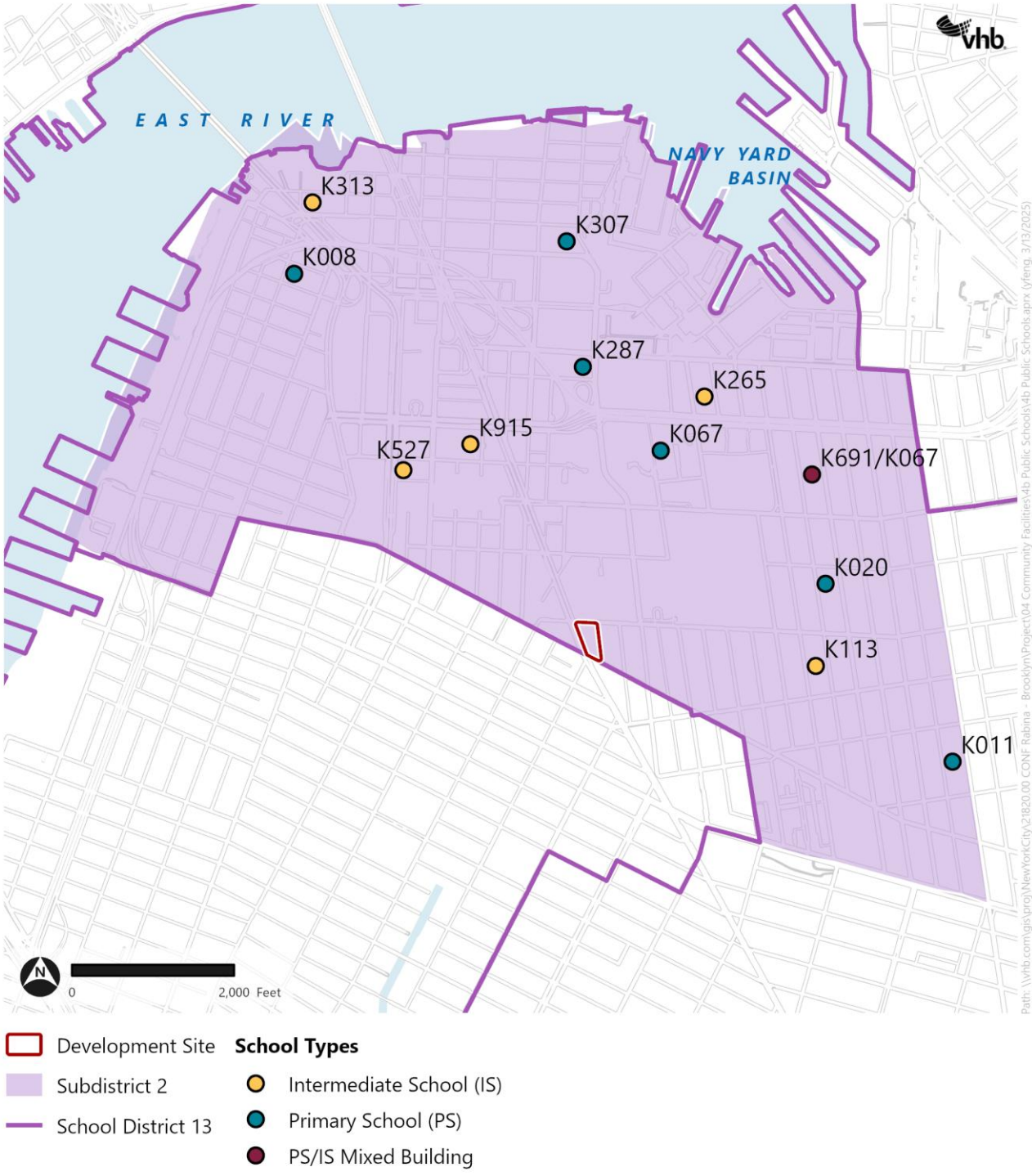
Public schools are free for all students ages 5 and older and are operated and funded by the DOE. Public schools include elementary schools (PS: grades K–5), middle schools (IS or MS: grades 6–8), and high schools (HS: grades 9–12).

Consistent with CEQR methodology, the analysis focuses only on potential impacts on public schools operated by the DOE; private and parochial education facilities as well as charter schools are excluded from the analysis. The CEQR analysis considers potential impacts to public elementary and middle schools at a local level (Community School Subdstrict). Schools are analyzed based on the potential for the project to cause overcrowding (i.e., a shortage of seats for an age group within the district).

Study Area

In accordance with the *CEQR Technical Manual*, the study area for the analysis of public elementary and intermediate schools is the school districts' subdistrict (aka regions or school planning zones) in which the Development Site is located. Therefore, the study area for primary and intermediate schools is Subdistrict 2 of Community School District (SCD) 13 (see **Figure 4-1**)

Figure 4-1 Public Schools District 13, Subdistrict 2



Data Sources

In accordance with the *CEQR Technical Manual*, the analysis of schools uses the most recent DOE data on school capacity, enrollment, and utilization rates for public elementary and intermediate schools in CSD 13, Subdistrict 2. Specifically, the existing conditions analysis uses data provided in the DOE's *Utilization Profiles: Enrollment/Capacity/Utilization, 2023–2024 School Year* edition, otherwise known as the *Blue Book,* and the 2024 Public Schools Ratio, as directed in the *CEQR Technical Manual*.[2] The DOE does not include charter school enrollment in its enrollment projections.

To calculate future conditions without the Proposed Actions, statistical forecasting's enrollment projections for years 2023 through 2032 were provided by New York City School Construction Authority (SCA).[3] These enrollment projections are based on broad demographic trends and do not explicitly account for individual new residential projects planned for the study area. Additionally, the DOE new housing starts data[4] on the number of new housing units and students expected at the subdistrict and borough levels are also considered in the overall No-Action enrollment. This analysis uses DOE's enrollment projections for years 2020 through 2029, which is the most recent data currently available on the SCA website. New school projects identified in the current DOE Five-Year Capital Plan or Panel for Educational Policy are also considered, if construction is already underway.

To determine school utilization rates for the With-Action condition, the students that would be introduced to the study area by the Proposed Actions are added to the respective total enrollments in the No-Action condition for CSD 13, Subdistrict 2.

Impact Criteria

The effect of new students introduced by a proposed project on the capacity of schools within the study area is evaluated based on the methodology detailed above. According to the *CEQR Technical Manual*, a significant adverse impact may occur for elementary and intermediate schools if a proposed project would result in both:

- A collective utilization rate in the subdistrict study area equal to or greater than 100 percent in the future With-Action condition; and,
- An increase of 100 or more new students generated from the proposed project past the 100 percent utilization rate.

Existing Conditions

As shown in **Table 4-5** and **Figure 4-1**, Brooklyn CSD 13, Subdistrict 2 contains seven elementary schools with a total enrollment 2,898 students and a surplus of 710 seats, leading to a utilization rate of 80.3 percent. Subdistrict 2 contains six intermediate schools that have a total enrollment of 1,075 students and a surplus of 772 seats, leading to an overall utilization rate of 58.2 percent.

[2] NYC Public Schools. Enrollment, Capacity, & Utilization, 2023–2024 School Year.

[3] SCA. Enrollment Projections 2023–2032 NYC Public Schools by the Statistical Forecasting.

[4] DOE. Projected Housing Starts as Used in 2020-2029 Enrollment Projection.

Table 4-5 Public School Enrollment, Capacity, and Utilization for Existing Conditions, School District 13, Subdistrict 2

Org. ID	School Name[1]	Address	Enrollment[2]	Target Capacity	Available Seats	Utilization
Elementary Schools						
K008	P.S. 8 - K	37 Hicks St.	580	517	-63	112%
K011	P.S. 11 - K	419 Waverly Ave.	857	768	-89	112%
K020	P.S. 20 - K	225 Adelphi St.	649	768	112	85%
K046	P.S. 46 - K	100 Clermont Ave.	224	488	264	46%
K067	P.S. 67 - K	51 St. Edwards St.	183	267	84	69%
K287	P.S. 287 - K	50 Navy St.	122	253	131	48%
K307	P.S. 307 - K	209 York St.	283	547	264	52%
		Study Area Total	**2,898**	**3,608**	**710**	**80.3%**
Intermediate Schools						
K113	I.S. 113 - K	300 Adelphi St.	188	712	524	26%
K265	I.S. 265 - K	101 Park Ave.	45	160	115	28%
K313	The Dock Street School for STEAM Studies - K	19 Dock St.	271	251	-20	108%
K527	I.S. 527 - K	283 Adams St.	116	178	62	65%
K691	Fort Greene Preparatory Academy - K	100 Clermont Ave.	200	233	33	86%
K915	M.S. 915 - K	105 Johnson St.	255	313	58	81%
		Study Area Total	**1,075**	**1,847**	**772**	**58.2%**

Source: DOE Enrollment, Capacity and Utilization Blue Book 2023-2024.
Notes:
[1] Only enrollment and capacity data for relevant grades were included for each elementary and intermediate school. Charter, citywide gifted and talented, D75 special education, and D79 alternative high school equivalency schools are not included in the analysis.
[2] The calculation of enrollment does not include Pre-K students

While not included in the quantitative analysis pursuant to the *CEQR Technical Manual*, there are two charter schools in CSD 13, Subdistrict 2 that serve elementary school and middle school students: Community Roots Charter School (located at 51 Saint Edwards Street) and the Compass Charter School (located at 300 Adelphi Street).

No-Action Condition

Projected Capacity Changes

There is no projected capacity change to schools in the study area under the No-Action condition.

Enrollment Projections

The SCA provides future enrollment projections by community school district for up to 10 years. The latest available SCA enrollment projections for CSD 13, Subdistrict 2 estimate the expected decline in elementary and intermediate school enrollment through 2032. The SCA projected enrollment lists

approximately 1,871 elementary students and 751 intermediate students that would be enrolled in the subdistrict in the No-Action condition.

As shown in **Table 4-6**, the projected DOE new housing starts data indicates that 847 elementary and 189 intermediate students are expected to be generated by No-Action residential development.[5] Considering SCA's projected enrollment and DOE's projected New Housing Starts, No-Action enrollment would total 2,708 elementary students and 939 intermediate students. Both elementary and intermediate schools are projected to operate below capacity in the No-Action condition.

Table 4-6 Projected Public School Enrollment, Capacity, and Utilization for No-Action Condition, School District 13, Subdistrict 2

Projected 2032 Enrollment	Students Introduced by No-Action Residential Development	Total No-Action Enrollment	Capacity	Available Seats	Utilization (%)
Elementary Schools					
1,871	847	2,708	3,608	900	75.0%
Intermediate Schools					
751	189	939	1,847	908	50.9%

Source: DOE Housing Starts as Used in 2020-2029 Enrollment Projection, SCA Enrollment Projections for New York City Public Schools by the Statistical Forecasting (2024-2033)

With-Action Condition

As detailed above, the Proposed Actions would result in the development of 1,263 DUs, which would introduce approximately 68 elementary students and 17 intermediate students to the subdistrict.

As shown in **Table 4-7**, elementary schools in CSD 13, Subdistrict 2 would continue to operate within capacity in the With-Action condition. The subdistrict elementary schools would operate at 76.9 percent capacity with 833 available seats. The collective utilization rate of elementary schools in the With-Action condition would increase by 1.9 percent from the No-Action condition. Intermediate schools would also continue to operate within capacity. In the With-Action condition, the subdistrict intermediate schools would operate at approximately 50.9 percent capacity with 908 available seats, a 0.9 percent increase in utilization over the No-Action condition.

[5] DOE, Projected New Housing Starts as Used in Enrollment Projections [2020-2029]

Table 4-7 Projected Public School Enrollment, Capacity, and Utilization for With-Action Condition, School District 2, Subdistrict 3

Total No-Action Enrollment	Students Generated by Project	Total With-Action Enrollment	Projected Capacity	Available Seats	Utilization (%) with Project	Raw Change in Utilization (%) from No Action
Elementary Schools						
2,708	68	2,775	3,608	833	76.9%	+1.9%
Intermediate Schools						
939	17	957	1,847	890	50.9%	+0.9%

Source: SCA Enrollment Projections for New York City Public Schools by the Statistical Forecasting (2019-2028)

The collective utilization rate for public elementary and intermediate schools in the With-Action condition would not be greater than 100 percent, nor would the Proposed Actions generate more than 100 elementary- or intermediate-school aged students. Therefore, the Proposed Actions would not result in a significant adverse impact to elementary or intermediate schools.

5

Open Space

This chapter assesses the potential impacts of the proposed actions on open space. The *2021 City Environmental Quality Review (CEQR) Technical Manual* defines open space as publicly or privately owned land that is publicly accessible and available for leisure, play, or sport, or is set aside for the protection and/or enhancement of the natural environment.

Introduction

The New York Department of Housing Preservation and Development (HPD), in conjunction with the New York City Department of Health and Mental Hygiene (DOHMH) and the Department of Citywide Administrative Services (DCAS) (each a co-applicant, and collectively, the Applicant), is seeking approval for a zoning map amendment, zoning text amendments, disposition of City-owned property, site selection and acquisition of real property interest, certification to establish and facilitate a transit volume, and an amendment to the Brooklyn Center Urban Renewal Plan (URP) (collectively, the Proposed Actions) to facilitate a mixed-use development (the Proposed Project) in the Downtown Brooklyn neighborhood within Brooklyn Community District (CD) 2. The Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with a new, approximately 1,552,605-gross-square-foot (gsf), 72-story, 840-foot-tall, mixed-use building. Under With-Action conditions, the building would include approximately 1,233,950 gsf of residential floor 129,000 gsf of retail space and 88,500 gsf of office and/or community facility space that may be dedicated for future City use.

The Proposed Actions would introduce approximately 1,263 dwelling units, of which approximately 253 to 379 would be designated as permanently affordable for households with incomes averaging between 40 and 80 percent area median income (AMI), pursuant to applicable requirements of the City's Mandatory Inclusionary Housing (MIH) Program option 1, 2, or 3.

The Proposed Project would also include public realm improvements, including an approximately 4,745 square foot (sf) open space available to the public on the southern portion of the Development

Site, an expanded sidewalk along the Development Site's Flatbush Avenue Extension frontage, and surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site. Additionally, the With-Action development would also include private amenity spaces for project-generated residents, consisting of no less than 28,000 sf of active recreational space (including but not limited to gym and play areas) and 5,000 sf of passive recreational space (including but not limited to lounge areas, a roof deck, and dog run). Such amenities would be located throughout the building, including potential use of terrace and rooftop areas.

Principal Conclusions

According to the *CEQR Technical Manual*, the significance of a project's effects on an area's open space is determined using both qualitative and quantitative factors. Given that the Proposed Actions are anticipated to introduce an increment of approximately 2,527 residents over the No-Action condition, a detailed open space analysis for a residential half-mile study area was conducted in accordance with *CEQR Technical Manual* guidelines.

In the 2032 analysis year, the active OSR would decrease 3.387 percent from 0.068 in the No-Action condition to 0.066 in the With-Action condition. The passive OSR would decrease 3.137 percent from 0.552 in the No-Action condition to 0.535 in the With-Action condition. The total OSR would decrease 3.165 percent from 0.620 in the No-Action condition to 0.600 in the With-Action condition. Therefore, the Proposed Actions would exceed CEQR's quantitative thresholds of significant adverse quantitative impact. However, the Development Site is located in a Walk-to-a-Park Service Area and would continue to be served by nearby open space resources not accounted for in the quantitative assessment. Additionally, the Proposed Actions would introduce 4,745 sf of new open space available to the public. Furthermore, the Proposed Actions would introduce private amenity space for project-generate residents, including no less than 28,000 sf of private active recreational space and 5,000 sf of private passive recreational space. These amenities would help to absorb a portion of the incremental demand on active and passive open spaces within the study area. Therefore, considering both the quantitative and qualitative assessment, the Proposed Actions would not result in significant adverse impact to open space.

In terms of the potential for direct impacts on open space resources (from air quality, noise, or shadows), the Proposed Actions would not result in direct open space impact from the effects of shadows, air quality, or noise (see **Chapter 6, Shadows**; **Chapter 13, Air Quality**; and **Chapter 15, Noise**; for additional information).

Methodology

The open space analysis will not only provide a quantitative and qualitative analysis of open space resources such as parks, it will also incorporate findings from other technical areas such as air quality and noise; the shadows analysis will assess the potential for incremental shadow to result in significant adverse impacts on the sunlight sensitive resources within open spaces.

Direct Effects Analysis

Consistent with the *CEQR Technical Manual*, a direct effects analysis should be performed if a proposed project would directly affect open space conditions by causing the loss of public open space; changing the use of an open space so that it no longer serves the same user population;

limiting public access to an open space; or increasing noise or air pollutant emissions, odor, or shadows that would temporarily or permanently affect the usefulness of a public open space. A proposed project can also directly affect an open space by enhancing its design or increasing its accessibility to the public. The Proposed Actions would not result in the physical loss or direct displacement of publicly accessible open space or limit access to open space, and no direct effects analysis is warranted.

Indirect Analysis

An indirect effects analysis is performed where a project could add sufficient population, either residents or non-residents, such that capacity of open spaces to serve the population would be noticeably diminished. The threshold for such an analysis is whether the project would introduce more than 200 residents or 500 workers to the area.

Compared to the future No-Action condition, the Proposed Actions would add more than 200 residents, but fewer than 500 workers to the area. Therefore, following *CEQR Technical Manual* guidance, an indirect-effects open space analysis was conducted for residential populations, consistent with the following methodology.

Study Area

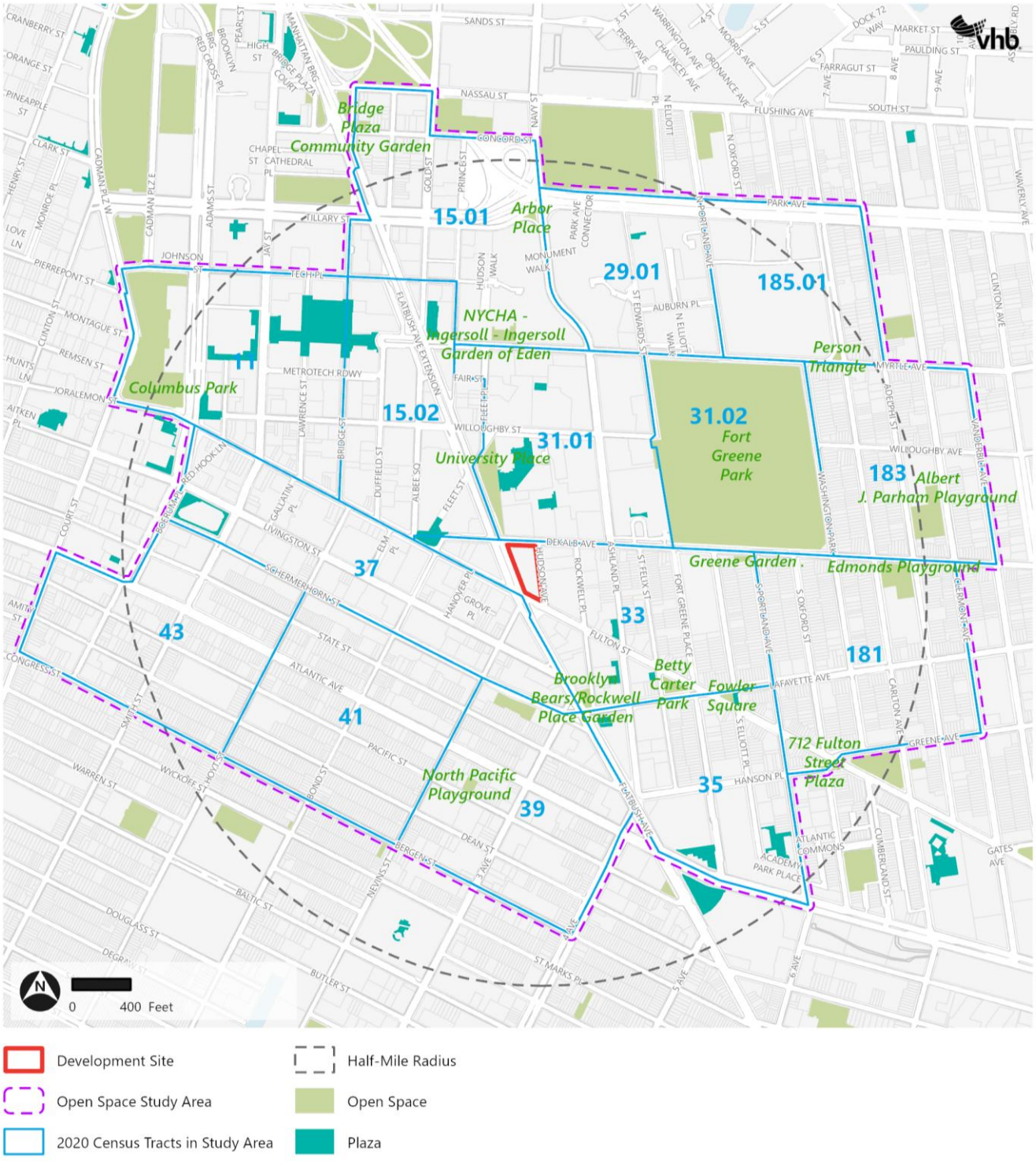
As described in the *CEQR Technical Manual*, an open space study area is defined by the reasonable walking distance users would travel to reach open spaces and recreational areas—typically a half-mile distance for residential populations.

Pursuant to *CEQR Technical Manual* guidance, the residential study area comprises all census tracts with at least 50 percent of their area located within a half mile of the Development Site. As shown in Error! Reference source not found.**,** 15 census tracts have at least 50 percent of their area located within a half mile of the Development Site, including Census Tracts 11, 15.01, 15.02, 29.01, 31.01, 31.02, 33, 35, 37, 39, 41, 43, 181, 183, and 185.01.

NYC Parks Walk-to-a-Park Initiative

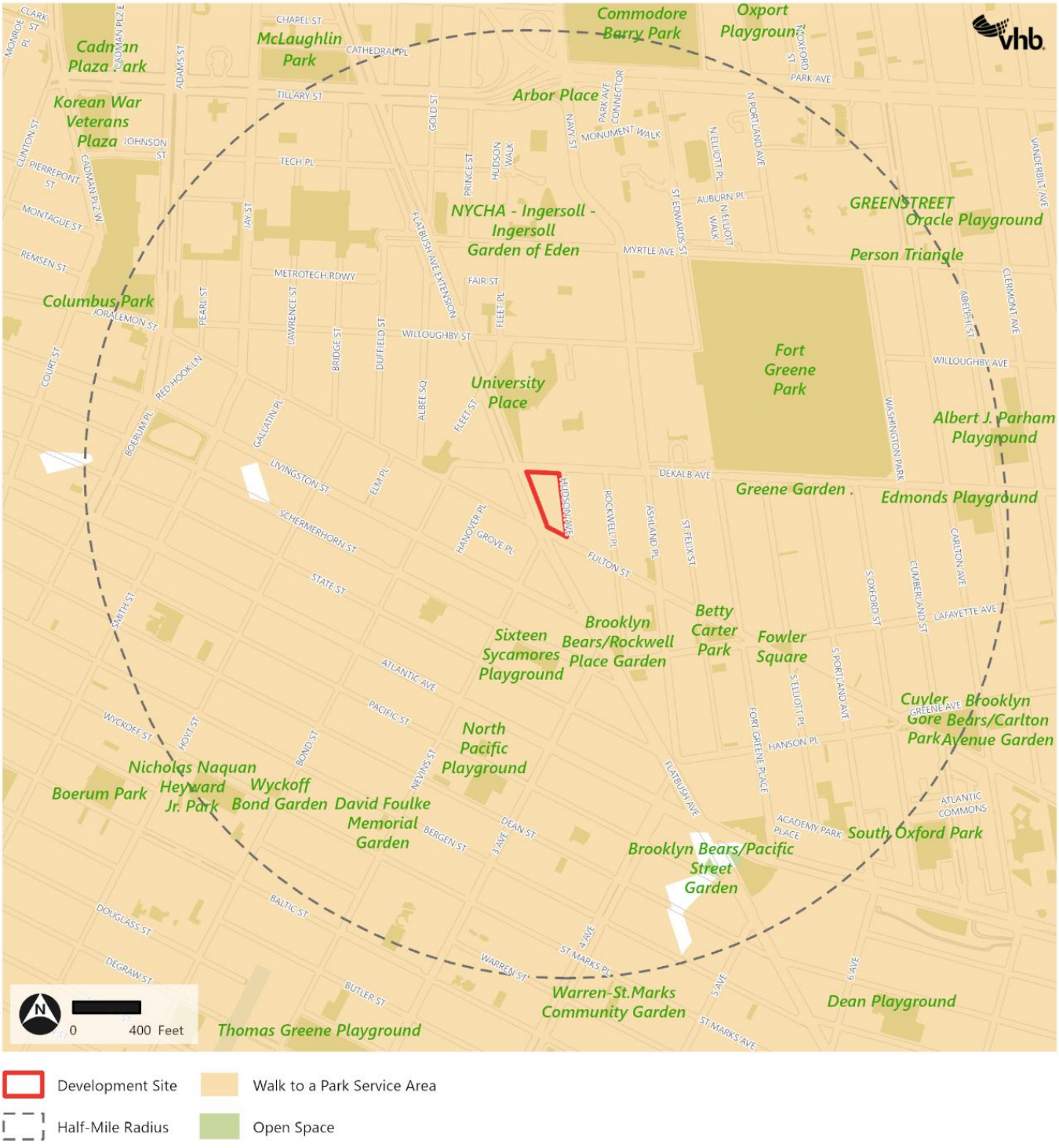
New York City, as part of the *OneNYC 2050 Building a Strong and Fair City* plan, has set a goal to have 85 percent of New York City residents living within walking distance of a park by 2030. To help the city reach this goal, NYC Parks has a Walk-to-a-Park initiative that focuses on increasing access to parks and open space in areas of the city where residents live farther than a walk to a park. According to Walk-to-a-Park service area geographic data provided by the City, the Development Site and half-mile study area are mostly within a Walk-to-a-Park service area, except for two small portions of the study area south and west of the Development Site (see **Figure 5-2**).

Figure 5-1 Residential Open Space Study Area



Source: NYC DCP (2024); NYC Parks (2024)

Figure 5-2 Walk-to-a-Park Service Area



Source: NYC DCP (2024); NYC Parks (2024)

Open Space User Populations

Existing Conditions

To identify residential user populations within the residential study area, data from the 2020 Decennial Census and developments completed within the residential study area since April 2020 were used to determine existing residential population.

The Future No-Action Condition

The residential study area population for the No-Action condition was determined by adding the existing population to the expected new population introduced from developments to be completed by the analysis year of 2032.

The Future With-Action Condition

The residential study area population for the With-Action condition was determined by adding the incremental number of residents generated by the Proposed Actions to the residential population in the No-Action condition.

Inventory of Open Space Resources

The *CEQR Technical Manual* defines public open space as open space that is publicly or privately owned and is accessible to the public on a regular basis, either constantly or for designated daily periods of time. Open spaces that are only available to limited users or are not available to the public on a regular or constant basis are not considered public open space but may be considered in a qualitative assessment of open space impacts.

Publicly accessible open space resources in the study area were inventoried through the latest available data obtained from NYC Parks and the New York City Geographic Information System (GIS). Open space is characterized as passive, active, or a mixture of active and passive depending on features of the space. Active open space is used for exercise, sports, or active children's play. Examples include playgrounds, athletic fields or courts, pools, and greenways. Passive open spaces allow for activities such as strolling, reading, sunbathing, and people watching. Examples include plazas, walking paths, gardens, and certain lawns with restricted uses. Esplanades are an example of open space that may be used for active uses, such as running and biking, or passive uses, such as dog walking.

Playgrounds that are open to the public outside of school hours (i.e., those that are part of the Schoolyard to Playground program[1]) managed by the NYC Department of Education (DOE), as well as those jointly operated and managed by both NYC Parks and DOE, are included in the inventory of open spaces. While public use of these playgrounds is prohibited during school hours, they are still included in the quantitative analysis as they serve the public in the afterschool and weekend hours.

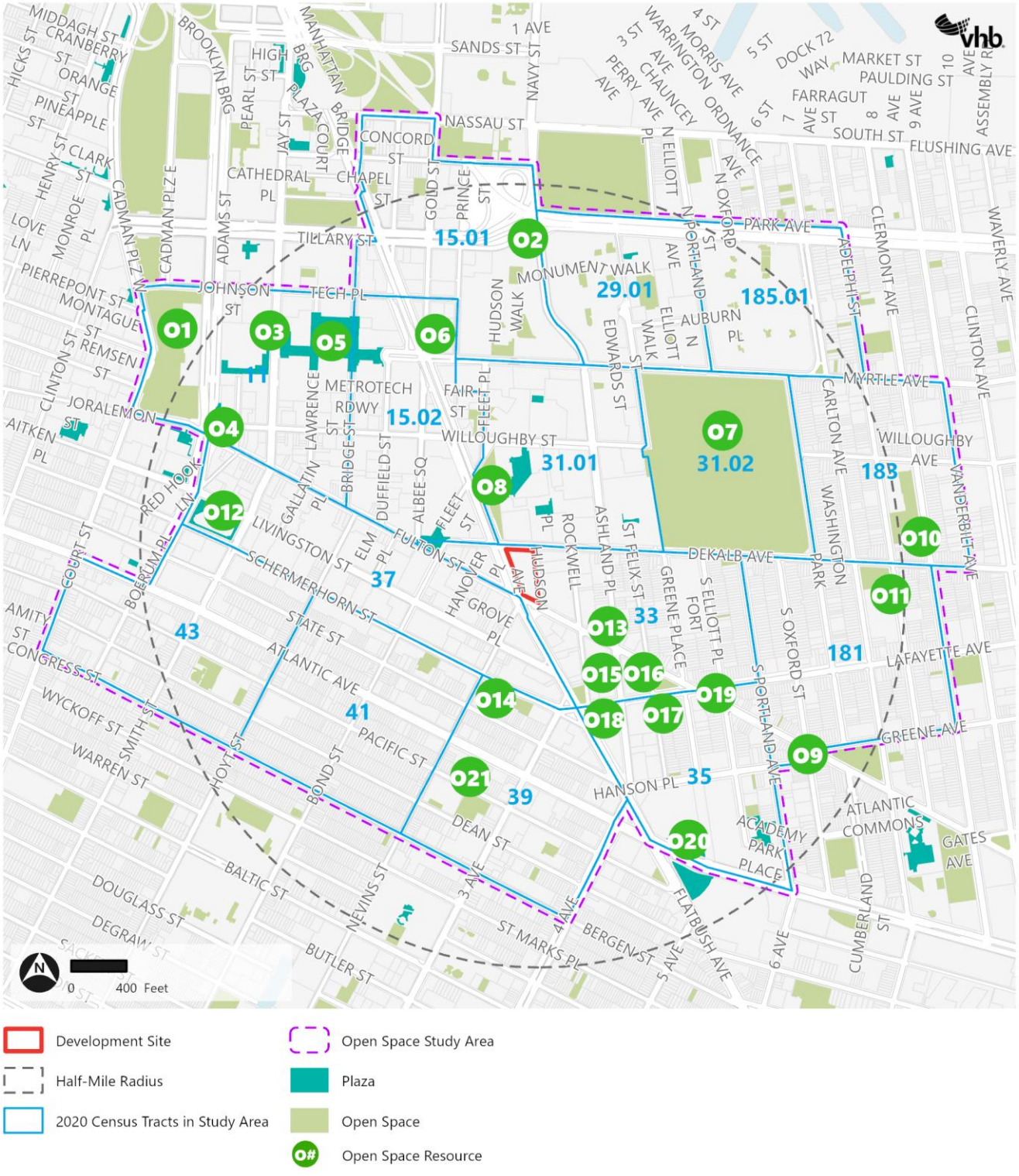
The open space inventory considered for quantitative analysis only includes community gardens within the study area that are publicly accessible on a constant and regular basis. The inventory excludes Greenstreets—small, planted areas within the street right-of-way maintained by NYC Parks as part of New York City's Greenstreets program—as these areas generally do not include passive recreational features such as benches or seating areas.

[1] These properties are owned and managed by the New York City Department of Education (DOE).

Existing Conditions

There are 22 public open space resources located within the study area (see **Figure 5-3**). These resources are a mix of neighborhood parks, playgrounds, plazas, privately owned public spaces (POPS), and gardens and comprise 45.19 acres of open space, of which approximately 4.95 is active and 40.24 is passive. Most of the study area's open space acreage comprises Fort Greene Park, which totals 30.17 acres of open space. Other large open space resources in the study area include Columbus Park, University Place, Albert J. Parham Playground, and 1 Metrotech Center Plaza. These resources provide a mix of active and passive open space and include amenities like fields, courts, playgrounds, shaded lawns, and seating areas.

Figure 5-3 Open Space Inventory



Source: NYC DCP (2024); NYC Parks (2024)

Adequacy of Open Space Resources

Comparison to City Guidelines

The adequacy of open space in the study area is based on the ratio of usable open space acreage to the study area population (the OSR). The City's planning goal for open space is 2.5 acres per 1,000 residents and optimally distributed as 80 percent active open space (or 2.0 acres per 1,000 residents) and 20 percent passive open space (or 0.5 acres per 1,000 residents).

Impact Assessment

The *CEQR Technical Manual* outlines the following guidelines for residential open space assessments:

- The City attempts to achieve a ratio of 2.50 acres per 1,000 residents for large-scale proposals. Ideally, this would consist of 0.50 acres of passive open space and 2.00 acres of active open space per 1,000 residents. However, these goals are often not feasible for many areas of the city and they do not constitute an impact threshold. Rather, it is a benchmark that represents how well an area is served by open space.
- A ratio that meets the Citywide Community District median ratio of 1.50 acres of open space per 1,000 residents is also recommended.

The determination of significant adverse impacts is based on how a project would change the OSRs in a study area, in addition to qualitative factors not reflected in the quantitative assessment. According to the *CEQR Technical Manual*, if a project would reduce an OSR and consequently result in overburdening existing facilities, or if it would substantially exacerbate an existing deficiency in open space, it may result in a significant adverse impact on open space resources. In general, if (1) a study area's OSRs fall below City guidelines, and (2) a project would result in a decrease in the OSR greater than the percent change threshold associated with OSR ranges, it could be considered a substantial change requiring additional analysis. In areas that have been determined to be extremely lacking in open space, a reduction as small as 1 percent may be considered significant, warranting further analysis (see **Table 5-1**).

Table 5-1 Percent Change Guidance to Determine Possible Open Space Impact

Total Open Space Ratio Range	Active Open Space Ratio Range	Passive Open Space Ratio Range	Percentage Change in Open Space Ratio signifying a Possible Adverse Open Space Impact
2.01 to 2.50 or greater	1.61 to 2.0* or greater	0.41 to 0.50* or greater	5%
1.51 to 2.00	1.21 to 1.60	0.31 to 0.40	4%
1.01 to 1.50	0.81 to 1.20	0.21 to 0.30	3%
0.51 to 1.00	0.41 to 0.80	0.11 to 0.20	2%
0.50 or less	0.01 to 0.40	0.01 to 0.10	1%

*2.5 OSR is the planning goal in NYC, with optimal distribution goal of 2.0 Active OSR and 0.5 Passive OSR

Preliminary Assessment

Existing Conditions

Study Area Population

As outlined in **Table 5-2**, data from the 2020 Decennial Census determines that a total of 52,159 residents are located within the half-mile study area. Based on data provided by the Department of City Planning (DCP), there have been 75 new developments completed since 2021 that are projected to have introduced 7,438 new residents to the study area (see **Table 5-3**). Therefore, the total existing residential population in the study area is approximately 59,597 people. Most of the population (74.2) comprises adults who often use court facilities and fields for sports as well as space for more individualized recreation, such as biking and jogging.

Table 5-2 Population from Census Tracts

Census Tract	Residential Population
11	1,578
15.01	5,161
15.02	5,801
29.01	3,149
31.01	3,395
31.02	0
33	4,807
35	2,402
37	4,565
39	2,644
41	3,398
43	3,810
181	4,204
183	2,784
185.01	4,461
Total	**52,159**
Population under 5 years	2,957 (5.7%)
Ages 5 to 9	1,979 (3.8%)
Ages 10 to 14	1,997 (3.8%)
Ages 15 to 19	1,833 (3.5%)
Ages 20 to 64	38,736 (74.2%)
Ages 65 and over	4,657 (8.9%)

Source: *2020 Decennial Census*

Table 5-3 Approximate Population from Developments Completed Since 2021

Project Address	Residential Units
Total DUs	3,664
Total Approximate Population from these Units	**7,438**
Total Existing Population	**59,597**

Source: *NYC DCP, Development DB 24Q2*

Study Area Open Space Resources

As discussed above, the study area includes 21 publicly accessible open spaces—which together provide a total of 45.12 acres of publicly accessible open space, including 4.95 acres of active open space and 40.17 acres of passive open space (see **Table 5-4**).

Table 5-4 Existing Residential Study Area Open Spaces

Map No.	Name	Owner/ Agency	Features and Amenities	Total Acres	Active Acres	Passive Acres	Condition	Utilization
1	**Columbus Park**	NYC Parks	Plaza, trees, tables, wireless internet access, benches	4.14	0	4.14	Excellent	Moderate
2	**Arbor Place**	NYC Parks	Trees, benches	0.07	0	0.07	Fair	Low
3	**Renaissance Plaza**	Brooklyn Renaissance Plaza LLC	Plaza, trees, plantings, benches	0.66	0	0.66	Fair	Low
4	**Willoughby Plaza**			0.38	0	0.38	Good	Moderate
5	**1 Metrotech Center Plaza**	Forest City Ratner Companies	Plaza, trees, plantings, benches	3.17	0	3.17	Excellent	Moderate
6	**Avalon Fort Greene**	Avalon Gold LLC	Plaza, trees, plantings, benches	0.43	0	0.43	Good	Low
7	**Fort Greene Park**	NYC Parks	Lawns, trees, playing courts, barbeque areas, playgrounds, spray showers, adult fitness station, plantings	30.17	3.02	27.15	Good	Heavy
8	**University Place**	NYC Parks	Plaza, trees, plantings, benches	1.16	0	1.16	Poor	Low
9	**712 Fulton Street Plaza**	NYC DOT	Plaza, trees, plantings, benches	0.017	0	0.017	Fair	Low
10	**Albert J. Parham Playground**	NYC Parks/NYC DOE	Sport courts, playground, spray showers, outdoor pool, bathrooms, trees, benches	1.25	0.75	0.50	Good	Heavy
11	**Edmonds Playground**	NYC Parks/NYC DOE	Basketball courts, playground, spray showers, bathrooms, trees, benches	0.92	0.74	0.18	Good	Low
12	**Livingston Plaza**	Metropolitan Transit Authority	Plaza, trees, plantings, benches	0.44	0	0.44	Good	Moderate
13	**230 Ashland Place Plaza**	230 Ashland Place	Plaza, trees and planter beds, benches	0.09	0	0.09	Fair	Moderate
14	**Sixteen Sycamores Playground**	NYC Parks	Playground, basketball courts, handball courts, spray showers, bathroom, trees, benches	0.57	0.4	0.17	Good	Moderate

Table 5-4 Existing Residential Study Area Open Spaces

Map No.	Name	Owner/ Agency	Features and Amenities	Total Acres	Active Acres	Passive Acres	Condition	Utilization
15	Polonsky Shakespeare Center Plaza	NYC HPD	Plaza, trees and planter beds, benches	0.17	0	0.17	Fair	Low
16	620 Fulton Street	NYHTC & HANYC, Inc. Employee Benefit Funds	Plaza, trees and planter beds, benches	0.06	0	0.06	Good	Moderate
17	Betty Carter Park	NYC Parks	Trees, planter beds, various seating	0.23	0	0.23	Fair	Heavy
18	BAM South POPS	300 Ashland/Downtown Brooklyn Partnership	Plaza, amphitheater, trees, plantings, movable table and chairs	0.41	0	0.41	Good	Moderate
19	Fowler Square	NYC Parks/DOT	Plaza, statue, planters, moveable chairs and tables, trees	0.15	0	0.15	Excellent	Heavy
20	Atlantic Terminal Mall Plaza	Atlantic Terminal Mall	Plaza, seating, trees and planters, Citibike station	0.48	0	0.48	Good	Heavy
21	North Pacific Playground	NYC Parks	Playground, garden, seating, trees	0.16	0.07	0.09	Good	Low
			Residential Study Area Total	**45.12**	**4.95**	**40.17**		
			Percent of Study Area Open Space	**100%**	**11%**	**89%**		

Adequacy of Open Spaces

The study area has an overall open space ratio of 0.76 acres per 1,000 residents (see **Table 5-5**), which is below the goal of 2.5 acres per 1,000 residents in the *CEQR Technical Manual* Open Space Guidelines. The study area's current residential passive and active open space ratios are 0.67 and 0.08 acres per 1,000 residents, respectively.

Table 5-5 Existing Conditions – Adequacy of Open Space Resources

	Open Space Acreage			Open Space Ratios (Acres per 1,000 People)			DCP Open Space Guidelines		
Total Population	**Total**	**Active**	**Passive**	**Total**	**Active**	**Passive**	**Total**	**Active**	**Passive**
Residential (0.5-Mile) Study Area									
59,597	45.12	4.95	40.17	0.76	0.08	0.67	2.5	2.0	0.50

While the study area ratios are below the City's goals, as shown in **Figure 5-2**, most of the study area is within the Walk-to-Park-Service Area. In addition, there are several substantial open space resources located outside the study area that are available for study area residents and those within the surrounding community. For example, the 10-acre Commodore Barry Park, located just north of the study area, features sports courts and fields, spray showers, a playground, and an outdoor pool. Cadman Plaza Park is a 10-acre plaza located just northwest of the study area and features well-shaded walkways and benches, as well as an artificial turf that can be used for passive or active recreation.

No-Action Condition

As described in the **Methodology** section, above, the No-Action condition accounts for population growth and changes expected to the inventory of open space resources by the 2032 analysis year.

Study Area Population

In the No-Action condition, there are 83 active construction projects expected to be completed prior to 2032, adding 7,438 residential units to the study area. These developments are expected to introduce 13,288 residents to the study area. Absent the Proposed Actions, the Development Site would remain the same as under the existing conditions, although it is assumed that the building's commercial spaces would be fully occupied by office and retail tenants. Therefore, the residential population in the study area under the No-Action condition would be 72,885 people (see **Table 5-6**).

Table 5-6 Population from No-Action Projects

No-Action Residential Category	Amount
Total No-Action DUs	7,438
Total Population from the No-Action DUs	**13,288**
Total No-Action Population	**72,885**

Source: NYC DCP, *Development DB 24Q2*

Study Area Open Spaces

In the No-Action condition, improvements to Fort Greene Park and Cuyler Gore Park would be completed. Fort Greene Park improvements would be complete by the 2032 build year and include the reconstruction of park entrances, paths, plaza, and drainage infrastructure. Cuyler Gore Park improvements would be complete in the fall of 2025 and include the reconstruction of park entrances, playground, and passive recreation area. The remainder of the existing open space resources in the inventory table are expected to remain the same as in existing conditions.

Adequacy of Open Spaces

In the No-Action condition, the total open space ratio in the study area would decrease to 0.62 per 1,000 residents, which would be below the City's goal of 2.5 acres per 1,000 residents. The active and passive open space resources would also fall beneath the City's goals at 0.07 and 0.55, respectively (see **Table 5-7**). As in existing conditions, the study area would continue to be located in a Walk-to-Park area and be served by existing parks not accounted for in the quantitative analysis.

Table 5-7 No-Action Condition – Adequacy of Open Space Resources

	Open Space Acreage			Open Space Ratios (Acres per 1,000 People)			DCP Open Space Guidelines		
Total Population	**Total**	**Active**	**Passive**	**Total**	**Active**	**Passive**	**Total**	**Active**	**Passive**
Residential (0.5-Mile) Study Area									
72,885	45.12	4.95	40.17	0.62	0.07	0.55	2.5	2.0	0.50

With-Action Condition

Study Area Population

In the With-Action condition the Proposed Actions would introduce an additional 2,564 residents to the study area population (see **Table 5-8**) for a total With-Action population of 75,449.

Table 5-8 No-Action and With-Action Population Comparison

No-Action Population	With-Action Population	Increment
72,885	75,449	+2,564

Study Area Open Spaces

In the With-Action condition, the Proposed Actions would introduce approximately 4,745 sf (approximately 0.10 acres) open space available to the public on the southern portion of the Development Site.

Adequacy of Open Spaces

Quantitative Assessment

In the With-Action condition, the study area would have 45.27 acres of open space, of which approximately 40.27 acres would contain passive uses, and 4.95 acres would contain active uses. An

additional 2,564 residents introduced by the Proposed Actions would be added to the study area's residential population. As such, the study area's total open space ratio in the With-Action condition would be 0.60 acres per 1,000 residents, the active open space ratio would be 0.07 acres per 1,000 residents, and the passive open space ratio would be 0.53 acres per 1,000 residents, all of which would continue to be below the City's guidelines (see **Table 5-9**).

Table 5-9 With-Action Condition – Adequacy of Open Space Resources

	Open Space Acreage			Open Space Ratios (Acres per 1,000 People)			DCP Open Space Guidelines		
Total Population	**Total**	**Active**	**Passive**	**Total**	**Active**	**Passive**	**Total**	**Active**	**Passive**
Residential (0.5-Mile) Study Area									
75,449	45.22	4.95	40.27	0.60	0.07	0.53	2.5	2.0	0.50

Qualitative Assessment

In the future with the Proposed Actions, the total residential open space ratio, as well as the active and passive open space ratios, would be below the City's planning goals. However, as noted above, the Proposed Actions would introduce to the Development Site private amenity spaces for project-generated residents, consisting of no less than 28,000 sf of active recreational space (including but not limited to gym and play areas) and 5,000 sf of passive recreational space (including but not limited to lounge areas, a roof deck, and dog run). Such amenities would be located throughout the building, including potential use of terrace and rooftop areas. These private amenity spaces would serve residents of the With-Action development, helping to absorb a portion of the incremental demand on active and passive open space resources within the study area.

Furthermore, additional open space resources are located outside the study area that are available for future residents generated by the Proposed Actions as well as the existing residents within the surrounding community. For example, the 10-acre Commodore Barry Park, located just north of the study area, features sports courts and fields, spray showers, a playground, and an outdoor pool. Cadman Plaza Park is a 10-acre plaza located just northwest of the study area and features well-shaded walkways and benches, as well as an artificial turf that can be used for passive or active recreation. Moreover, as shown in **Figure 5-2**, the majority of the study area is within the Walk-to-Park Service Area.

Impact Determination

As described previously, for areas with a total OSR of 0.51 to 1.00, a significant adverse open space impact may result if the OSR would be reduced by more than 2 percent. **Table 5-10** displays the percentage change between the No-Action and With-Action conditions for the Study Area.

Table 5-10 Open Space Ratios Summary

Ratio	CEQR Goal (Acres per 1,000)	No-Action Condition	With-Action Condition	Percent Change	Raw Change
Active	2.00	0.068	0.066	-3.387%	-0.002
Passive	0.50	0.551	0.534	-3.157%	-0.017
Total	**2.50**	**0.619**	**0.599**	-3.184%	**-0.020**

In the 2032 analysis year, the active OSR would decrease 3.387 percent from 0.068 in the No-Action condition to 0.066 in the With-Action condition. The passive OSR would decrease 3.157 percent from 0.551 in the No-Action condition to 0.534 in the With-Action condition. The total OSR would decrease 3.184 percent from 0.619 in the No-Action condition to 0.599 in the With-Action condition. Therefore, based on CEQR's quantitative thresholds, the Proposed Actions would result in a significant adverse quantitative impact. However, the Development Site is located in a Walk-to-a-Park Service Area and would continue to be served by nearby open space resources not accounted for in the quantitative assessment. Additionally, the Proposed Actions would introduce 4,745 sf of new open space available to the public. Furthermore, the Proposed Actions would introduce private amenity space for project-generate residents, including no less than 28,000 sf of private active recreational space and 5,000 sf of private passive recreational space. These amenities would help to absorb a portion of the incremental demand on active and passive open spaces within the study area. Therefore, considering both the quantitative and qualitative assessment, the Proposed Actions would not result in significant adverse impact to open space.

6

Shadows

A shadow is defined in the *2021 City Environmental Quality Review (CEQR) Technical Manual* as the condition that results when a building or other built structure blocks the sunlight that would otherwise directly reach a certain area, space, or feature. The purpose of this section is to assess whether new structures may cast shadows on sunlight-sensitive publicly accessible resources or other resources of concern such as natural resources, and to assess the significance of their impact.

Introduction

According to the *CEQR Technical Manual*, a shadows assessment is required for proposed actions that would result in new structures greater than 50 feet in height or located adjacent to, or across the street from, a sunlight-sensitive resource. Such resources include publicly accessible open spaces, important sunlight-sensitive natural features, or historic resources with sun-sensitive features. A significant adverse shadow impact occurs when the incremental shadow added by a proposed project falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources.

As described in **Chapter 1, Project Description,** the Proposed Actions would facilitate the construction of the Proposed Project, a 72-story, approximately 840-foot-tall building (including the mechanical bulkhead) located on Brooklyn Block 2093, Lot 1 (the Development Site), replacing the existing approximately 120-foot-tall building. Therefore, further assessment is warranted to understand the potential for the Proposed Actions to result in shadows impacts under *CEQR Technical Manual* criteria. To ensure a conservative analysis, this chapter considers a maximum building envelope with a total height (with bulkhead) of approximately 945 feet.

Principal Conclusions

A detailed shadows analysis was conducted based on the methodology set forth in the *CEQR Technical Manual* and determined that the Proposed Actions would not result in a significant adverse impact related to shadows. Because future development on the Development Site is expected to exceed 50 feet in height, the *CEQR Technical Manual* threshold for a shadows analysis, Tier 1 through Tier 3 and detailed shadows analyses were undertaken for the Proposed Actions. As described below, several sunlight-sensitive resources were identified within the Tier 3 shadow sweep that were advanced to a detailed analysis. These resources consist of 12 open space resources: Walt Whitman Park (O3), University Place (O9), Cadman Plaza Park (O12), Greenstreet at Brooklyn Bridge Boulevard (O17), Fort Greene Park (O18/H7),[1] Edmonds Playground (O24), Greenstreet at Carlton Avenue (O26), P.S. 261 Playground (O27), MetroTech Plaza (O28), Albee Square (O29), Abolitionist Place (O30), and Avalon Fort Greene Plaza (O33); and five historic resources: Evangelical Lutheran Church of the Holy Trinity (H1), First Free Congregation Church (H3), Mary of Nazarene Roman Catholic Church (H6), Fort Greene Park (H7/O18), and Simpson Methodist Episcopal Church (H9). No natural resources warrant a detailed analysis.

A detailed analysis was conducted for the resources that could receive incremental shadow on one or more of the analysis days. For the open space resources that were studied in the detailed shadows analysis, incremental shadows would be of limited duration and would occur in spaces that either receive uninterrupted sunlight during other periods of the analysis day or on spaces that do not receive uninterrupted sunlight under existing/No-Action conditions. Thus, it was determined that incremental shadows would not adversely impair the public's enjoyment of the space or the viability of vegetation of these resources. For the historic resources studied in the detailed shadows analysis, it was determined that incremental shadows either would not reach sunlight-sensitive features of the historic resources or would not last long enough to affect their use or enjoyment by the public. Based on the foregoing, no adverse impacts to sunlight sensitive resources would occur due to shadows from future development under the Proposed Actions.

Methodology

According to the *CEQR Technical Manual*, the longest shadow a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height. In accordance with the *CEQR Technical Manual*, a preliminary screening assessment is conducted to ascertain whether shadows resulting from a project could reach any sunlight-sensitive resource at any time of year; if the preliminary assessment indicates that, in the absence of intervening buildings, shadows from a project could reach sunlight-sensitive resources on any of the representative analysis days, a detailed analysis is typically warranted.

[1] Fort Greene Park is both a sunlight-sensitive open space resource and a sunlight-sensitive historic resource.

Identification of Sunlight-Sensitive Resources

The *CEQR Technical Manual* defines sunlight-sensitive resources as those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity. The following are considered to be sunlight-sensitive resources:[2]

- Public open space (e.g., parks, beaches, playgrounds, plazas, schoolyards, greenways, and landscaped medians with seating). Planted areas within unused portions of roadbeds that are part of the Greenstreets program are also considered sunlight-sensitive resources. The uses and vegetation in an open space establish its sensitivity to shadows. This sensitivity is assessed for both (1) warm-weather-dependent features like wading pools and sand boxes, or vegetation that could be affected by loss of sunlight during the growing season (i.e., March through October); and (2) features such as benches that could be affected by a loss of winter sunlight. Uses that rely on sunlight include passive uses, such as sitting or sunning; active uses, such as playfields or paved courts; and such activities as gardening, or children's wading pools and sprinklers. Where lawns are actively used, the turf requires extensive sunlight. Vegetation requiring direct sunlight includes the tree canopy, flowering plants, and plots in community gardens. Generally, 4 to 6 hours a day of sunlight, particularly in the growing season, is a minimum requirement for most vegetation. Consistent with *CEQR Technical Manual* methodology, private open spaces are not considered in a shadows analysis. Similarly, open spaces associated with residential buildings are not considered.
- Features of historic architectural resources that depend on sunlight for their enjoyment by the public. Only the sunlight-sensitive features are considered, as opposed to the entire architectural resource. Sunlight-sensitive features include the following: design elements that are part of a recognized architectural style that depends on the contrast between light and dark (e.g., deep recesses or voids such as open galleries, arcades, recessed balconies, deep window reveals, and prominent rustication); elaborate, highly carved ornamentation; stained-glass windows; exterior building materials and color that depend on direct sunlight for visual character (e.g., the polychrome (multicolored) features found on Victorian Gothic Revival or Art Deco façades); historic landscapes, such as scenic landmarks including vegetation recognized as a historic feature of the landscape; and structural features for which the effect of direct sunlight is described as playing a significant role in the structure's importance as a historic landmark. Historic resources that do not have sunlight-sensitive features are not considered in the shadows analysis.
- Natural resources where the introduction of shadows could alter the resource's condition or microclimate. Such resources could include surface waterbodies, wetlands, or designated resources such as coastal fish and wildlife habitats.

Preliminary Assessment

The preliminary screening assessment consists of three tiers of analysis:

- **Tier 1 Screening:** The first tier determines a simple radius around the proposed buildings representing the longest shadow that could be cast. If there are sunlight-sensitive resources within the radius, the analysis proceeds to the second tier;
- **Tier 2 Screening:** The second-tier analysis reduces the area that could be affected by project-generated shadows by accounting for a specific range of angles that can never receive shade in

[2] According to the *CEQR Technical Manual*, city streets, sidewalks, and private open spaces (such as private residential front and backyards, stoops, and vacant lots) are not considered to be sunlight-sensitive resources.

New York City due to the path of the sun in the northern hemisphere. According to the *CEQR Technical Manual*, because of the path that the sun travels across the sky in the northern hemisphere, no shadow can be cast in a triangular area south of any given project site. In New York City, this area lies between -108 and +108 degrees from true north. Topographic lines are included to demonstrate the terrain of the area;

- **Tier 3 Screening:** If the second tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a third tier of screening analysis further refines the area that could be reached by new shadows by looking at specific representative days of the year and determining the maximum extent of shadow over the course of each representative day. For the Tier 3 screening, three-dimensional modeling software with the capacity to model shadows is used, and the With-Action development is modeled and geo-located within the program. Terrain, which has been included in the Tier 1 and Tier 2 Screenings, is also incorporated into the model to account for how changes in elevation throughout the study area can influence shadows that could be cast in the With-Action condition. The representative days are December 21 (winter solstice), June 21 (summer solstice), March 21/September 21 (vernal/autumnal equinox), and May 6/August 6 (halfway between summer solstice and the equinoxes). The modeling software is also used to approximate times that shadows cast from the With-Action development could enter and exit a resource.

Detailed Assessment

If the Tier 3 screening indicates that, in the absence of intervening buildings, shadows from the With-Action development would reach a sunlight-sensitive resource on any of the representative analysis days, a detailed shadow analysis would be warranted. Because existing buildings (or No-Action buildings) may already cast shadows on a sun-sensitive resource, the Proposed Actions may not result in additional (incremental) shadows upon that resource. The detailed shadow analysis models a baseline condition (future No-Action) that is compared to the future condition resulting from the Proposed Actions (future With-Action) to illustrate the shadows cast by the No-Action development and distinguish the additional (incremental) shadow cast by the project.

For the Proposed Actions, a preliminary assessment (Tiers 1 through 3) and detailed analysis was undertaken.

Determination of Significance

As described in the *CEQR Technical Manual*, an incremental shadow is generally not considered significant when its duration is no longer than 10 minutes at any time of year and the resource continues to receive substantial direct sunlight. A significant shadow impact can occur when an incremental shadow of 10 minutes or longer falls on a sunlight-sensitive resource and results in one of the following:

- Vegetation: a substantial reduction in sunlight available to a sunlight-sensitive feature of the resource to less than the minimum time necessary for its survival (when there was sufficient sunlight in the future without the project), or a reduction in direct sunlight exposure where the sensitive feature of the resource is already subject to substandard sunlight (i.e., less than the minimum time necessary for its survival).
- Historic and cultural resources: a substantial reduction in sunlight available for the enjoyment or appreciation of the sunlight-sensitive features of a historic or cultural resource.

- Open space utilization: a substantial reduction in the usability of open space as a result of increased shadow, with consideration given to anticipated new users and the open space's utilization rates throughout the affected time periods as well as to the inventory of available open space resources in the study area.
- For any sunlight-sensitive feature of a resource: complete elimination of all direct sunlight on the sunlight-sensitive feature of the resource, when the complete elimination results in substantial effects on the survival, enjoyment, or—in the case of open space or natural resources—the use of the resource.

In general, a significant adverse shadow impact occurs when the incremental shadow added by a proposed action falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources.

Preliminary Assessment

Tier 1 and 2 Screening

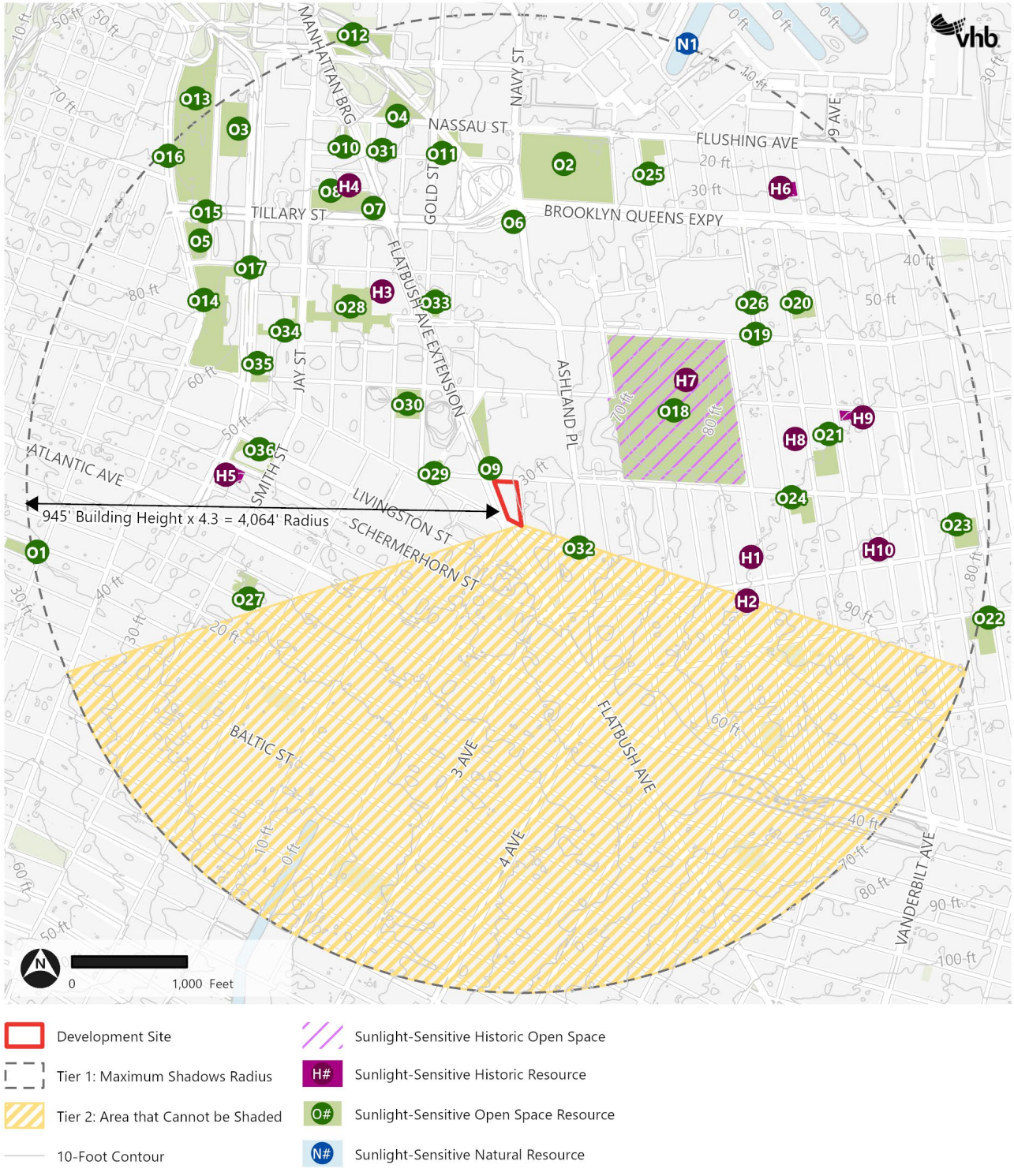
As noted above, while the Applicant's Proposed Project would have a total height of 840 feet, for conservative analysis purposes, this shadows analysis will consider a maximum building envelope with a height of approximately 945 feet, including mechanical bulkhead.

As shown in **Figure 6-1**, the Tier 1 radius—the maximum area where With-Action shadows could be cast—extends approximately 4,064 feet from the Development Site, which is 4.3 times the height of the maximum building envelope. The Tier 2 area between +108 and -108 degrees from true north cannot be shaded by the With-Action development. **Figure 6-1** and **Table 6-1** show the potential sunlight-sensitive resources identified in the Tier 1 and Tier 2 screening assessment that require additional analysis under Tier 3. The figure also shows the current topographic elevation of the Development Sites and surrounding area, which ranges from sea level to 90 feet (NAVD88).

As shown in **Table 6-1,** there are 47 sunlight-sensitive resources wholly or partially within an area that could be shaded by the With-Action development, based on the Tier 1 and Tier 2 Screenings. The 47 resources consist of 36 open space resources, ten historic resources,[3] and one natural resource. These resources require additional analysis as part of the Tier 3 modeling.

[3] Fort Greene Park is counted twice (as H7 and O18) because it is a sunlight-sensitive open space and historic resource.

Figure 6-1 Tier 1 and Tier 2 Screening



Source: NYC DCP (2024); NYC Parks (2024); NYC LPC (2025)

Table 6-1 Sunlight-Sensitive Resources in the Study Area

Map ID	Resource Name	Resource Summary	Sunlight-Sensitive Elements
Open Space			
O1	Cobble Hill Park	Local park with landscaped paths, seating areas, and a playground	Active recreation, vegetation, seating
O2	Commodore Barry Park	Neighborhood park with sports facilities and an outdoor pool; the oldest park in Brooklyn	Active recreation, vegetation, seating
O3	Walt Whitman Park	Park with trees and a lawn surrounding a central fountain and seating area	Vegetation, seating
O4	Trinity Park	Small park with benches and picnic tables	Vegetation, seating
O5	Korean War Veterans Plaza	Landscaped plaza with trees, benches, and a monument	Vegetation, seating
O6	Arbor Place	Small plaza with trees	Vegetation
O7	Bernard Weinberg Triangle	Landscaped plaza with trees, benches, and a monument	Vegetation, seating
O8	McLaughlin Park	Local park with sports fields, playground, and picnic area	Active recreation, vegetation
O9	University Place	Plaza with trees and seating	Vegetation, seating
O10	Greenstreet – Manhattan Bridge	Landscaped traffic median	Vegetation
O11	Golconda Playground	Local playground with handball courts, a seating area, and trees	Active recreation, vegetation, seating
O12	Bridge Park	Skate park with handball courts	Active recreation, vegetation
O13	Cadman Plaza Park	Landscaped plaza with trees, benches, and memorials	Vegetation, seating
O14	Columbus Park	Landscaped plaza with trees, benches, and a statue	Vegetation, seating
O15	Greenstreet – Tillary Street	Landscaped traffic median	Vegetation
O16	Greenstreet – Cadman Plaza	Landscaped traffic median	Vegetation
O17	Greenstreet – Brooklyn Bridge Boulevard	Landscaped traffic median	Vegetation
O18/H7	Fort Greene Park	Large park with basketball and tennis courts, playgrounds, a visitor center, and a historic monument	Active recreation, vegetation, seating, historic features
O19	Person Triangle	Small plaza with trees	Vegetation
O20	Oracle Playground	Local playground with play equipment, spray showers, benches, and an asphalt field	Active recreation, vegetation, seating
O21	Albert J. Parham Playground	Local playground with play equipment, basketball courts, and a lawn	Active recreation, vegetation, seating
O22	Greene Playground	Local playground with play equipment, benches, and an asphalt field	Active recreation, vegetation, seating

Table 6-1 Sunlight-Sensitive Resources in the Study Area

Map ID	Resource Name	Resource Summary	Sunlight-Sensitive Elements
O23	Underwood Park	Local playground with play equipment, spray showers, chess tables, and public restrooms	Active recreation, vegetation, seating
O24	Edmonds Playground	Local playground with play equipment, basketball and tennis courts, and public restrooms	Active recreation, vegetation, seating
O25	Oxport Playground	Local playground with play equipment, basketball courts, and tennis courts	Active recreation, vegetation, seating
O26	Greenstreet – Carlton Avenue	Landscaped traffic median.	Vegetation
O27	P.S. 261 Playground	Local playground with play equipment, basketball courts, a garden, and a lawn	Active recreation, vegetation, seating
O28	MetroTech Plaza	Public plaza with plantings and seating	Vegetation, seating
O29	Albee Square	Public plaza with plantings and seating	Vegetation, seating
O30	Abolitionist Place	Landscaped public plaza with seating and an art installation	Vegetation, seating
O31	Bridge Plaza Community Garden	Community garden with raised planting beds	Vegetation
O32	230 Ashland Place Plaza	Public plaza with plantings and seating	Vegetation, seating
O33	Avalon Fort Greene Plaza	Public plaza with plantings and seating	Vegetation, seating
O34	340 Jay Street Plaza	Public plaza with plantings and seating	Vegetation, seating
O35	Willoughby Plaza	Public plaza with plantings and seating	Vegetation, seating
O36	130 Livingston Street Plaza	Public plaza with plantings and seating	Vegetation, seating
Historic Resource			
H1	Evangelical Lutheran Church of the Holy Trinity	Small brick Gothic chapel with stained-glass windows	Stained-glass windows
H2	Lafayette Avenue Presbyterian Church	Large stone masonry Gothic church with stained-glass windows	Stained-glass windows
H3	First Free Congregation Church	Brick Greek Revival temple with prominent wood columns and Victorian stained glass, currently in use as New York University (NYU) admissions offices	Stained-glass windows
H4	St. James Roman Catholic Church	Neo-Georgian-style Catholic cathedral with stained-glass windows, associated with the 19th-century Irish American community	Stained-glass windows
H5	Friends Meeting House	Greek Revival and Italianate brick building with large windows	Double-hung windows with original sashes and blinds
H6	Mary of Nazarene Roman Catholic Church	Victorian Gothic style brick church with large rondel windows	Stained-glass windows
H7/O18	Fort Greene Park	*See above*	*See above*

Table 6-1 Sunlight-Sensitive Resources in the Study Area

Map ID	Resource Name	Resource Summary	Sunlight-Sensitive Elements
H8	St. Mark's and St. Michael's Episcopal Church	Stone Gothic church with stained-glass windows	Stained-glass windows
H9	Simpson Methodist Episcopal Church	Large brick Gothic church building with stained-glass windows, currently housing a French-language Baptist church congregation	Stained-glass windows
H10	Queen of All Saints Roman Catholic Church	Flamboyant Gothic style cast-stone church building with stained-glass windows	Stained-glass windows
Natural Resource			
N1	Navy Yard Basin	Industrial inlet of the East River	Aquatic habitat

Source: New York City Department of Parks and Recreation, NYC Capital Planning Platform POPS map, New York Cultural Resource Information System (CRIS), New York City Landmarks Preservation Commission (LPC)

Tier 3 Screening Assessment

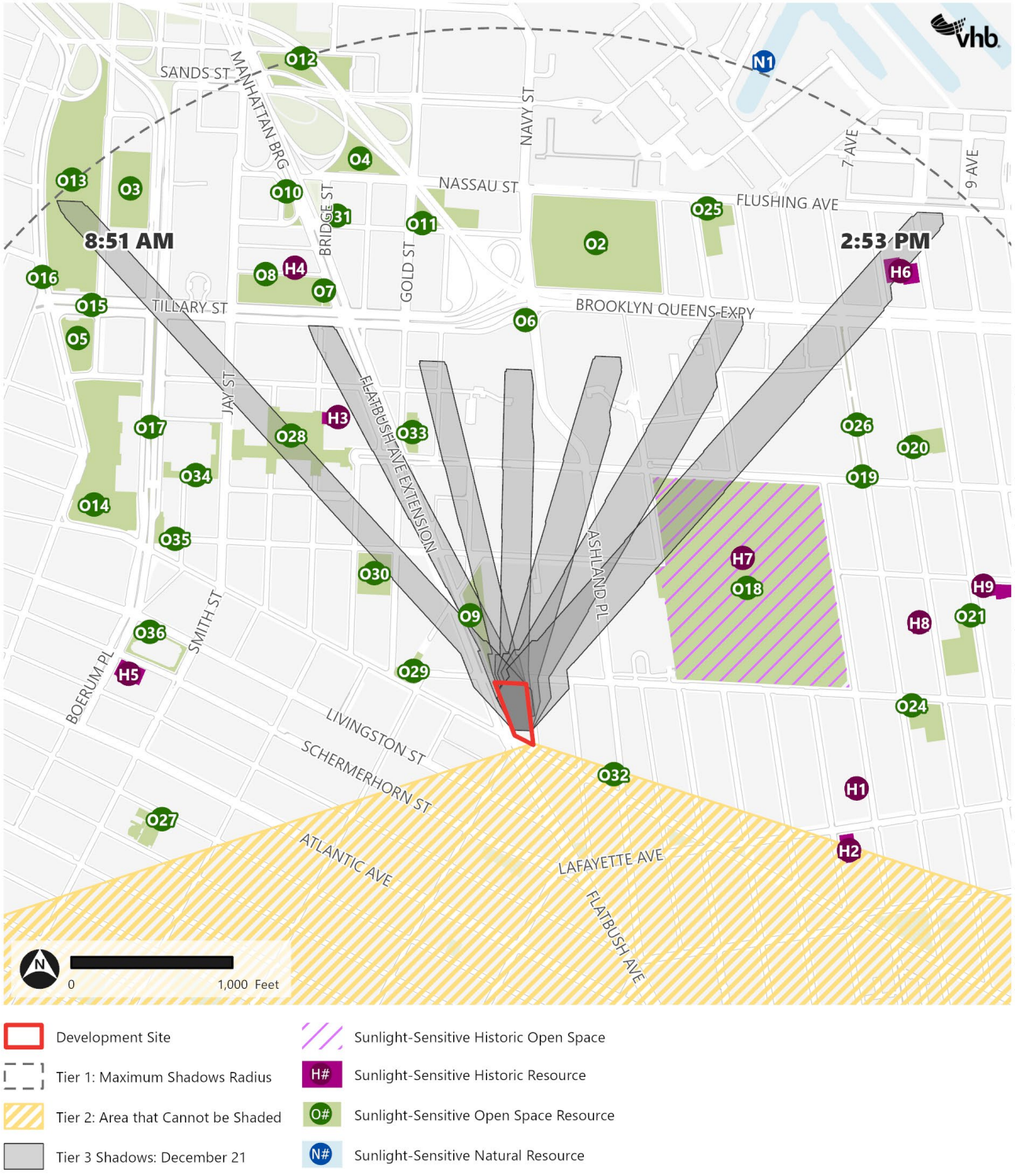
In accordance with the *CEQR Technical Manual*, a Tier 3 screening assessment was performed because the Tier 1 and Tier 2 assessments identified several sunlight-sensitive resources within ±108 degrees of true north and within the area of the longest shadow that could be cast by the With-Action development.

The Tier 3 screening assessment was performed for the 4 representative days of the year set forth in the *CEQR Technical Manual*: December 21, the winter solstice and shortest day of the year; March 21/September 21, the equinoxes; May 6/August 6, the midpoints between the summer solstice and the equinoxes; and June 21, the summer solstice and the longest day of the year.

In accordance with the *CEQR Technical Manual*, a model of the building in the With-Action condition was developed in a three-dimensional computer program (Rhino). The model was geo-located, and the surrounding terrain was imported into the model to account for differences in topography. As noted above, the Tier 3 shadow screening shows the shadows that could be cast as a result of the Proposed Actions but does not account for existing buildings which may already cast shadows on the identified resources. **Figure 6-2** to **Figure 6-5**. below show the Tier 3 screening results.

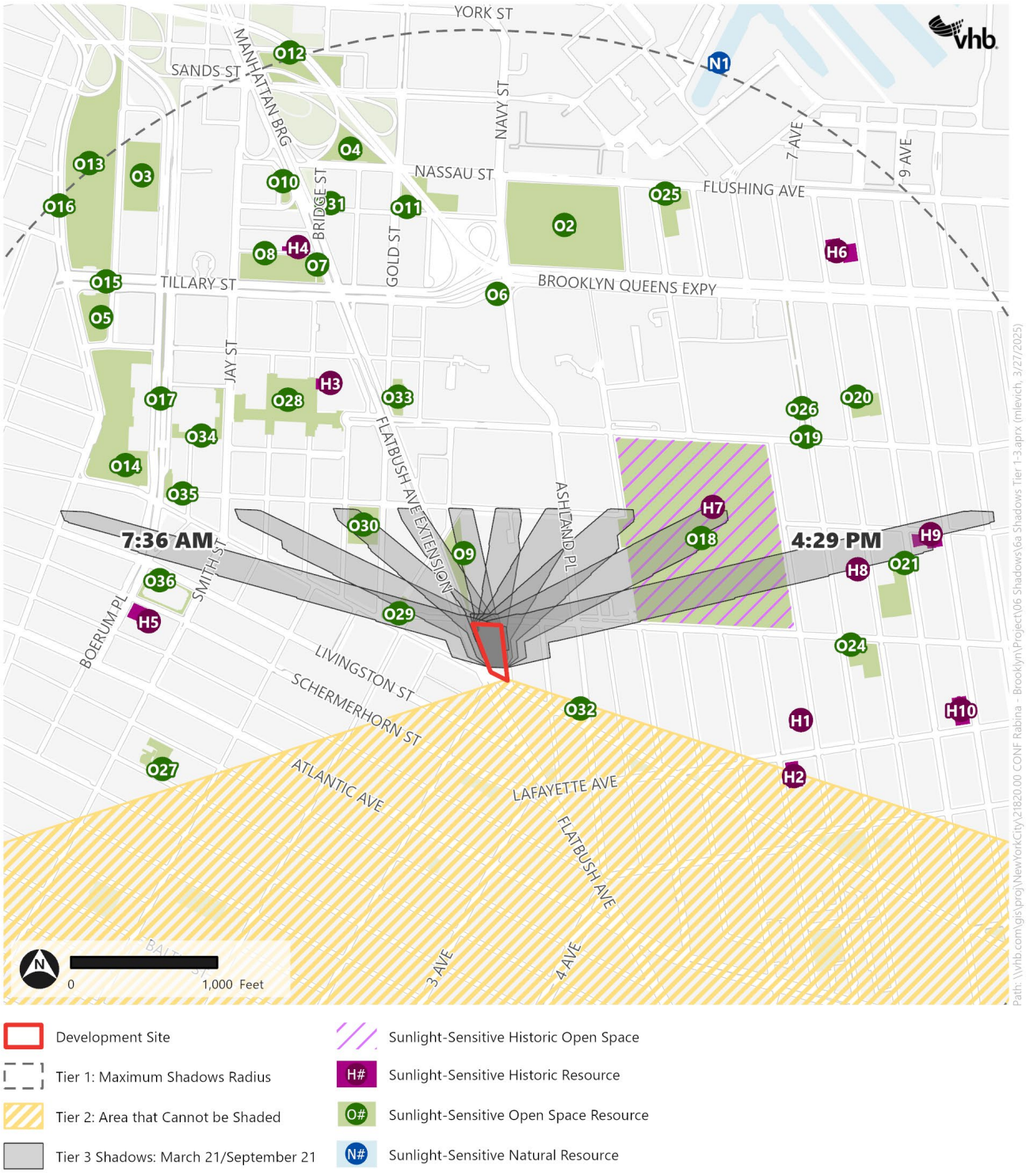
The Tier 3 screening indicates that in the absence of intervening structures, the With-Action development could cast shadows on 12 open space resources and four historic resources (including Fort Greene Park, which is counted as both an open space resource and a historic resource); therefore, these resources were advanced to a detailed analysis. The remainder of the resources screened out and therefore do not require detailed analysis. **Table 6-2** shows the results of the Tier 3 screening assessment.

Figure 6-2 Tier 3 Screening December 21 Analysis Day



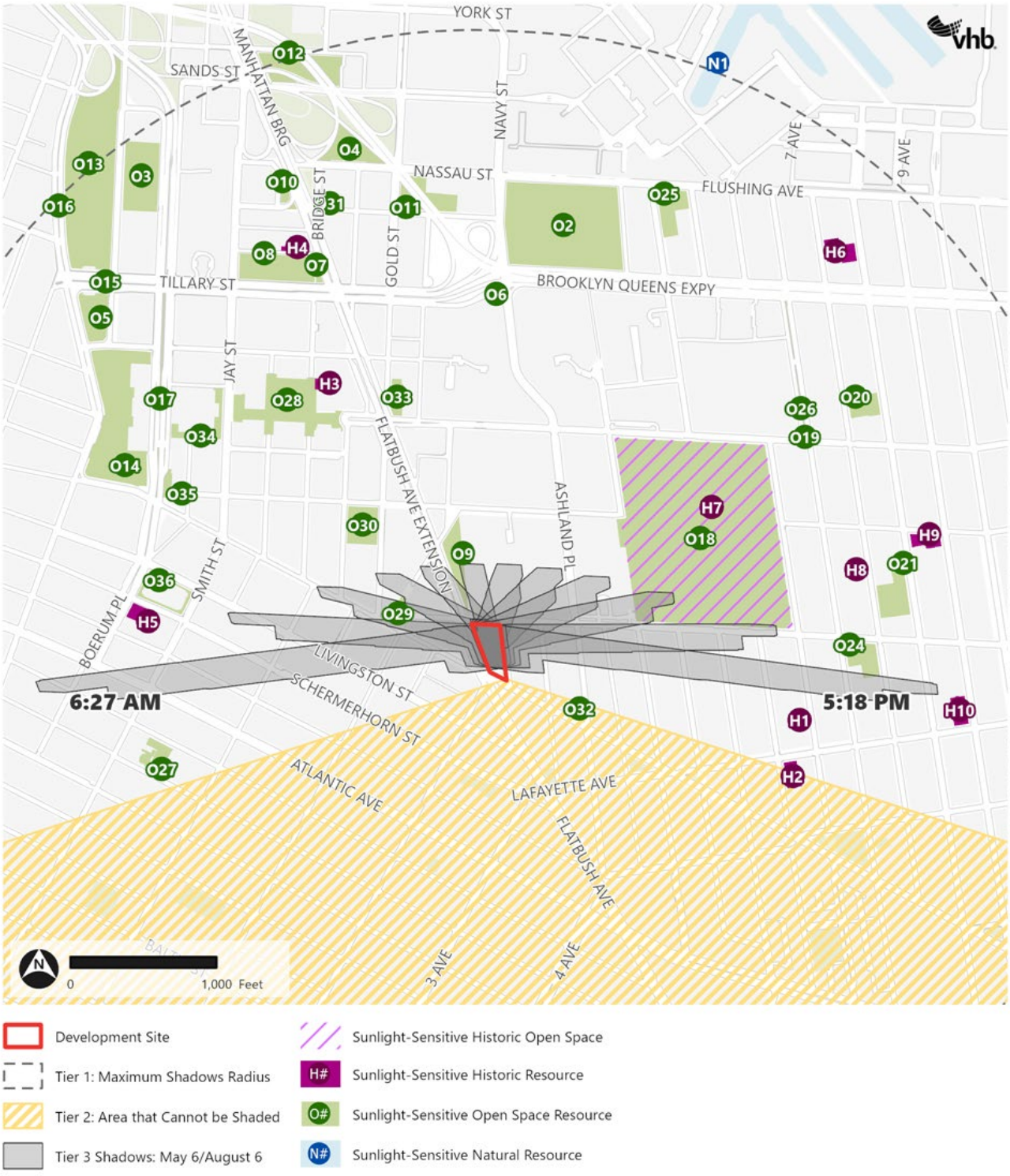
Source: NYC DCP (2024); NYC Parks (2024); NYC LPC (2025)

Figure 6-3 Tier 3 Screening March 21/September 21 Analysis Day



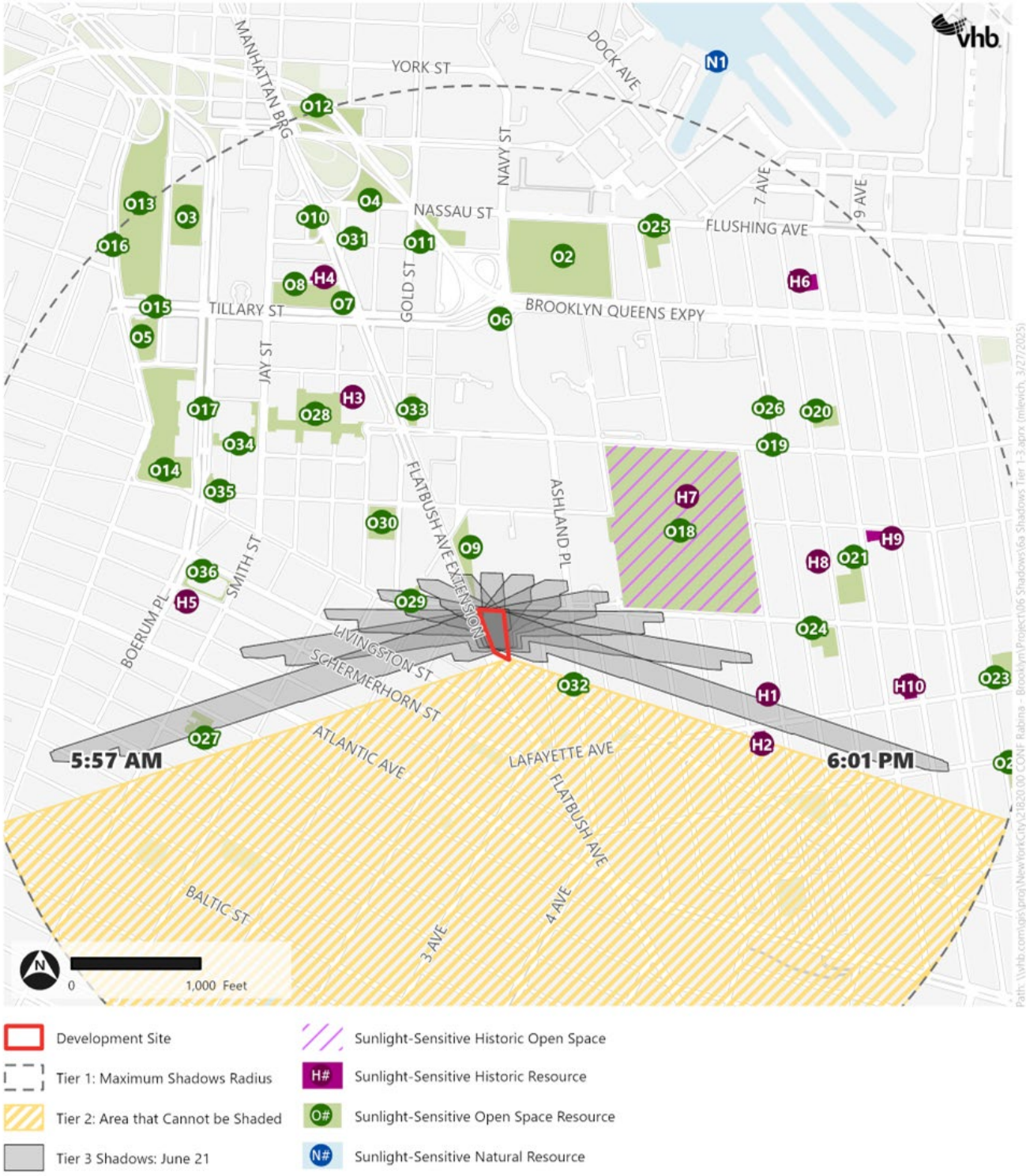
Source: NYC DCP (2024); NYC Parks (2024); NYC LPC (2025)

Figure 6-4 Tier 3 Screening May 6/August 6 Analysis Day



Source: NYC DCP (2024); NYC Parks (2024); NYC LPC (2025)

Figure 6-5 Tier 3 Screening June 21 Analysis Day



Source: NYC DCP (2024); NYC Parks (2024); NYC LPC (2025)

Table 6-2 Tiers 1-3 Screening Results

Map ID	Resource Name	Screening Results
Open Spaces		
O1	Cobble Hill Park	Screened at Tier 3
O2	Commodore Barry Park	Screened at Tier 3
O3	Walt Whitman Park	Detailed analysis required
O4	Trinity Park	Screened at Tier 3
O5	Korean War Veterans Plaza	Screened at Tier 3
O6	Arbor Place	Screened at Tier 3
O7	Bernard Weinberg Triangle	Screened at Tier 3
O8	McLaughlin Park	Screened at Tier 3
O9	University Place	Detailed analysis required
O10	Greenstreet – Manhattan Bridge	Screened at Tier 3
O11	Golconda Playground	Screened at Tier 3
O12	Bridge Park	Screened at Tier 3
O13	Cadman Plaza Park	Detailed analysis required
O14	Columbus Park	Screened at Tier 3
O15	Greenstreet – Tillary Street	Screened at Tier 3
O16	Greenstreet – Cadman Plaza	Screened at Tier 3
O17	Greenstreet – Brooklyn Bridge Boulevard	Detailed analysis required
O18/H7	Fort Greene Park	Detailed analysis required
O19	Person Triangle	Screened at Tier 3
O20	Oracle Playground	Screened at Tier 3
O21	Albert J. Parham Playground	Screened at Tier 3
O22	Greene Playground	Screened at Tier 3
O23	Underwood Park	Screened at Tier 3
O24	Edmonds Playground	Detailed analysis required
O25	Oxport Playground	Screened at Tier 3
O26	Greenstreet – Carlton Avenue	Detailed analysis required
O27	P.S. 261 Playground	Detailed analysis required
O28	MetroTech Plaza	Detailed analysis required
O29	Albee Square	Detailed analysis required
O30	Abolitionist Place	Detailed analysis required
O31	Bridge Plaza Community Garden	Screened at Tier 3
O32	230 Ashland Place Plaza	Screened at Tier 3
O33	Avalon Fort Greene Plaza	Detailed analysis required
O34	340 Jay Street Plaza	Screened at Tier 3
O35	Willoughby Plaza	Screened at Tier 3
O36	130 Livingston Street Plaza	Screened at Tier 3

Table 6-2 Tiers 1-3 Screening Results

Map ID	Resource Name	Screening Results
Historic Resources		
H1	Evangelical Lutheran Church of the Holy Trinity	Detailed analysis required
H2	Lafayette Avenue Presbyterian Church	Screened at Tier 3
H3	First Free Congregation Church	Detailed analysis required
H4	St. James Roman Catholic Church	Screened at Tier 3
H5	Friends Meeting House	Screened at Tier 3
H6	Mary of Nazarene Roman Catholic Church	Detailed analysis required
H7/O18	Fort Greene Park	Detailed analysis required
H8	St. Mark's and St. Michael's Episcopal Church	Screened at Tier 3
H9	Simpson Methodist Episcopal Church	Detailed analysis required
H10	Queen of All Saints Roman Catholic Church	Screened at Tier 3
Natural Resource		
N1	Navy Yard Basin	Screened at Tier 3

Detailed Analysis

No-Action Condition

As discussed in detail in **Chapter 1, Project Description**, in the 2032 future without the Proposed Actions, the existing building would remain at the Development Site, and the Development Site would not be redeveloped. No changes in building bulk, height, or massing would occur at the Development Site relative to the existing conditions.

The detailed analysis incorporates the approximate building massing of nearby No-Action development projects anticipated to be complete before 2032.

With-Action Condition

In the future with the Proposed Actions, the existing commercial office building at the Development Site would be demolished, and the Proposed Project—a 72-story, approximately 840-foot-tall (with bulkhead) mixed-use building—would be constructed. As noted above, a 945-foot-tall building envelope is analyzed for conservative analysis purposes.

The detailed shadow analysis builds on the three-dimensional modeling used in the Tier 3 analysis to identify whether development under the With-Action condition could cast shadows on the identified resources of concern. Any new shadows projected to be cast onto the identified resources from the proposed buildings are considered "incremental shadows."

Table 6-3 provides the modeled incremental shadow entry/exit times for the sunlight-sensitive resources. Based on the detailed analysis, University Place (O9), Fort Greene Park (O18/H7), Edmonds Playground (O24), P.S. 261 Playground (O27), Albee Square (O29), and the Evangelical Lutheran Church of the Holy Trinity (H1) could all receive incremental shadows on at least one analysis day

when accounting for terrain and intervening buildings. The detailed modeling showed that all other resources in **Table 6-3** would not receive incremental shading in the With-Action condition due to existing shadows cast by intervening buildings; therefore, these resources do not warrant further analysis.

Table 6-3 Detailed Analysis Summary of Incremental Shadow Entry/Exit Times

	Analysis Day			
Resource	**December 21 8:51 AM - 2:53 PM**	**March 21/ September 21 7:36 AM - 4:29 PM**	**May 6/Aug. 6 6:27 AM - 5:18 PM**	**June 21 5:57 AM - 6:01 PM**
Open Space Resources				
O3 – Walt Whitman Park	No incremental shading[1]	No incremental shading	No incremental shading	No incremental shading
O9 – University Place	10:18 AM – 11:24 AM 1 hour 6 minutes	10:08 AM – 11:38 AM 1 hour 20 minutes	10:43 AM – 11:43 AM 1 hour	10:39 AM – 11:44 AM 1 hour 5 minutes
O13 – Cadman Plaza Park	No incremental shading[1]	No incremental shading	No incremental shading	No incremental shading
O17 – Greenstreet at Brooklyn Bridge Boulevard	No incremental shading[1]	No incremental shading[1]	No incremental shading	No incremental shading
O18/H7 – Fort Greene Park	2:17 PM – 2:53 PM 36 minutes	2:45 PM – 4:29 PM 1 hour 44 minutes	3:19 PM – 4:41 PM 1 hour 22 minutes	No incremental shading
O24 – Edmonds Playground	No incremental shading	No incremental shading	5:12 PM – 5:18 PM 6 minutes	No incremental shading
O26 – Greenstreet at Carlton Avenue	No incremental shading[1]	No incremental shading	No incremental shading	No incremental shading
O27 – P.S. 261 Playground	No incremental shading	No incremental shading	No incremental shading	5:57 AM – 6:18 AM 21 minutes
O28 – MetroTech Plaza	No incremental shading[1]	No incremental shading	No incremental shading	No incremental shading
O29 – Albee Square	No incremental shading	No incremental shading[1]	7:30 AM – 9:11 AM 1 hour 41 minutes	8:00 AM – 9:53 AM 1 hour 53 minutes
O30 – Abolitionist Place	No incremental shading	No incremental shading	No incremental shading[1]	No incremental shading[1]
O33 – Avalon Fort Greene Plaza	No incremental shading[1]	No incremental shading	No incremental shading	No incremental shading
Historic Resources				
H1 – Evangelical Lutheran Church of the Holy Trinity	No incremental shading	No incremental shading	No incremental shading	5:40 PM – 5:52 PM 12 minutes
H3 – First Free Congregation Church	No incremental shading[1]	No incremental shading	No incremental shading	No incremental shading

Table 6-3 Detailed Analysis Summary of Incremental Shadow Entry/Exit Times

	Analysis Day			
Resource	**December 21 8:51 AM - 2:53 PM**	**March 21/ September 21 7:36 AM - 4:29 PM**	**May 6/Aug. 6 6:27 AM - 5:18 PM**	**June 21 5:57 AM - 6:01 PM**
H6 – Mary of Nazarene Roman Catholic Church	No incremental shading[1]	No incremental shading	No incremental shading	No incremental shading
H7/O18 – Fort Greene Park	*See above.*	*See above.*	*See above.*	*See above.*
H9 – Simpson Methodist Episcopal Church	No incremental shading	No incremental shading	No incremental shading[1]	No incremental shading

Notes:

Per the *CEQR Technical Manual,* the selected time zone for the analysis is Eastern Standard Time and daylight saving time was not used.

[1] There would be no incremental shadows on this resource due to intervening buildings

Detailed shadow analyses are discussed for each resource in the relevant sub-sections below.

Open Space Resources

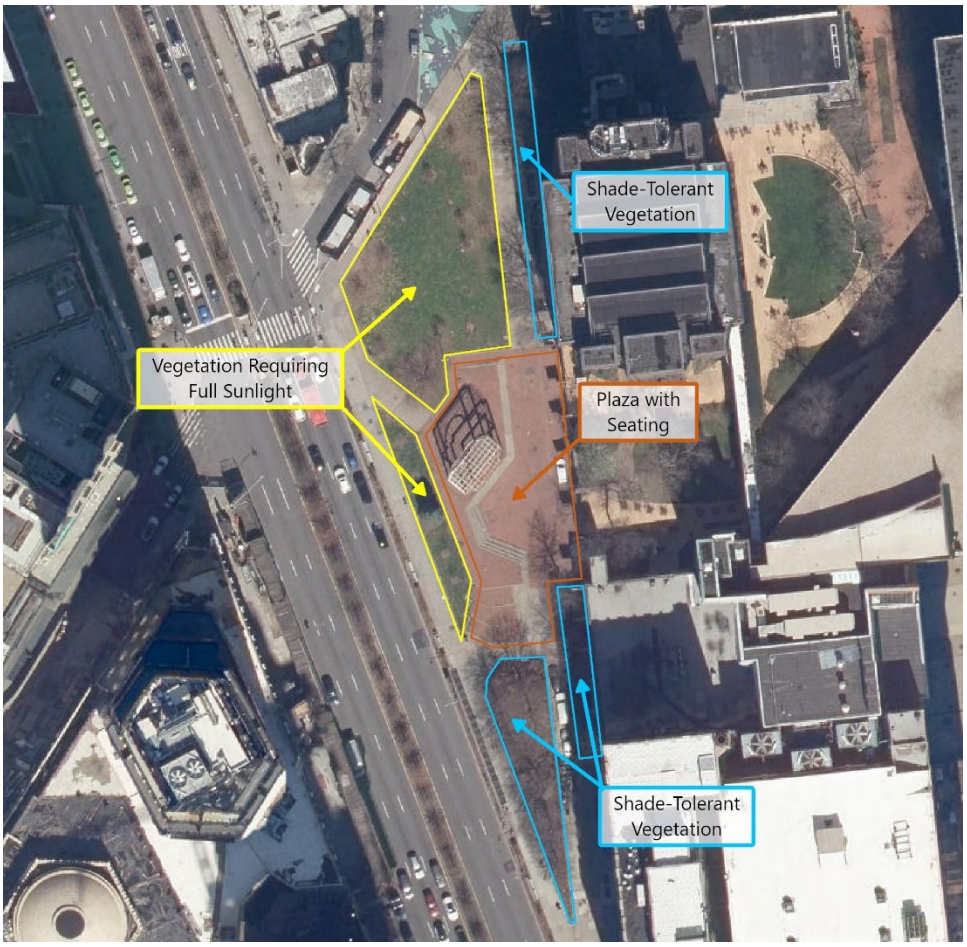
O9 – University Place

University Place (O9) is a public plaza owned and operated by NYC Parks. Located north of the Development Site, University Place occupies a triangular area between Flatbush Avenue Extension and the campus of Long Island University Brooklyn (LIU). The plaza features benches, a sculpture, and landscaping with trees and shrubs. Sunlight-sensitive elements are the benches around the perimeter of the plaza and vegetation, including grass, shrubs, and a mix of mature and immature trees. A diagram of the plaza showing sunlight-sensitive features is shown in **Figure 6-6.** Under With-Action conditions, University Place would receive incremental shadows on all 4 analysis days, as shown in **Figure 6-8** through **Figure 6-20.**

December 21 Analysis Day

The detailed analysis indicates that under With-Action conditions, incremental shadows would be cast on University Place for approximately 1 hour and 6 minutes in the morning of the December 21 analysis day, from 10:18 AM to 11:24 AM. Incremental shadows would quickly move through several distinct areas around the perimeter of the plaza, reaching their greatest extent at approximately 10:50 AM, as shown in **Figure 6-9**. The With-Action development would briefly eliminate sunlight from this resource for approximately 10 minutes from 10:18 AM to 10:28 AM. Since December 21 is outside the growing season for vegetation, incremental shadows on the landscaped lawns, shrubs, and trees during this analysis day would not interfere with the health of the vegetation. Incremental shadows cast for a limited duration in the morning during this analysis day would not affect the use or enjoyment of the plaza by the public. While sunlight would be eliminated briefly, the plaza would still receive sunlight during midday, when utilization would be highest in the winter (though lower than during warmer seasons). No significant adverse impacts would occur due to project-generated incremental shadows on University Plaza during the December 21 analysis day.

Figure 6-6 University Place – Vegetation Requiring Full or Partial Sunlight



Source: NYS ITS Geospatial Services, 2024

March 21/September 21 Analysis Day

Under With-Action conditions, incremental shadows would be cast on University Place for approximately 1 hour and 20 minutes in the morning of the March 21/September 21 analysis day, from 10:08 AM to 11:38 AM, reaching their greatest extent at approximately 11:00 AM (see **Figure 6-13**). The With-Action development would not result in the complete elimination of sunlight at University Plaza at any point on this day, as sunlight would be cast on a strip of land at the southwest of the plaza around 11:00 AM. March 21 and September 21 are in the growing season for vegetation. Vegetation in University Plaza includes shrubs, and mature trees, which can grow with a minimum of 4 to 6 hours of sunlight per day. There are also lawns and immature trees and saplings scattered throughout the plaza, which require approximately 6 to 8 hours of direct sunlight, according to the *CEQR Technical Manual*. As shown in **Figure 6-6**, vegetation that requires full sunlight is mainly located in the northern half of the open space, along with several immature trees planted in a raised bed running along the western edge. It is anticipated that the majority of the vegetation in the plaza would receive sufficient sunlight for growth on this day. It is possible that some of the grass and immature tree saplings in the open space could receive fewer than 6 hours of direct sunlight on the March 21/September 21 analysis day in the future with the Proposed Actions. However, this would also be true in the No-Action condition for some vegetation, particularly toward the northwestern corner of the plaza. March 21 and September 21 are at the beginning and end of the growing season

for vegetation, and during the bulk of the growing season (late spring, summer, and early fall), all vegetation would receive sufficient sunlight for growth (as detailed further below).

The introduction of incremental shadows for 1 hour and 20 minutes on University Place would not substantially change the conditions of the open space because it is located in a highly developed downtown area surrounded by other tall buildings. On March 21 and September 21, the shadows of nearby tall buildings are cast on the plaza several times throughout the analysis day, and it receives periods of direct sunlight and shade. The same would be true in the future with or without the Proposed Actions. Incremental shade due to the With-Action development would not substantially affect the use or enjoyment of the open space by the public because of the limited duration of additional shadows. Therefore, no significant adverse impacts would occur due to project-generated incremental shadows on University Plaza during the March 21/September 21 analysis day.

May 6/August 6 Analysis Day

Under With-Action conditions, incremental shadows would be cast on University Place for approximately 1 hour on the May 6/August 6 analysis day, from 10:43 AM to 11:43 AM. Shadows on the plaza would be limited to its southern half, reaching their greatest extent at around 11:10 AM (see **Figure 6-16**). The area that would be shaded on this day contains a stand of mature trees at the southern tip of the park directly south of a paved plaza and seating area and a small portion of a raised planting bed containing grass and saplings. All vegetation in the plaza would continue to receive sufficient sunlight for growth, i.e., 4 to 6 hours for the mature tree canopy and shrubs, and 6 to 8 hours for the immature tree saplings and grass lawns. There would be seating areas in direct sunlight for the majority of the day as well, and the incremental shadow from the With-Action development would not affect the public use or enjoyment of the open space resource. Therefore, no significant adverse impacts would occur due to project-generated incremental shadows on the May 6/August 6 analysis day.

June 21 Analysis Day

Under With-Action conditions, incremental shadows would be cast on University Place for approximately 1 hour and 5 minutes on the June 21 analysis day, from 10:39 AM to 11:44 AM. Shadows on the plaza would cover a marginal area at the southern tip, reaching their greatest extent at around 11:30 AM (see **Figure 6-20**). The area that would be shaded on this day contains a stand of mature trees at the southern tip of the park. All vegetation in the plaza would continue to receive sufficient sunlight for growth, i.e., 4 to 6 hours for the mature tree canopy and shrubs, and 4 to 6 hours for the immature tree saplings and grass lawns. There would be seating areas in direct sunlight for the majority of the day, and the incremental shadow from the With-Action development would not affect the public use or enjoyment of the open space resource. Therefore, no significant adverse impacts would occur due to project-generated incremental shadows on the June 21 analysis day.

O18/H7 – Fort Greene Park

Fort Greene Park is an approximately 30-acre park featuring a variety of active and passive recreational amenities, including walking trails, picnic areas, seating areas, basketball and tennis courts, a playground, and spray showers. The park is rhombus-shaped, arranged around a central hill occupied by a monument commemorating the American Revolutionary War, the Prison Ship Martyr's Monument. The park is located approximately 1,000 feet northeast of the Development Site.

Fort Greene Park is a contributing resource within the LPC-Designated Fort Greene Historic District, notable for its design and its association with significant historic events. The park is the historic site of a Revolutionary War–era fort involved in the Battle of Long Island. In the early 19th century, journalist Walt Whitman led a successful movement to turn the site into a public park. Sunlight-sensitive historic elements of the park include the landscaping and layout, originally designed by Frederick Law Olmstead and Calvert Vaux in the late 19th century, and the Prison Ship Martyr's Monument, a granite Doric column with a glazed-bronze cap, designed by McKim, Mead, and White and constructed in 1908.

Fort Greene Park would receive incremental shadows on the December 21, March 21/September 21, and May 6/August 6 analysis days, as shown in **Figure 6-21** through **Figure 6-31.**

Figure 6-7 Fort Greene Park – Features Requiring Full or Partial Sunlight



Source: NYS ITS Geospatial Services, 2024

December 21 Analysis Day

The detailed analysis indicates that under With-Action conditions, incremental shadows would be cast on Fort Greene Park for approximately 36 minutes in the afternoon of December 21, from approximately 2:17 PM to 2:53 PM, which is the end of the analysis day. Shadows would be limited to a small area in the northwestern corner of the park, covering an area between the existing shadows of several nearby buildings. Sunlight-sensitive elements in this part of the park are basketball courts and a mature tree canopy. Since December 21 is outside the growing season for vegetation, incremental shadows on trees during this analysis day would not interfere with the health of the vegetation. The basketball courts in this area would still receive sunlight throughout most of the day, and it is anticipated that their utilization would be relatively low during the winter. The incremental shadows would be of limited extent and duration, and they would not affect the public use or enjoyment of this resource. Therefore, no significant adverse impacts would occur due to project-generated incremental shadows on the December 21 analysis day.

March 21/September 21 Analysis Day

Fort Greene Park would receive incremental shadows from the With-Action development for approximately 1 hour and 44 minutes in the afternoon on March 21/September 21, from 2:45 until the end of the analysis day at 4:29 PM. Incremental shadows would enter the western edge of the park and extend east across the park's center, reaching their greatest extent after 4:00 PM (see **Figure 6-26**). Sunlight-sensitive features in the area of incremental shadow include seating areas, vegetation such as grass and mature tree canopy, and the historic Prison Ship Martyr's Monument. At no point would sunlight be eliminated from the park, and the majority of the park's area would continue to receive direct sunlight for all or most of the day. While the incremental shadows at their greatest extent would cover a large area, they would travel quickly because the park is a considerable distance from the Development Site. March 21 and September 21 are in the growing season for vegetation. The area of incremental shade from the With-Action development is occupied by a variety of vegetation, mostly consisting of grass lawns and mature trees. Per *CEQR Technical Manual* guidance, the types of vegetation found in this area require 4 to 6 hours of direct sunlight for growth. In the future with the Proposed Actions, all vegetation shaded by the With-Action development on this analysis day would continue to receive sufficient sunlight to ensure growth. With the exception of a small strip of land along the western edge of the park south of Willoughby Street, the majority of the park would continue to receive over 7 hours of continuous direct sunlight from 7:36 AM at the beginning of the analysis day until roughly 3:00 PM when shadows from buildings west of the park, including the incremental shadow of the With-Action development, would begin to elongate. The buildings to the east and south are relatively short and would not cast long shadows on the park, meaning that shadows would mainly come from buildings west of the park during the afternoon. Incremental shadows from the With-Action development would affect the historic monument and surrounding paved plaza at the center of the park for approximately 25 minutes, from 3:20 PM to 3:45 PM. In the late afternoon, shadows from other buildings to the west of the park would also move across the monument, and the incremental shadows from the With-Action development would not significantly alter these conditions. The monument and other sunlight-sensitive historic features of the park would continue to receive an ample amount of direct sunlight throughout the day. Incremental shadows under the With-Action condition would not affect the recreational use or enjoyment of the park or the public's enjoyment of the park's sunlight-sensitive historic elements. Therefore, no significant adverse impacts would occur due to project-generated incremental shadows on the March 21/December 21 analysis day.

May 6/August 6 Analysis Day

On the May 6/August 6 analysis day, incremental shadows would be cast on Fort Greene Park in the afternoon for approximately 1 hour and 22 minutes from 3:19 PM to 4:41 PM. Shadows generated by the With-Action development would enter the park at the southwest corner and extend east, reaching their greatest extent at approximately 4:10 PM (see **Figure 6-30**) before moving south and leaving the park. Incremental shadows on this day would be cast on a relatively small area and would move quickly so that any given area would not be affected for longer than roughly 30 minutes. The affected area includes sunlight-sensitive vegetation (grass, shrubs, and mature trees) and walking paths. All vegetation in the park would continue to receive at least 6 to 8 hours of sunlight throughout the day. Given the limited extent and duration of incremental shadows on the park, they would not affect the public use or enjoyment of its historic or recreational features. Therefore, no significant adverse impacts would occur due to project-generated incremental shadows on the May 6/August 6 analysis day.

O24 – Edmonds Playground

Edmonds Playground is an approximately 1-acre playground jointly operated between NYC Parks and NYC Department of Education (DOE). Sunlight-sensitive features include active recreational amenities (basketball and tennis courts and playground equipment), picnic seating, and a mature tree canopy. It is located approximately a half-mile east of the Development Site. Incremental shadows would reach this resource on the May 6/August 6 analysis day only (see **Figure 6-32**).

May 6/August 6 Analysis Day

On the May 6/August 6 analysis day, incremental shadows would be cast on Edmonds Playground in the afternoon for approximately 6 minutes, from 5:12 PM to 5:18 PM. Incremental shadows would not result in the complete elimination of sunlight on the playground at any period of the analysis day. Per *CEQR Technical Manual* guidance, an incremental shadow of less than 10 minutes would not cause a significant adverse impact. Given the limited extent and duration of incremental shadows on the park, they would not affect the public use or enjoyment of its recreational features or impede the growth of vegetation. Therefore, no significant adverse impacts would occur due to project-generated incremental shadows on the May 6/August 6 analysis day.

O27 – P.S. 261 Playground

P.S. 261 Playground is an elementary school playground that is open to the public during non-school hours through the Schoolyards to Playgrounds program administered by NYC Parks and NYC DOE. The playground features playground equipment, play fields, picnic benches, a garden, and trees. It is located approximately a half-mile southwest of the Development Site. Incremental shadows would reach this resource on the June 21 analysis day only (see **Figure 6-33**).

June 21 Analysis Day

Incremental shadows from the With-Action development would be cast on the P.S. 261 Playground for approximately 21 minutes on June 21, from the beginning of the analysis day at 5:57 AM to 6:18 AM. At the beginning of the analysis day, incremental shadows would cover most of the playground before moving north and east and exiting the resource by 6:18 AM. Incremental shadows would not result in the complete elimination of sunlight on the playground at any period of the analysis day. According to NYC Parks, playgrounds participating in the Schoolyards to Playgrounds program are

open to the public from school closing until dusk Monday through Friday, and from 8:00 AM until dusk on Saturday, Sunday, and holidays. The incremental shadows would occur while the playground is closed to the public, and therefore they would not affect the public use or enjoyment of the open space resource. The limited vegetation in the playground would continue to receive over 8 hours of sunlight. Therefore, no significant adverse impacts would occur due to project-generated incremental shadows on the June 21 analysis day.

O29 – Albee Square

Albee Square is a privately owned public space (POPS) featuring several types of seating along with landscaped planting beds with trees and shrubs. It is located roughly 500 feet west of the Development Site. Albee Square would receive incremental shadows on the May 6/August 6 and June 21 analysis days only (see **Figure 6-34** through **Figure 6-43**).

May 6/August 6 Analysis Day

On May 6/August 6, Albee Square would receive incremental shadows from the With-Action development in the morning for approximately 1 hour and 41 minutes, from 7:30 AM to 9:11 AM, reaching their greatest extent at about 8:20 AM (see **Figure 6-36**). Incremental shadows would eliminate sunlight from the plaza for roughly an hour beginning at 8:10 AM. While Albee Square is surrounded by tall buildings to the north, east, and west, there are few obstructions directly to the south, meaning that shadows during the late spring, summer, and early fall would mainly occur during the early morning and late afternoon. As such, even though the With-Action development would briefly eliminate sunlight from the plaza, it would still receive uninterrupted sunlight for approximately 5 hours during the middle of the day on the May 6/August 6 analysis day, providing sufficient sunlight for the growth of the limited vegetation in the plaza. The shrubs in planting beds and the three mature trees at the center of the plaza (a London plane and two honey locusts) would be able to tolerate partial sunlight (4 to 6 hours a day). There are several immature Kentucky coffee trees planted as street trees along the perimeter of the plaza; these trees would receive incremental shadows from the With-Action development for less than 30 minutes. They would receive roughly 5 hours of direct sunlight on this analysis day. While full sunlight (6 to 8 hours) is recommended for the Kentucky coffee trees, per the U.S. Department of Agriculture, it is considered to be a "tough" tree that adapts well to urban conditions.[4] Shadows from nearby tall buildings on the plaza would be present with or without the Proposed Actions. During the midday hours, utilization would be at its highest, and the plaza would be in direct sunlight. The incremental shadows would not affect the use or enjoyment of this open space resource because it would continue to receive direct sunlight throughout the late morning, midday, and early afternoon, the period when utilization would be highest, No significant adverse impacts would occur due to project-generated incremental shadows on the May 6/August 6 analysis day.

June 21 Analysis Day

On June 21, Albee Square would receive incremental shadows from the With-Action development in the morning for approximately 1 hour and 53 minutes, from 8:00 AM to 9:53 AM, reaching their greatest extent at approximately 9:00 AM (see **Figure 6-41**). Incremental shadows would eliminate sunlight from the plaza for approximately 15 minutes, from 9:00 AM to 9:15 AM. Similar to the May 6/August 6 analysis day, the plaza would continue to receive uninterrupted sunlight between the

[4] Source: U.S. Dept. of Agriculture: https://plants.usda.gov/DocumentLibrary/factsheet/pdf/fs_gydi.pdf

early morning and late afternoon, for approximately 5 hours. This period includes midday during lunch, when utilization would generally be at its highest. Similar to the May 6/August 6 analysis day, the mature London plane tree, mature honey locust trees, and shrubs at the center of the plaza would receive roughly 5 hours of sunlight which would be sufficient for their growth. The Kentucky coffee trees along the perimeter of the plaza would receive incremental shadows from the With-Action development for less than 30 minutes. They would receive roughly 5 hours of direct sunlight on this analysis day. The incremental shadows would not affect the use or enjoyment of this open space resource because it would continue to receive direct sunlight during the late morning, midday, and early afternoon, the period when its utilization would be the highest. No significant adverse impacts would occur due to project-generated incremental shadows on the June 21 analysis day.

Historic Resources

H1 – Evangelical Lutheran Church of the Holy Trinity

A small neo-Gothic chapel dating from the late 19th century featuring stained-glass windows facing east along Cumberland Avenue, the church is a contributing resource in the LPC-Designated Fort Greene Historic District. The church would receive incremental shadows as a result of the With-Action development on the June 21 analysis day only, as shown in **Figure 6-44**.

June 21 Analysis Day

On June 21, incremental shadows from the With-Action development would be cast on the church for approximately 12 minutes, from 5:40 PM to 5:52 PM. However, incremental shadows would not reach the east-facing façade of the building containing sunlight-sensitive stained-glass windows during any period of the analysis day (see **Figure 6-44**). Therefore, no significant adverse impacts would occur due to project-generated incremental shadows on the June 21 analysis day.

O9 – University Place

Figure 6-8 December 21 – 10:30 AM



Figure 6-9 December 21 – 10:50 AM



Figure 6-10 December 21 – 11:10 AM



Figure 6-11 March 21/September 21 – 10:20 AM



Figure 6-12 March 21/September 21 – 10:40 AM



Figure 6-13 March 21/September 21 – 11:00 AM



Figure 6-14 March 21/September 21 – 11:20 AM

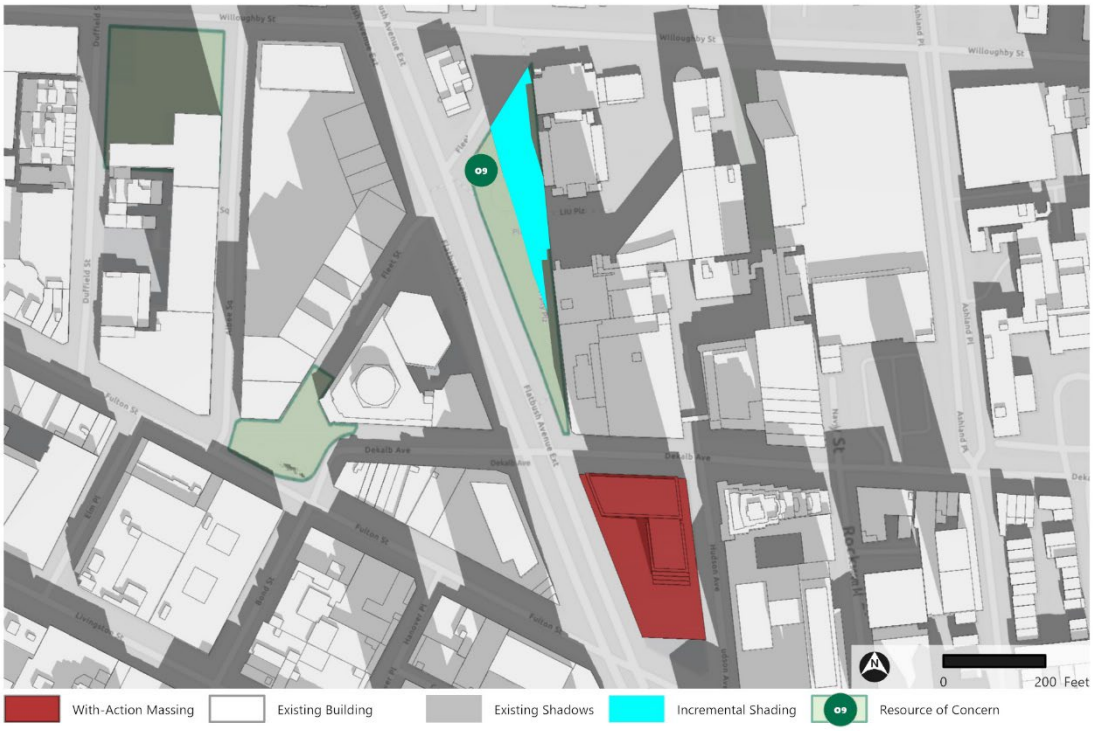


Figure 6-15 May 6/August 6 – 10:50 AM

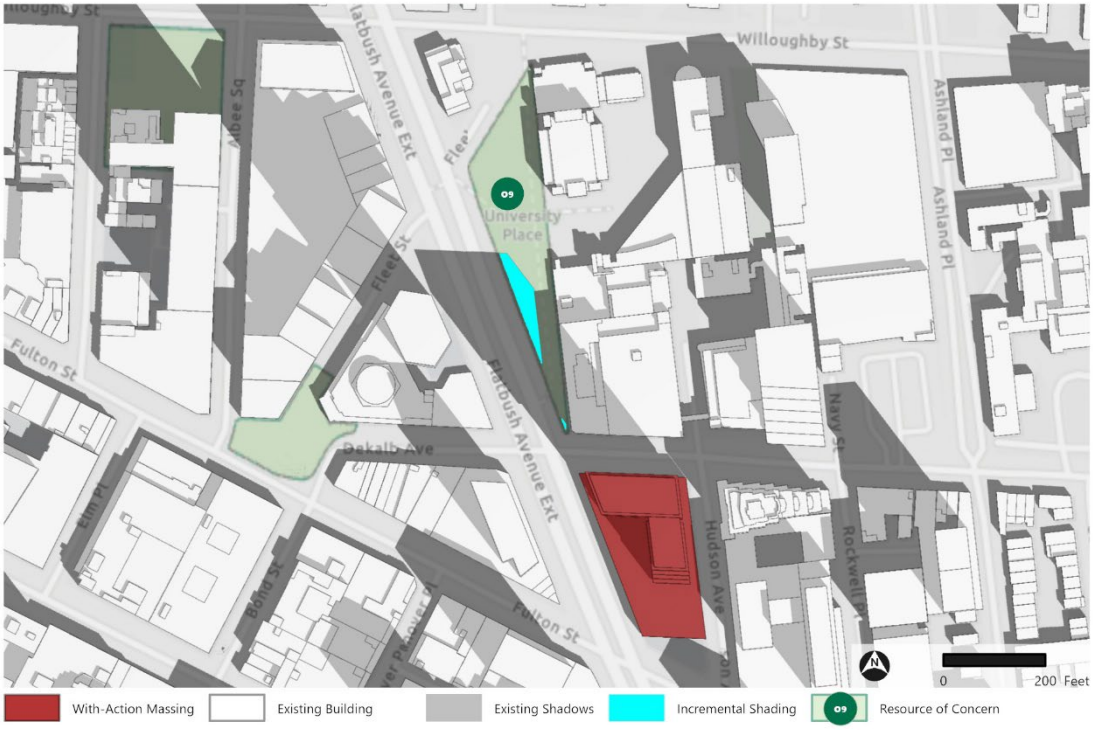


Figure 6-16 May 6/August 6 – 11:10 AM

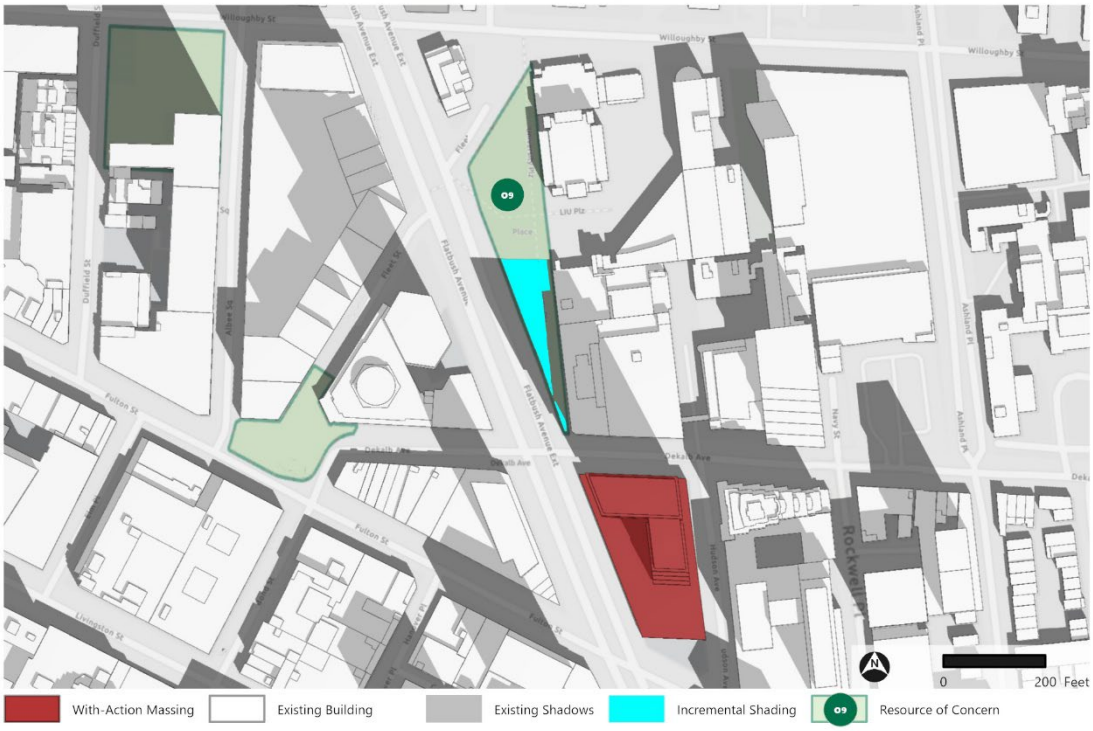


Figure 6-17 May 6/August 6 – 11:30 AM

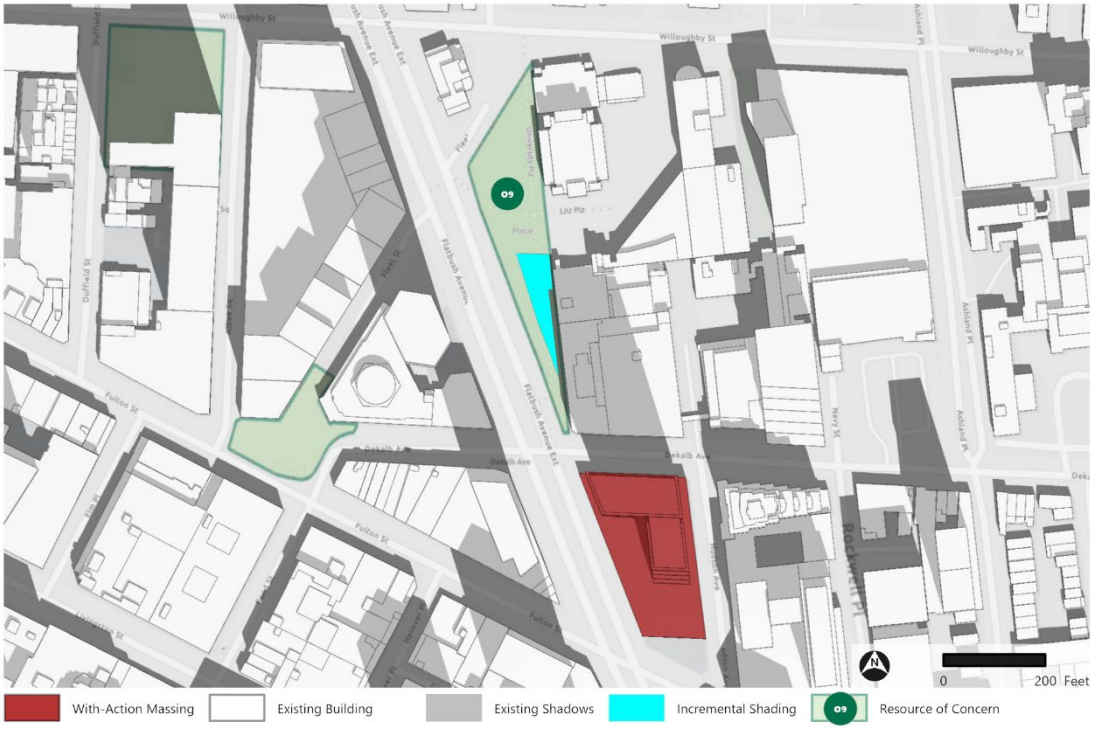


Figure 6-18 June 21 – 10:50 AM



Figure 6-19 June 21 – 11:10 AM

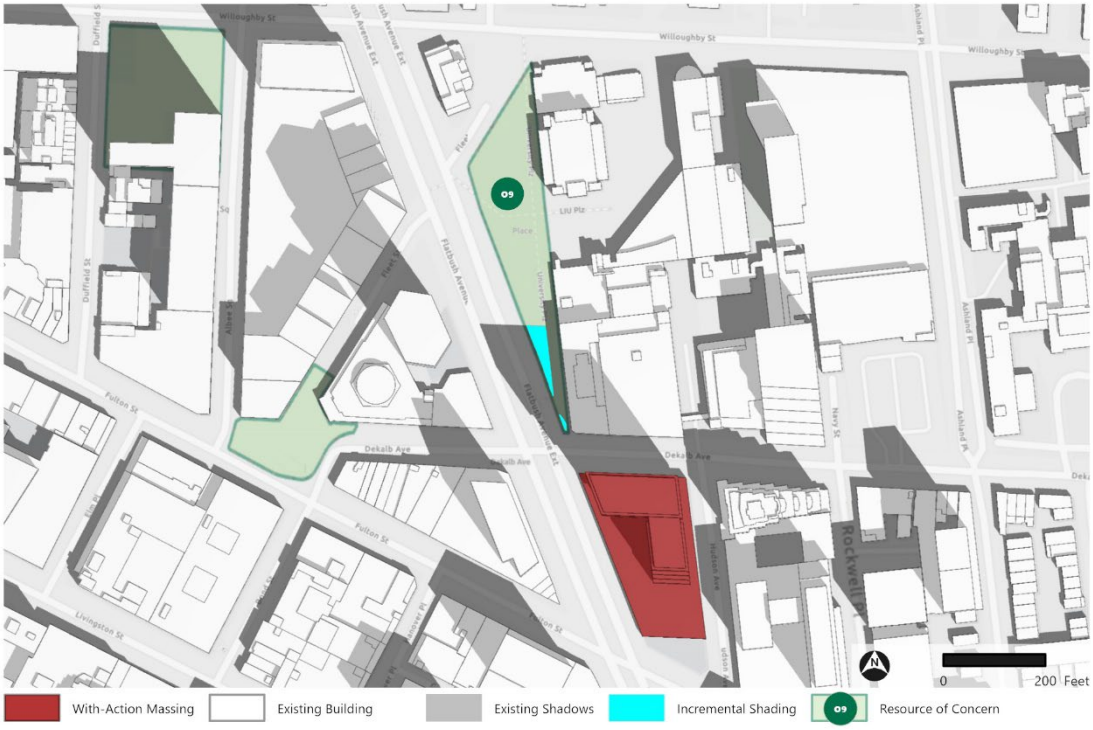
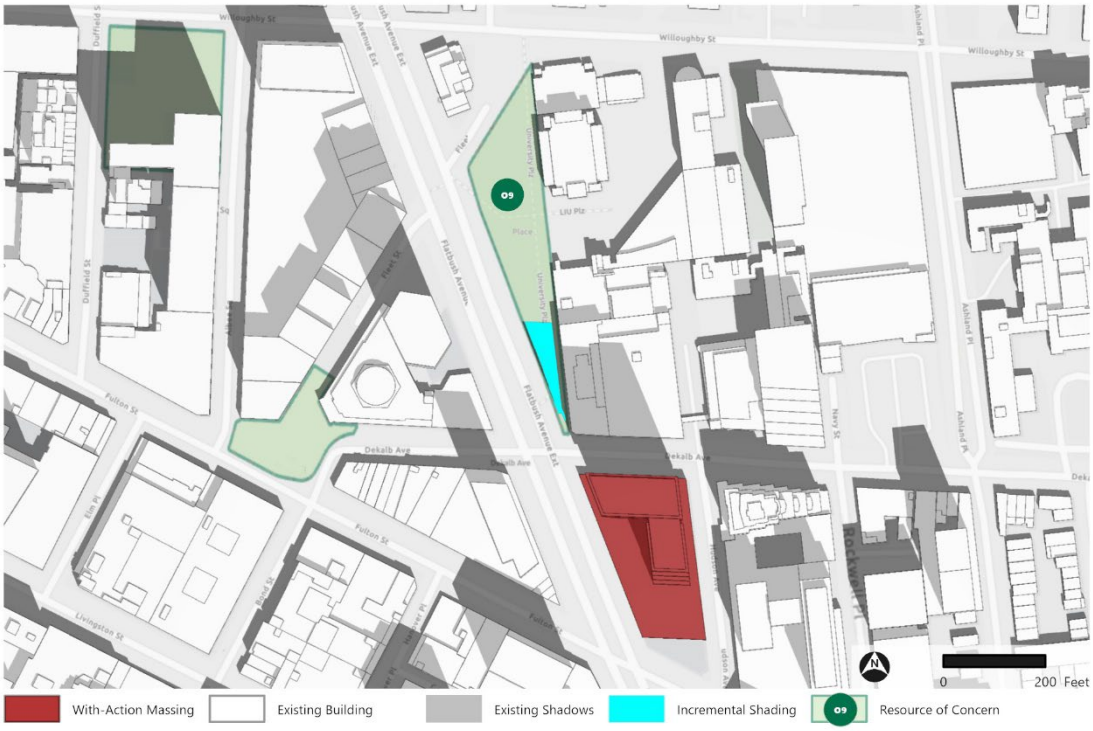


Figure 6-20 June 21 – 11:30 AM



O18/H7- Fort Greene Park

Figure 6-21 December 21 – 2:25 PM



Figure 6-22 December 21 – 2:45 PM



Figure 6-23 March 21/September 21 – 3:00 PM



Figure 6-24 March 21/September 21 – 3:20 PM

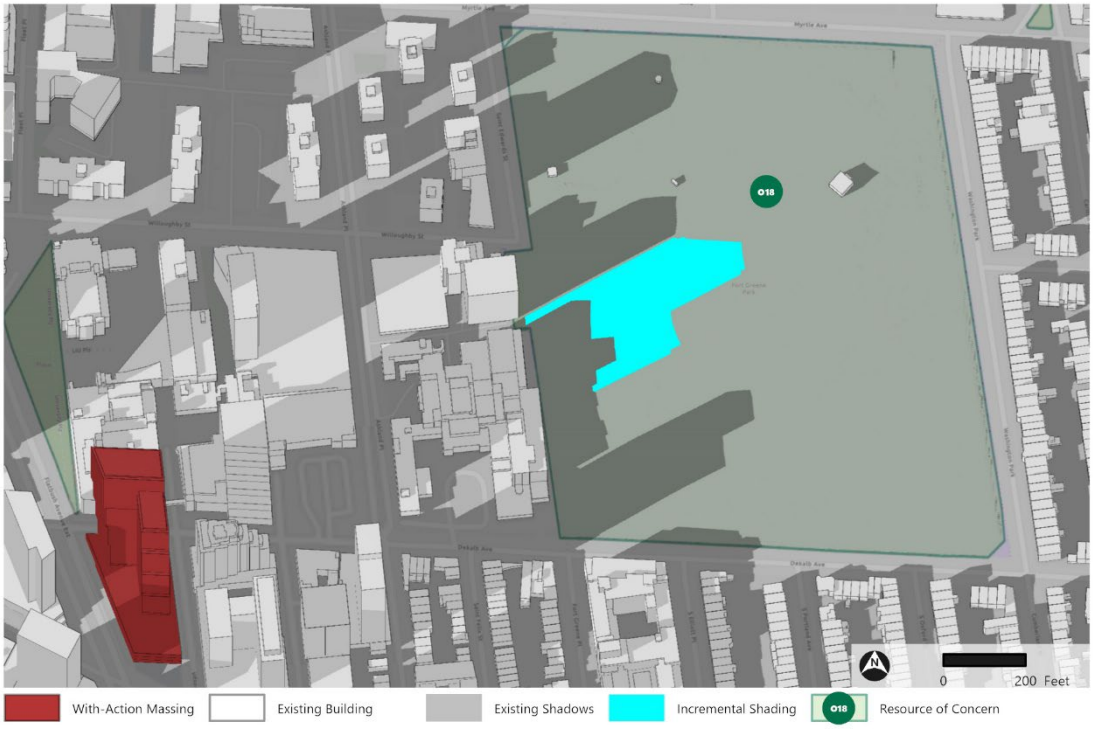


Figure 6-25 March 21/September 21 – 3:40 PM

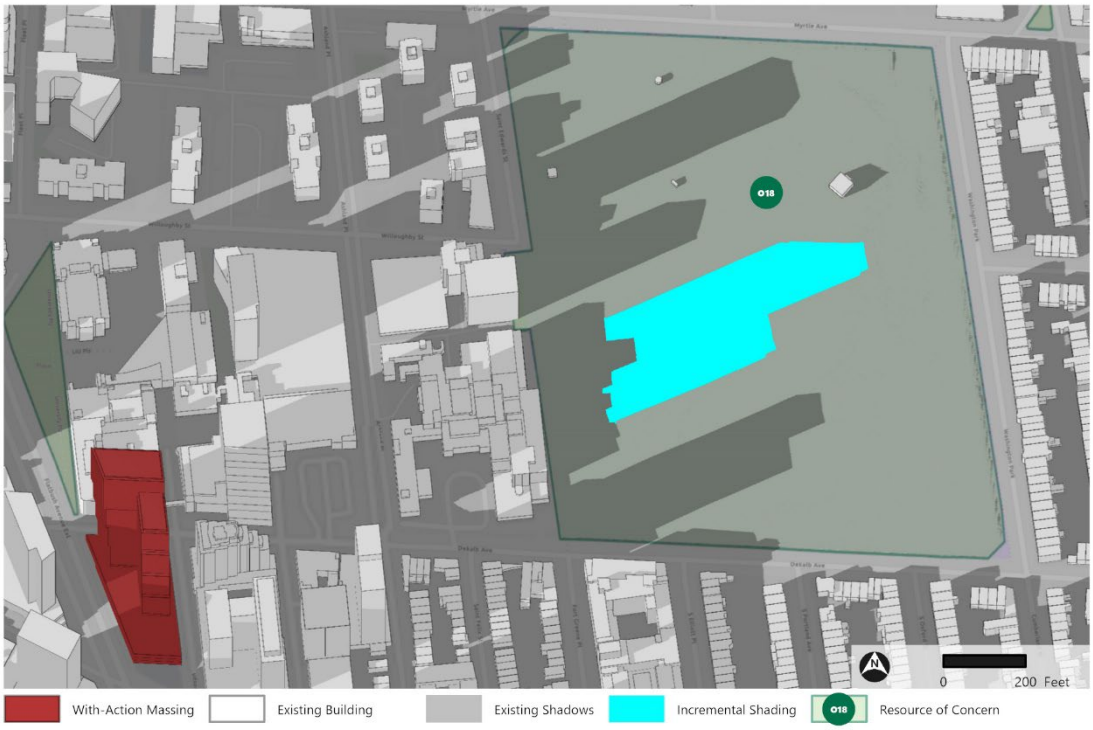


Figure 6-26 March 21/September 21 – 4:00 PM

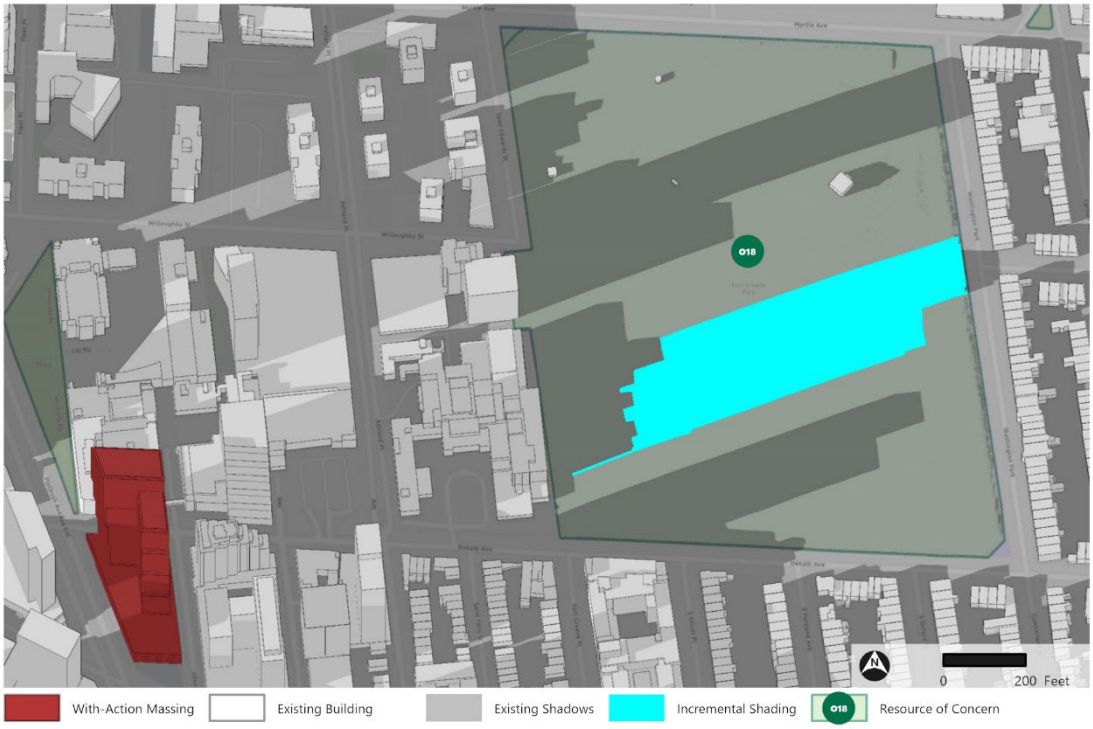


Figure 6-27 March 21/September 21 – 4:29 PM



Figure 6-28 May 6/August 6 – 3:30 PM

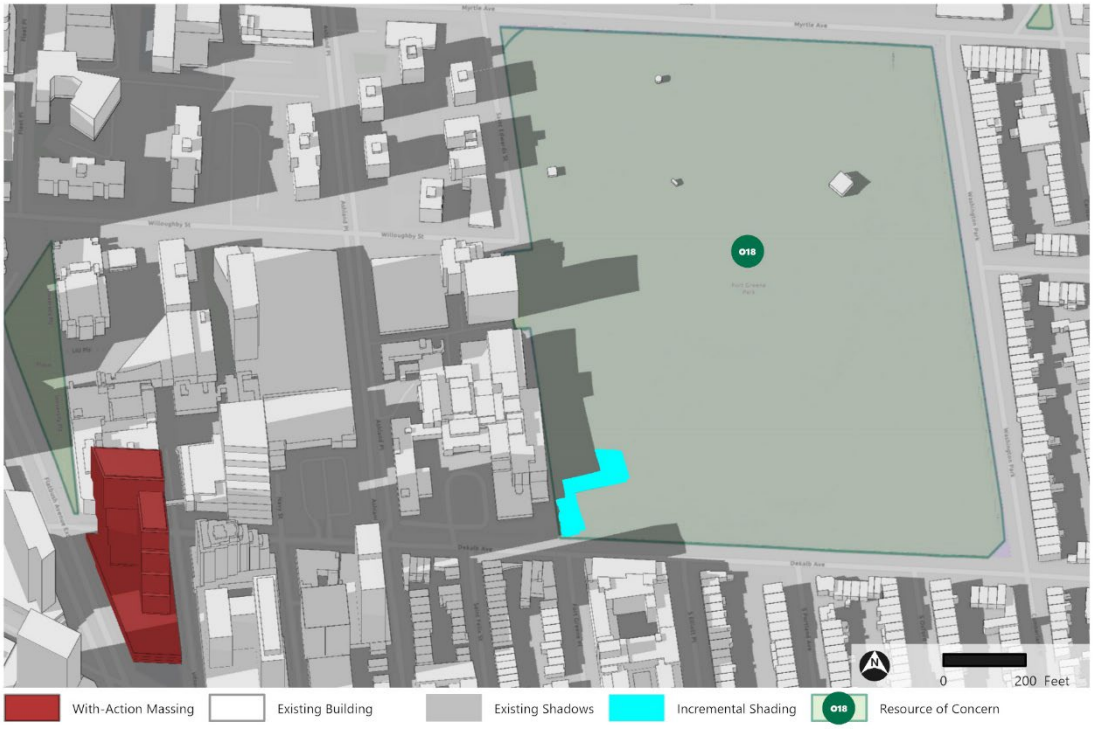


Figure 6-29 May 6/August 6 – 3:50 PM

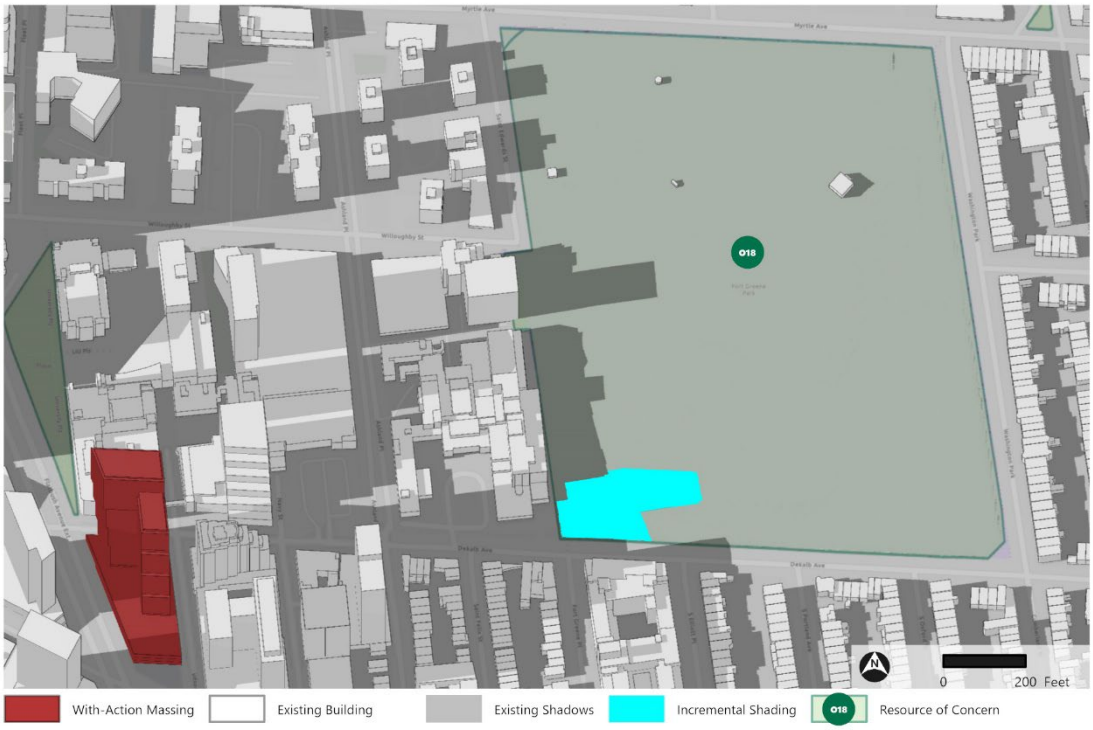


Figure 6-30 May 6/August 6 – 4:10 PM



Figure 6-31 May 6/August 6 – 4:30 PM



O24- Edmonds Playground

Figure 6-32 May 6/August 6 – 5:10 PM



O27- P.S. 261 Playground

Figure 6-33 June 21 – 5:57 AM



O29- Albee Square

Figure 6-34 May 6/August 6 – 7:40 AM



Figure 6-35 May 6/August 6 – 8:00 AM



Figure 6-36 May 6/August 6 – 8:20 AM



Figure 6-37 May 6/August 6 – 8:40 AM



Figure 6-38 May 6/August 6 – 9:00 AM



Figure 6-39 June 21 – 8:20 AM



Figure 6-40 June 21 – 8:40 AM



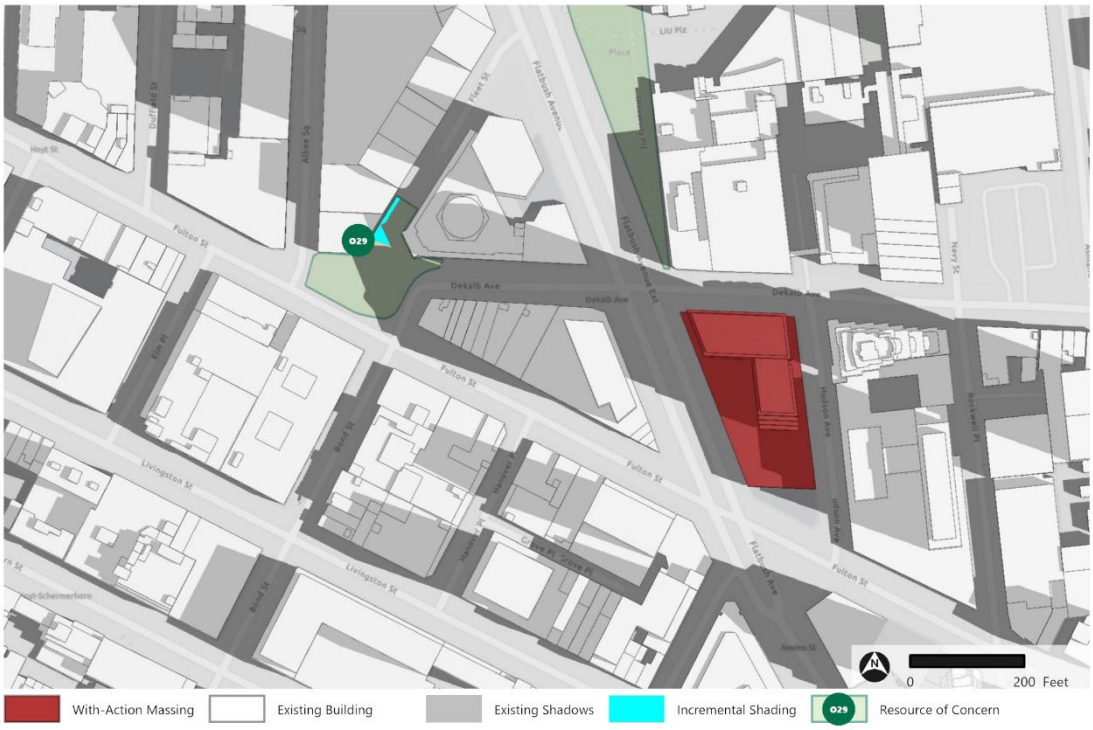
Figure 6-41 June 21 – 9:00 AM



Figure 6-42 June 21 – 9:20 AM

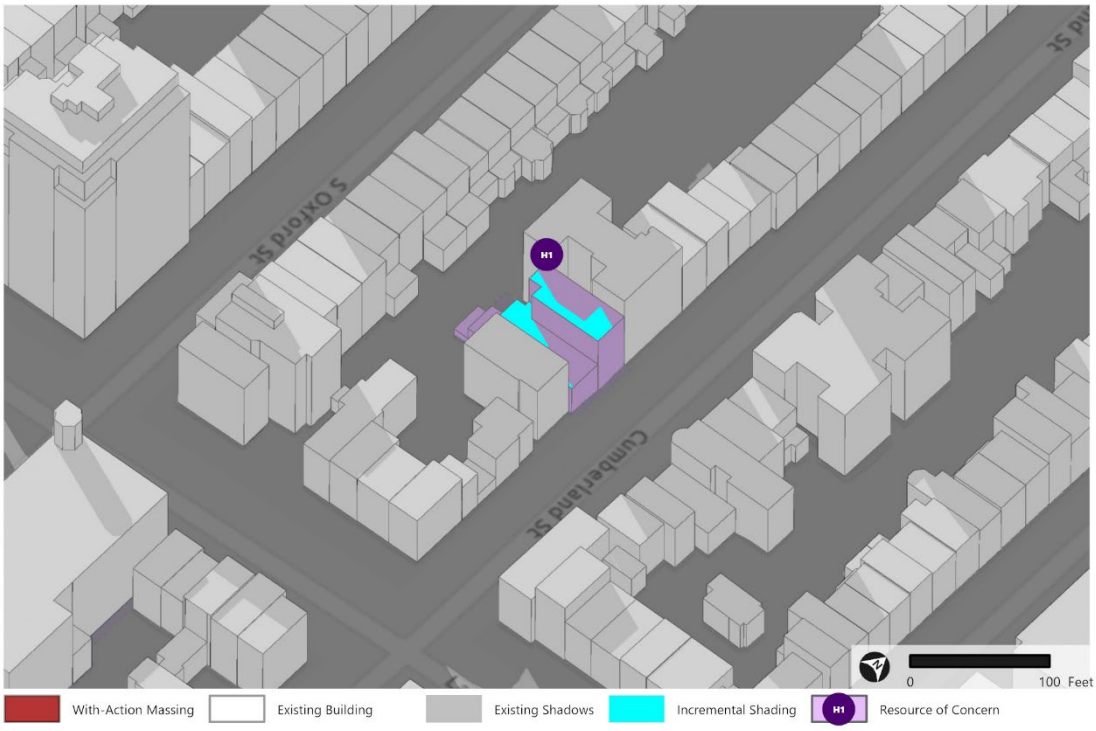


Figure 6-43 June 21 – 9:40 AM



H1- Evangelical Lutheran Church of the Holy Trinity

Figure 6-44 June 21 – 5:46 PM



7

Historic and Cultural Resources

This section assesses the potential for a proposed action to result in significant adverse impacts on historic and cultural resources, including both archaeological and architectural resources.

Introduction

The *2021 City Environmental Quality Review* (*CEQR) Technical Manual* recommends that a historic and cultural resources assessment be performed if a proposed action would result in any of the following: in-ground disturbance; new construction, demolition, or significant physical alteration of any building, structure, or object; the change in scale, visual prominence, or visual context of any building, structure, or object or landscape feature; or the screening or elimination of publicly accessible views, even if no known historic resources are located nearby. This analysis has been prepared in accordance with the *CEQR Technical Manual* and in consultation with the New York City Landmarks Preservation Commission (LPC).

Consistent with *CEQR Technical Manual* guidance, historic and cultural resources consist of the following:

- Designated New York City Landmarks (NYCLs), interior landmarks, scenic landmarks, and properties within designated New York City historic districts (or resources calendared for consideration by LPC);
- Resources listed on, or formally determined eligible for inclusion on, the New York State and/or National Register of Historic Places (S/NR), or contained within a district listed on, or formally determined eligible for listing on, the S/NR;
- Resources recommended by the New York State Board for Historic Preservation for listing on the S/NR;
- National Historic Landmarks; and

› Resources not identified by one of the programs listed above, but that meet their eligibility requirements.

As discussed in **Chapter 1, Project Description**, the Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with a new, approximately 1,552,605-gross-square-foot (gsf), 72-story, 840-foot-tall, mixed-use building. Under With-Action conditions, the building would include approximately 1,233,950 gsf of residential floor 129,000 gsf of retail space and 88,500 gsf of office and/or community facility space that may be dedicated for future City use. The Proposed Actions would also intorduce public realm improvements, including an approximately 4,745 square foot (sf) open space available to the public on the southern portion of the Development Site, an expanded sidewalk along the Development Site's Flatbush Avenue Extension frontage, and surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site.

Principal Conclusions

The Proposed Actions would not result in a significant adverse impact to historic and cultural resources. Based on an environmental review letter provided by LPC on February 11, 2025 (see **Appendix A**), the Development Site does not have archaeological significance. As such, an assessment of archaeological resources is not warranted and no significant adverse impacts would result from the Proposed Actions.

None of the architectural resources within the study area are within 90 feet of the Development Site and as such, the Proposed Actions would not result in direct impacts to historic resources. Although the Proposed Project will introduce a new building that is taller than the existing building on the Development Site, this new development would be consistent with the ongoing growth and transformation of Downtown Brooklyn. As a result, it is not expected that construction of the Proposed Project would significantly alter the setting, visual relationship or publicly accessible views of historic resources within the study area.

Additionally, as described in **Chapter 6, Shadows**, it was determined that incremental shadows either would not reach sunlight-sensitive features of historic resources within the study area or would not last long enough to affect their use or enjoyment by the public. As such, the Proposed Actions would not result in significant adverse shadow impacts on any architectural resources containing sunlight-sensitive features in the study area.

Therefore, there would be no significant adverse impacts to architectural resources as a result of the Proposed Actions.

Methodology

The *CEQR Technical Manual* notes that environmental review for historic and cultural resources includes a survey and planning process that helps protect New York City cultural heritage from the potential impacts of projects undergoing CEQR. Historic and cultural resources include both archaeological and architectural resources. Archaeological resources are physical remains, usually subsurface, of pre-contact, post-contact, and historic periods—such as burials, foundations, artifacts, wells, and privies. Architectural resources generally include historically important buildings,

structures, objects, sites, and districts. They may include bridges, canals, piers, wharves, and railroad transfer bridges that may be wholly or partially visible above ground.

Archaeological Resources

Archaeological resources are usually assessed for projects that would result in any in-ground disturbance. This is any disturbance to an area not previously excavated, including new excavation that would be deeper and/or wider than previous excavation on the same site.

The study area for archaeological resources is the area that would be disturbed for project construction, which is the Development Site. Construction of the Proposed Project would require new excavation and/or removal of fill at depths greater than currently exist on the site. However, based on an environmental review letter provided by LPC on February 11, 2025 (see **Appendix XX**), the Development Site does not have archaeological significance. As such, an assessment of archaeological resources is not warranted, and no significant adverse impacts would result from the Proposed Actions.

Architectural Resources

Generally, architectural resources should be surveyed and assessed if a proposed project would result in any of the following, whether any known historic resources are located near the site of the project:

- New construction, demolition, or significant physical alteration to any building, structure, or object;
- A change in scale, visual prominence, or visual context of any building, structure, object or landscape feature. Visual prominence is generally the way in which a building, structure, object, or landscape feature is viewed. For example, a building may be part of an open setting, such as a tower within a plaza, which is either conforming or nonconforming with the street wall in terms of its height, footprint, and/or setback. Visual context is the character of the surrounding built or natural environment. This may include the following: the architectural components of an area's buildings (e.g., height, scale, proportion, massing, fenestration, ground-floor configuration, style), streetscapes, skyline, landforms, vegetation, and openness to the sky;
- Construction, including but not limited to, excavating vibration, subsidence, dewatering, and the possibility of falling objects;
- Additions to or significant removal, grading, or replanting of significant historic landscape features;
- Screening or elimination of publicly accessible views;
- Introduction of significant new shadows or significant lengthening of the duration of existing shadows on an historic landscape or on an historic structure if the features that make the structure significant depend on sunlight. For example, stained glass windows that cannot be seen without sunlight, or buildings containing design elements that are part of a recognized architectural style that depends on the contrast between light and dark design elements, such as deep window reveals and prominent rustication.

Consistent with *CEQR Technical Manual* guidance, the assessment of the Proposed Development's potential to result in impacts on architectural resources begins with the survey and documentation of existing resources in the study area, which for this analysis is the area within a 400-foot radius of the Development Site. Following existing conditions, the assessment provides a description of future conditions

absent the Proposed Actions (No-Action condition), and future conditions expected with the Proposed Actions (With-Action condition).

Preliminary Assessment

Existing Conditions

The Development Site (Brooklyn Block 2093, Lot 1) is owned and controlled by the City of New York, and has a lot area of approximately 49,153 sf.[1] As shown in **Figure 7-1**, the Development Site is bounded by Dekalb Avenue to the north (approximately 193 feet of frontage), Fulton Street to the south (approximately 130 feet of frontage), Hudson Avenue to the east (approximately 365 feet of frontage), and Flatbush Avenue Extension to the west (approximately 334 feet of frontage).

The Development Site is currently improved with a seven-story, 372,214 gross square feet (gsf) commercial building with 293,370 gsf of commercial office space, 32,654 gsf of ground floor retail, and 46,190 gsf of below-grade parking (which accommodates 140 public parking spaces). Constructed in 1974, the existing building currently contains a Verizon call center in the commercial office space. The ground floor retail space is primarily tenanted with local retail chains. All tenants are expected to vacate the building by January 1, 2028.

An entrance to the Dekalb Avenue subway station (serving the B/Q/R subway lines) is located at the northwest corner of the Development Site. This entrance includes a street elevator and two staircases that lead out to the plaza entrance. Additionally, there are three curb cuts located along the Hudson Avenue frontage: two of which serve the existing building's loading areas, with the third curb cut provides access to a public parking garage.

Architectural Resources

Based on an environmental review letter provided by LPC on February 11, 2025 (see **Appendix A**), two architectural resources are located within the 400-foot study area—the Dime Savings Bank (NYCL, S/NR eligible) located at 9 DeKalb Avenue and 33 Flatbush Avenue (S/NR Undetermined). Additionally, the Pioneer Warehouse (NYCL eligible, S/NR eligible) located at 37-53 Flatbush Avenue is located just outside the 400-foot study area.

Based on the LPC environmental review letter, several additional architectural resources are located within the Tier 1/Tier 2 Shadow Screening study area (the area that could potentially be cast in project-generated shadow as a result of the Proposed Actions), including:

- Friends Meeting House, 110 Schermerhorn Street (NYCL);
- First Free Congregational Church, 311 Bridge Street (NYCL);
- Cathedral Basilica of St. James, 250 Cathedral Place (S/NR eligible);
- Mary of Nazareth RC Church, 37 Adelphi Street (S/NR eligible);
- Fort Greene Historic District (NYCHD, S/NR), specifically:
  - Fort Greene Park;
  - St. Marks and St. Michael's Episcopal Church, 222-232 Adelphi Street;

[1] The lot size is based on a site survey dated December 4, 2024.

- Simpson Methodist Episcopal Church, 201-2011 Clermont Avenue;
- Lafayette Avenue Presbyterian Church, 102-108 Lafayette Avenue;
- Evangelical Lutheran Church of the Holy Trinity, 266 Cumberland Street; and
- Queen of All Saints RC Church, 201-209 Lafayette Avenue.

Of the 10 identified architectural resources containing sunlight-sensitive features described above, five required further analysis in **Chapter 6, Shadows**: the Evangelical Lutheran Church of the Holy Trinity, the First Free Congregation Church, the Mary of Nazrene Roman Catholic Church, the Simpson Methodist Episcopal Church, and Fort Greene Park. Based on the detailed shadows analysis presented in **Chapter 6**, it was determined that only the Evangelical Lutheran Church of the Holy Trinity and Fort Greene Park would experience incremental shadows on at least one representative analysis day. However, it was determined that incremental shadows on these historic resources would either not reach sunlight-sensitive features of the historic resource or not last long enough to affect their use or enjoyment by the public. As such, no adverse impacts to architectural resources containing sunlight-sensitive features would occur due to shadows from future development under the Proposed Actions.

H1 – Dime Savings Bank

The Dime Savings Bank (NYCL, S/NR eligible), located at 9 DeKalb Avenue (also known as 9-31 DeKalb Avenue and 86 Albee Square, formerly Fleet Street), was built between 1906 and 1908. The building was designed by architects Mowbray & Uffinger, with a significant enlargement in 1931–32 designed by Halsey, McCormack & Helmer (see **Photo 7-1**).

The Dime Savings Bank building is considered one of Brooklyn's most notable works of commercial architecture. It was designed as an imposing neo-Classical temple structure, with a marble-clad exterior featuring Ionic colonnades, a soaring dome, and a highly ornate entrance portico. In 1931–32, the bank expanded and reinforced its classical style to visually integrate the new and old sections of the building. Throughout the 20th century, the Dime Savings Bank was one of the largest savings banks in the United States and a key influence on the development of Brooklyn, maintaining its headquarters in this prominent building, which remains remarkably intact.[2]

H2 – 33 Flatbush Avenue

The building located at 33 Flatbush Avenue (S/NR Undetermined, USN 04701.017306) is seven stories tall with a modern white/gray Roman brick exterior set in a Flemish double stretcher bond (see **Photo 7-2**). The building retains its original bracketed cornice.

The ground floor has entrance doors at either end of the building with full-height window bays separated by stone pilasters. The second floor exterior is clad with small square tile. Windows at the top floor have segmental arch surrounds with keystones. All windows appear to be modern fixed-glass replacement.

H3 – Pioneer Warehouse

The Pioneer Warehouse located at 37-53 Flatbush Avenue is located just outside the 400-foot study area (see **Photo 7-3**). The building is listed in the New York State Office of Parks, Recreation and

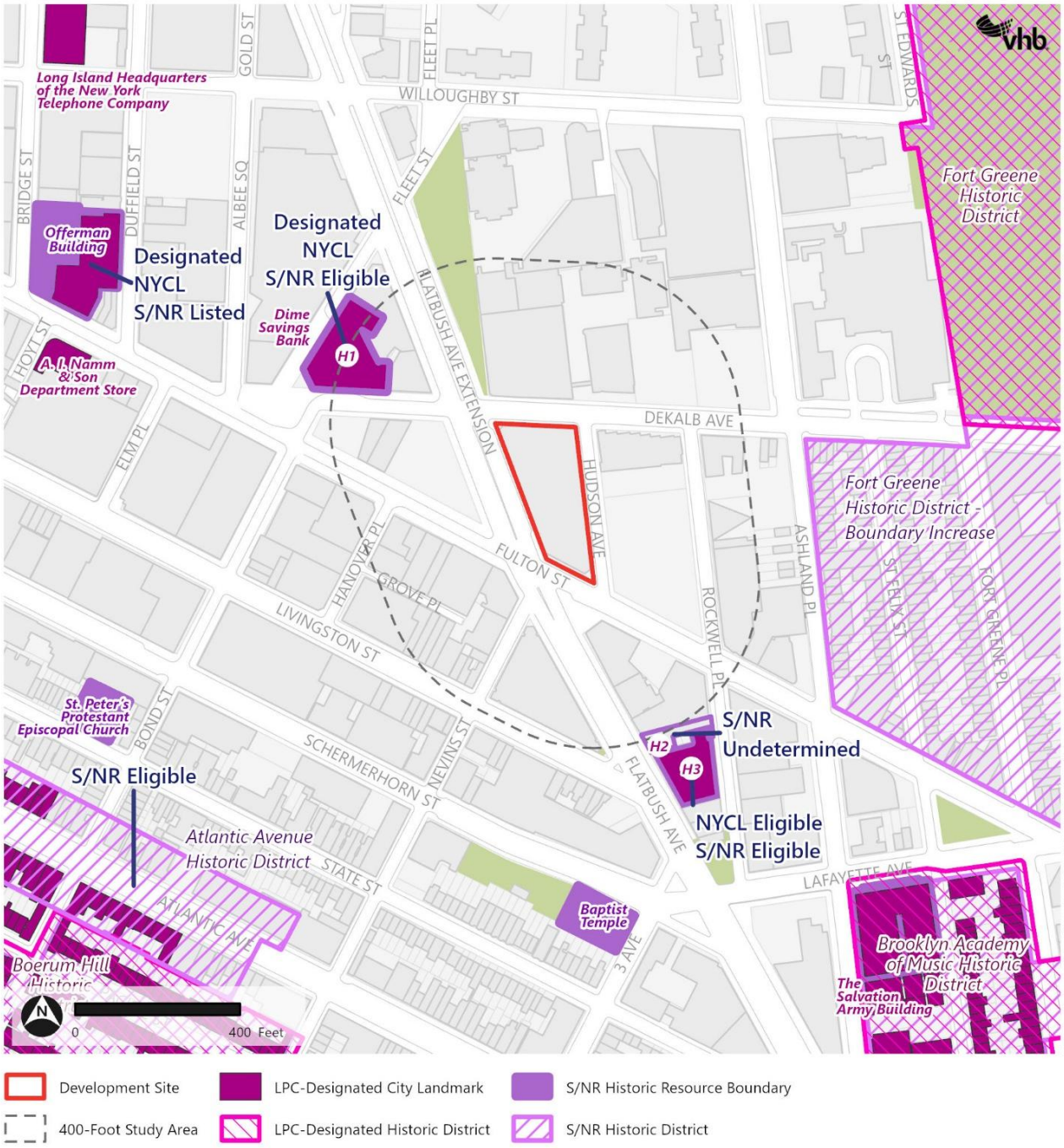
[2] LPC Designation Report, July 19, 1994.

Historic Preservation (OPRHP) Cultural Resources Information System (CRIS) database as S/NR Undetermined (USN 04701.016137). However, based on the LPC February 11, 2025, environmental review letter, this building is NYCL and S/NR eligible.

Based on information included in the CRIS database, the building was constructed circa (ca.) 1900 with subsequent additions. The earliest section of the building is the central section that includes the main entrance. It was constructed as a fireproof warehouse for general storage with safe deposit and silver vaults. The building was later expanded ca. 1915 to its current size. The summary in CRIS notes that it is one of the few warehouse buildings that retains its impressive entrance lobby.

The building is ten stories tall with a white/gray brick exterior. It has an ornate two-story entrance flanked with columns; fixed-pane windows are above the entrance doors with an elaborate arched stone surround. Full-height window bays at the ground floor are separated by paneled stone pilasters. Second-floor windows have ornate stone surrounds with a pattern of round medallions. A decorative stone cornice with a geometric pattern is at the second floor. Windows on the upper floors appear to be fixed-glass replacement and lack any ornamentation. The building has an ornate bracketed cornice with modillions. Stone lettering that reads “PIONEER WAREHOUSE” is at the cornice; metal lettering that reads “PIONEER BUILDING” is above the entrance.

Figure 7-1 Historic Resources Map



Source: NYC DCP (2024); NYC Parks (2022); NYC LPB (2024); NYS OPRHP (2024)

Table 7-1 Historic Resources in the Study Area

Map #	Photo #	Name	Location	Status
H1	7-1	Dime Savings Bank	9 DeKalb Avenue	NYCL, S/NR eligible
H2	7-2	33 Flatbush Avenue	33 Flatbush Avenue	S/NR Undetermined
H3	7-3	Pioneer Warehouse	37-53 Flatbush Avenue	NYCL eligible, S/NR eligible

Source: LPC February 11, 2025, environmental review letter and CRIS 2025

Photo 7-1 Dime Savings Bank



Photo taken on February 27, 2025

Photo 7-2 Flatbush Avenue



Photo taken on February 27, 2025

Photo 7-3 Pioneer Warehouse (33 Flatbush Avenue on the left)



Photo taken on February 27, 2025

No-Action Condition

In the No-Action condition, it is expected that the exiting seven-story commercial office and retail building currently occupying the Development Site would remain as under existing conditions and be fully occupied.

In the future without the Proposed Actions, it is possible that changes to architectural resources identified above or to their settings could occur. For example, indirect impacts from future projects could include a change in scale, visual prominence, or visual context of any building, structure, or object or landscape feature; screening or elimination of publicly accessible views; or introduction of significant new shadows or significant lengthening of the duration of existing shadows on a historic structure if the features that make the resource-significant depend on sunlight. It is also possible that some architectural resources could deteriorate or experience direct impacts through alteration or demolition, while others could be restored. In addition, future projects could accidentally damage architectural resources through adjacent construction. Future projects would need to be assessed under their respective environmental reviews to determine if there could be any impacts to historic and cultural resources.

With-Action Condition

In the future with the Proposed Actions, the existing building on the Development Site would be demolished and redeveloped with a new 72-story, mixed-used building. None of the architectural resources within the study area are within 90 feet of the Development Site and as such, the Proposed Actions would not result in direct impacts to historic resources. Although the Proposed Project would introduce a new building that is taller than the existing building on the Project Site, this new development would be consistent with the ongoing growth and transformation of Downtown Brooklyn. Several other high-rise buildings have been constructed within the study area, creating a new skyline that has a mix of low- to high-rise buildings. Therefore, the Proposed Project would be consistent with the use and height of buildings elsewhere in the study area. As a result, construction of the Proposed Project would not be expected to significantly alter the setting, visual relationship, or publicly accessible views of historic resources within the study area.

Additionally, as described above and in **Chapter 6, Shadows**, it was determined that incremental shadows on nearby historic resources would either not reach sunlight-sensitive features of the historic resource or not last long enough to affect their use or enjoyment by the public. As such, no adverse impacts to architectural resources containing sunlight-sensitive features would occur due to shadows from future development under the Proposed Actions.

8

Urban Design and Visual Resources

In an urban design and visual resources assessment under city environmental quality review (CEQR), one considers whether and how a project may change the experience of a pedestrian in the Project Area. The assessment focuses on the components of a proposed project that may have the potential to alter the arrangement, appearance, and functionality of the built environment.

Introduction

According to the *2021 CEQR Technical Manual*, urban design is defined as the totality of components—including streets, buildings, open spaces, wind, natural resources, and visual resources—that may affect a pedestrian's experience of public space. A visual resource is defined as the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, and natural resources.

Based on the *CEQR Technical Manual*, a detailed assessment of urban design and visual resources is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning. Examples include projects that permit the modification of yard, height, and setback requirements, and projects that result in an increase in built floor area beyond what would be allowed "as-of-right," or in the future No-Action condition.

As described in **Chapter 1, Project Description**, the Applicant is seeking approval for the Proposed Actions, which include a zoning map amendment, zoning text amendments, disposition of City-owned property, site selection and acquisition of real property interest, certification to establish and facilitate a transit volume, and an amendment to the Brooklyn Center Urban Renewal Plan (URP) to facilitate a mixed-use development in the Downtown Brooklyn neighborhood of Brooklyn, Community District (CD) 2. The Proposed Actions would facilitate the redevelopment of Brooklyn

Block 2093, Lot 1 (the Development Site) with a new 72-story, 840-foot-tall mixed-use building (the Proposed Project). Under With-Action conditions, the building would contain approximately 1,552,605 gross square feet (gsf), equivalent to 1,130,388 zoning square feet (zsf) or 23.0 FAR, including 1,233,950 gsf (933,820 zsf; 19.0 FAR) of residential floor area and 217,500 gsf (196,568 zsf; 4.0 FAR) of non-residential floor area designated for commercial (office and retail) and/or community facility space that may be dedicated for future City use.

The Proposed Project would also include a number of public realm improvements, including:

- A new, publicly accessible open space area (approximately 4,745 sf) on the southern portion of the Development Site; and
- An expanded sidewalk along Flatbush Avenue Extension.

Since the Proposed Actions would result in an increase in floor area beyond what is allowed as-of-right, and since the Proposed Project would include public realm improvements, an assessment of urban design and visual resources is warranted.

Principal Conclusions

Urban Design

The Proposed Actions would not result in significant adverse impacts to urban design in either the primary or secondary study areas. The proposed With-Action building on the Development Site would be constructed on an existing block and would not entail any changes to block shapes, street pattern and hierarchy, topography, open space, or natural features in the primary or secondary study area. The Proposed Actions would not create land uses or structures that would be substantially incompatible with existing and emerging character of the surrounding area. As described below, the proposed With-Action building would be of a similar height and bulk to buildings that have been recently completed and buildings that would be completed by the 2032 build year. The Proposed Actions would activate the streetscape by introducing a 24-hour population to the Development Site. Furthermore, the Proposed Actions would introduce several public realm improvements that increase pedestrian safety and circulation (as well as improving access to public transit through improvements to the DeKalb Avenue subway station entrance) and enhance the pedestrian experience of the Development Site and primary study area.

Visual Resources

Visual resources within the primary and secondary study area include the Williamsburgh Savings Bank, located south of the Development Site. An analysis of the Proposed Actions' impact on significant view corridors to the Williamsburgh Savings Bank identified one significant view corridor within the study area. As detailed below, development under With-Action conditions at the Development Site would not obstruct any significant view corridors to the Williamsburgh Savings Bank. Therefore, no significant adverse impacts to visual resources would occur as a result of the Proposed Actions.

Methodology

Per the *CEQR Technical Manual*, an urban design and visual resources assessment is conducted in three basic steps. First, a proposed action is reviewed to determine whether such an assessment is warranted, based on whether it would be expected to result in changes to elements particular to urban design—such as streets, buildings, visual resources, open space, natural features, and/or potential wind effects, and whether there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning. Projects that permit modification of yard, height, and setback requirements, and projects that result in an increase in built floor area beyond what would be allowed as-of-right, or in the future without a proposed action, require preliminary analysis. When such changes, or "effects," could be expected with a proposed action, then a preliminary assessment of urban design and visual resources is conducted to determine which particular effects expected with the Proposed Action may warrant further investigation in a detailed analysis.

A detailed analysis may be needed for projects or actions that potentially obstruct view corridors, compete with icons in the skyline, or make substantial alterations to the streetscape of a neighborhood by noticeably changing the scale of buildings. The effects are characterized within the detailed analysis, and a determination is made as to whether any changes to the urban design and visual resources of an area would alter the pedestrian's experience of public space in a significant way.

The Proposed Project is located adjacent to visual resources, and given its proposed height, would be visible among existing recognizable buildings in the skyline. Therefore, a detailed analysis of the potential impacts of the Proposed Actions on urban design and visual resources is warranted per the *CEQR Technical Manual* guidelines and is provided below. This analysis describes existing conditions and compares the future with and without the Proposed Actions, to determine potential urban design and visual resource impacts.

Per the criteria listed in Section 230 of the *CEQR Technical Manual*, a pedestrian wind condition analysis is not warranted for the Proposed Actions. Per the *CEQR Technical Manual*, factors that were considered when making the determination about whether a pedestrian wind assessment is warranted include the following five-part test:

- Whether the location is exposed to high wind conditions, such as along west and northwest-facing waterfronts, or other locations at or in close proximity to waterfront sites where prevailing winds from the waterfront are not attenuated by buildings or natural features;
- The size of the project (generally only projects of a substantial size have the potential to alter wind conditions);
- The number of proposed buildings to be constructed;
- The size and orientation of the buildings that are proposed to be constructed; and
- The site plan and surrounding pedestrian context of the project.

The *CEQR Technical Manual* identifies wind as a concern when channelized wind pressure from between tall buildings and/or downwashed wind pressure from parallel tall buildings causes winds that affect pedestrian comfort and safety. The Development Site is not located in a high wind location, such as directly along the waterfront, and would not create a uniform street wall that would result in channelization or downwash effects. Therefore, wind is not considered in this analysis.

The urban design assessment for the With-Action development focuses on assessing potential changes to the urban fabric without committing to precise building specifications. This approach aligns with standard practices for large-scale developments, where initial environmental assessments and preliminary planning prioritize understanding broad impacts and community feedback over finalizing detailed designs. The *CEQR Technical Manual* outlines that environmental assessments typically analyze the project as facilitated by various discretionary actions but do not require exhaustive detail at preliminary stages. As such, some aspects of the project, like detailed building specifications, may not be fully defined until later stages of the review and approval process. This urban design assessment focuses on potential impacts to the urban fabric based on the most conservative building envelope.

Information pertinent to the assessment of the urban design and visual resources analysis includes data collected and analytical information prepared as part of other analyses included in this DEIS, specifically: **Chapter 2, Land Use, Zoning, and Public Policy**; **Chapter 4, Open Space**; and **Chapter 6, Historic and Cultural Resources**. In addition, the study of existing urban design and visual resources conditions has been informed by field visits and photography, and future conditions without and with the Proposed Actions also rely on computer imaging and graphic renderings. All photos included in this assessment were taken in February 2025.

Assessment Criteria

In general, an assessment of urban design is needed when a project may have effects on one or more of the elements that contribute to a pedestrian's experience of public space. The elements contributing to urban design are described in the *CEQR Technical Manual* as follows:

- Streets: For many neighborhoods, streets are the primary component of public space. The arrangement and orientation of streets define the location and flow of activity in an area, set street views, and create the blocks on which buildings and open spaces are organized. The apportionment of street space between cars, bicycles, transit, and sidewalk is critical to making a successful streetscape, as is the careful design of street furniture, grade, materials used, and permanent fixtures, including plantings, streetlights, fire hydrants, curb cuts, or newsstands.
- Buildings: Buildings support streets. A building's streetwalls form the most common backdrop in the city for public space. A building's size, shape, setbacks, lot coverage, placement on the zoning lot and block, orientation of active uses, and pedestrian and vehicular entrances all play major roles in the vitality of the streetscape. The public realm also extends to building façades and rooftops, offering more opportunity to enrich the visual character of an area.
- Open Space: For the purpose of urban design, open space includes public and private areas such as parks, yards, cemeteries, parking lots, and privately owned public spaces.
- Natural Features: Natural features include vegetation and geologic, topographic, and aquatic features. Rock outcroppings, steep slopes or varied ground elevation, beaches, or wetlands may help define the overall visual character of an area.
- Visual Resources: A visual resource is the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources.
- Wind: Channelized wind pressure from between tall buildings and downwashed wind pressure from parallel tall buildings may cause winds that jeopardize pedestrian safety.

As described in **Chapter 1, Project Description**, the Proposed Actions include zoning maps and zoning text amendments. In the areas where those actions would be applicable, there would be physical alterations beyond what is allowed by existing zoning. Therefore, an urban design and visual resources analysis is warranted.

Study Area

This analysis will include a primary study area of 400 feet from the Development Site and a secondary study area of 0.25 miles from the Development Site for a more conservative assessment of potential impacts on urban design and visual resources. As shown in **Figure 8-1**, the primary study area for this analysis is generally bounded by Fleet Street to the north, Hanover Place to the west, Livingston Street to the south, and mid-block between Rockwell and Ashland Place to the east. The secondary study area for this analysis is generally bounded by Myrtle Avenue to the north, Hoyt Street to the west, Pacific Street to the south, and South Elliott Place to the east.

Figure 8-1 Study Area with Photograph Locations



Source: NYS Office of Information Technology Services, New York State Orthoimagery (2024)

Detailed Analysis

Existing Conditions

Figure 8-1 provides a map of the Development Site and study area with accompanied site-specific photo locations. This section provides a narrative of the existing development on the project block and in the study area. **Photo 8-1** through **Photo 8-16** show existing conditions of the Development Site and study areas.

Primary Study Area

As described above, the primary study area for this analysis is generally bounded by Fleet Street to the north, Hanover Place to the west, Livingston Street to the south, and mid-block between Rockwell and Ashland Place to the east. The primary study area has an irregular street grid pattern, with Flatbush Avenue/Flatbush Avenue Extension and Fulton Street running at an angle through the study area.

The Development Site comprises Brooklyn Block 2093, Lot 1 in the Downtown Brooklyn neighborhood of Brooklyn CD 2. The Development Site encompasses the entirety of Block 2093, which is bounded by DeKalb Avenue to the north with approximately 193 feet of frontage, Fulton Street to the south with approximately 130 feet of frontage, Hudson Avenue to the east with approximately 365 feet of frontage, and Flatbush Avenue Extension to the west with approximately 334 feet of frontage. The sidewalks surrounding the Development Site are wide and contain street furniture and streetscape elements including metal bike racks, LinkNYC kiosks, bus shelters, and a metal fence at the curb along Fulton Street. There is a Citi Bike station located along DeKalb Avenue directly north of the Development Site.

The Development Site is currently improved with a seven-story, 372,214 gsf commercial building with 293,370 gsf of commercial office space, 32,654 gsf of ground-floor retail, and 46,190 gsf of below-grade parking (which accommodates 140 public parking spaces). Constructed in 1974, the existing building currently houses a Verizon call center in its office space. The ground floor retail space is primarily tenanted with local retail chains (see **Photo 8-1**). The existing building is built to the lot line and features an arcade along DeKalb Avenue, Flatbush Avenue Extension, and Fulton Street. The building is clad in a metal and glass façade.

An entrance to the DeKalb Avenue subway station (serving the B/Q/R subway lines) is located at the northwest corner of the Development Site (see **Photo 8-2**). This entrance includes a street elevator and two staircases that lead out to the plaza entrance. Additionally, there are three curb cuts located along the Hudson Avenue frontage: two of which serve the existing building's loading areas, with the third curb cut provides access to a public parking garage. The two for loading purposes measure approximately 20 feet and 60 feet in width each and are separated by approximately 50 feet, whereas the curb-cut for parking garage access measures approximately 40 feet in width.

As described in **Chapter 2, Land Use, Zoning and Public Policy**, the study area exhibits a diverse blend of commercial, residential, and institutional uses. Generally, there is not a cohesive urban design characteristic of the primary study area. A mix of older, low-scale commercial and mixed-use buildings are interspersed throughout the primary study area alongside new, high-rise developments and varying institutional uses (see **Photo 8-4**).

Photo 8-1 View of the Development Site facing East along Fulton Street



Photo taken on January 10, 2025

Photo 8-2 View of the Development Site facing South along Flatbush Avenue Extension



Photo taken on January 10, 2025

Photo 8-3 View along Hudson Avenue looking North



Photo taken on January 10, 2025

Streets

As described above, Flatbush Avenue/Flatbush Avenue Extension and Fulton Street both run at an angle through the primary study area, forming an irregular street pattern. Street widths vary throughout the study area based on street hierarchy. Principal arterial roads within the primary study area include Flatbush Avenue, Fulton Street, and DeKalb Avenue, which range from 70 to 120 feet wide. Local roadways within the study area include Rockland Place, Hudson Avenue, Nevins Street, Hanover Place, and Grove Place, which range from 47.5 feet to 60 feet wide.

Flatbush Avenue is a 100- to 120-foot-wide major thoroughfare with four lanes of two-way traffic, which is separated by a median along the avenue extension north of the Flatbush Avenue, Fulton Street, and Nevins Street intersection (see **Photo 8-5**). Fulton Street is an 80-foot-wide street with two lanes of two-way traffic (see **Photo 8-6**). To the east of Flatbush Avenue, Fulton Street has dedicated bus lanes in both directions indicated by red pavement. Along Fulton Street within the western and southwestern portion of the primary study is Fulton Mall, a key public corridor and regional shopping destination. DeKalb Avenue is a 70-foot-wide street with two lanes of one-way westbound traffic and curbside parking (see **Photo 8-7**). Local roadways are generally one-lane, one-way traffic with curbside parking.

The streets in the primary study area generally have heavy pedestrian and vehicular activity, as there are public transportation hubs, a mix of commercial and residential buildings, and a major thoroughfare (Flatbush Avenue) in the primary study area. Active ground-floor uses are located throughout the primary study area but are more heavily concentrated along the primary arterial streets (Flatbush Avenue, Fulton Street, and DeKalb Avenue). Street trees in the primary study area are sparse and generally concentrated along the portions of Fulton Street and DeKalb Avenue that are west of Flatbush Avenue.

Photo 8-4 Facing North along Livingston Street

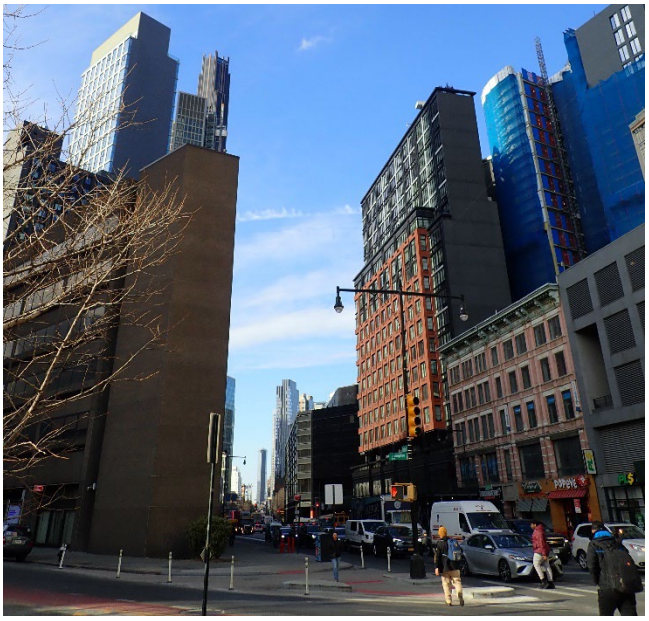


Photo taken on February 26, 2025

Photo 8-5 Facing South along Flatbush Avenue Extension



Photo taken on February 26, 2025

Photo 8-6 View West along Fulton Street

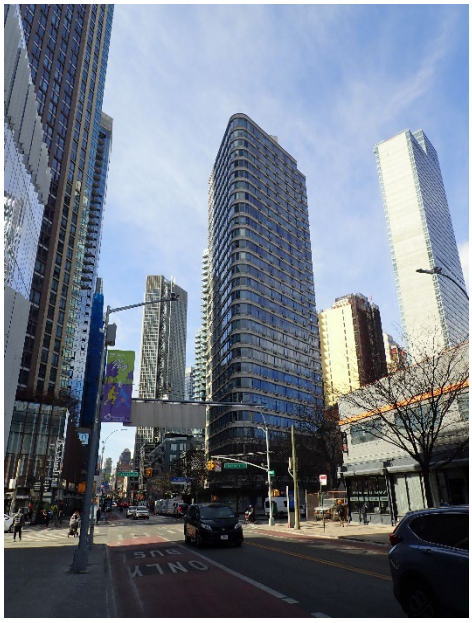


Photo taken on February 26, 2025

Photo 8-7 View Southwest along DeKalb Avenue



Photo taken on February 26, 2025

Buildings

The built environment within the primary study area is varied, with buildings ranging from tall towers to three-story mixed-use buildings. Building heights in the study area are shown in **Figure 8-2**, and built floor area ratio (FAR) of surrounding buildings is shown in **Figure 8-3**. As discussed in **Chapter 2, Land Use, Zoning and Public Policy**, uses within the study area include, among others, residential, commercial and institutional buildings. Buildings that are located along Flatbush Avenue, as well as buildings located directly adjacent to the Development Site, are generally large-footprint commercial buildings and mixed-use residential towers with ground-floor retail. The Development Site is directly adjacent to high-density development on all frontages. Buildings further east of the Development Site along Rockwell Place and further west of the Development Site along Fulton Street and DeKalb Avenue are generally lower- to mid-rise in scale commercial and mixed-use buildings. As mentioned previously, north of the Development Site is the Long Island University campus, which consists of a mix of building typologies ranging from six to 30 stories (approximately 80 to 415 feet) and from roughly 2.0 to 12.0 FAR.

Residential uses within the study area range from high-rise residential towers to lower-scale multi-family walkup buildings. The lower-scale residential uses are typically found along the outskirts of the primary study area, with high-rise tower uses concentrated closer to the Development Site. Multi-family walkup buildings within the primary study area typically contain ground floor retail with residential uses on the remaining two to three floors. These buildings generally feature brick façade treatments and contain awnings, signage, and advertisements on the ground floor associated with the commercial business (see **Photo 8-8**). Within the study area, this type of building generally contains up to 4.0 FAR and is under 50 feet tall.

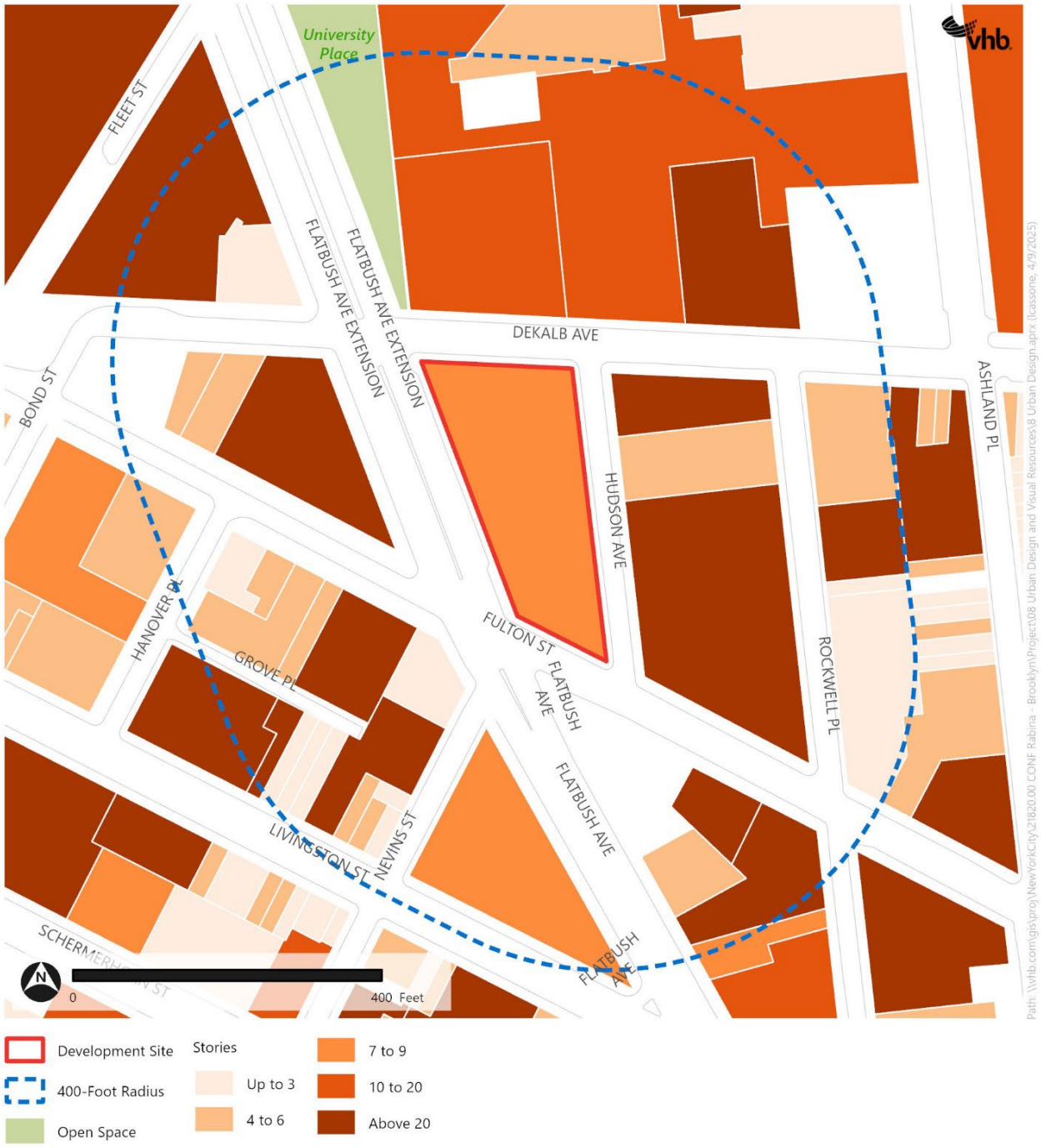
High-rise residential towers generally range between 30 and 50 stories, with the tallest rising to 1,066 feet in height. FAR for residential towers in the study area ranges from 10.5 to 24.6. These buildings are typically constructed with a ground floor that extends to the property line/sidewalk with a

setback above the building podium and exhibit a mix of glass, metal, bronze, and cast stone façade treatments (see **Photo 8-9**). Some of the towers contain commercial uses at the building podium. The tallest high-rise residential tower within the primary study area is the Brooklyn Tower, which was built in 2021 and is located north of the Development Site. The Brooklyn Tower rises to 1,066 feet tall (92 stories) and contains commercial retail space at the building's podium and residential space on the remaining floors, with a total FAR of 13.3. (see **Photo 8-10**). The building is constructed out to the sidewalk with a setback above the podium and features a mix of steel, bronze, and copper façade treatments. West of the Development Site is the recently completed 589 Fulton Street development, which is a 52-story, 575-foot-tall mixed-use residential tower built in 2023, containing 20.5 FAR. Also exhibiting the typical design of high-rise buildings in the study area, 589 Fulton Street is constructed out to the sidewalk of Flatbush Avenue, DeKalb Avenue, and Fulton Street and features a setback after the building podium. The building consists of a glass and bronze façade treatment.

Commercial uses within the study primary study area consist of large-footprint commercial retail and office buildings as well as ground-floor retail and office space within mixed-use multi-family walk-up buildings and residential towers. As with the area residential buildings, buildings containing commercial uses vary in height and façade styles. Commercial uses within mixed-use multi-family walk-up buildings typically contain awnings, signage, or advertisements on the ground floor that are associated with the commercial business (see **Photo 8-8**). Commercial uses on the ground floor of residential towers are typically large-footprint retail uses with modern glass façades. Large-footprint commercial-only buildings range between three and ten stories and typically contain ground-floor retail with commercial office space on the remaining floors (see **Photo 8-11**). These buildings are generally constructed to the sidewalk and exhibit a mix of modern glass, brick, and stucco facades. Buildings with ground-floor retail typically contain awnings, signage, or advertisements on the ground floor that are associated with the retail business.

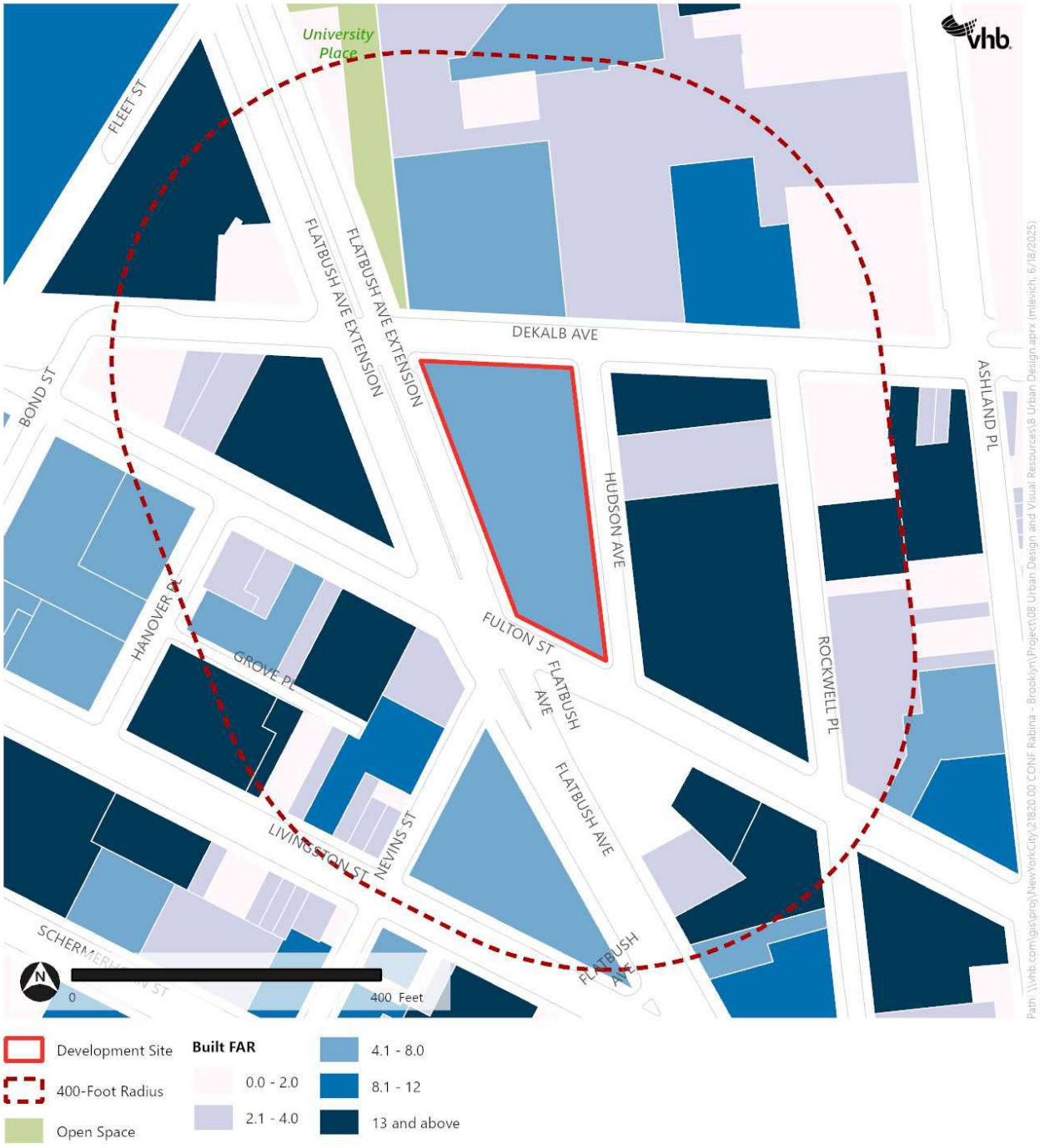
Institutional uses within the primary study area are generally confined to the LIU campus located north of the Development Site. As described previously, the LIU campus consists of a mix of building typologies ranging from six to 30 stories (2.0 to 12.0 FAR) that generally feature brick facade treatments. LIU buildings are set back from the street along Flatbush Avenue Extension to accommodate publicly accessible open space with seating, plantings, and trees (see **Photo 8-12**). The buildings are constructed to the sidewalk along DeKalb Avenue, except for a parking lot at the corner of DeKalb Avenue and Ashland Place. At the southwestern corner of the LIU campus, the Brooklyn Paramount theater occupies an 11-story, 155-foot-tall building containing 5.3 FAR; this building features a masonry façade and a marquee awning along DeKalb Avenue and Flatbush Avenue Extension. To the east, the Brooklyn Paramount building is connected by a skyway to the Zeckendorf Health Sciences building, a seven-story, approximately 90-foot-tall building with a brick façade and a clock tower. Further north within the LIU campus, there is a series of interconnected mid-rise buildings with classrooms and office space. Two recently constructed residence hall buildings are located just outside the study area to the north, rising to 165 feet and 410 feet.

Figure 8-2 Primary Study Area Building Heights



Source: NYC DCP (2024); NYC Parks (2024)

Figure 8-3 Primary Study Area Built FAR



Source: NYC DCP (2024); NYC Parks (2024)

Source: NYC DCP (2024); NYC Parks (2024)

Photo 8-8 Facing West along Livingston Street

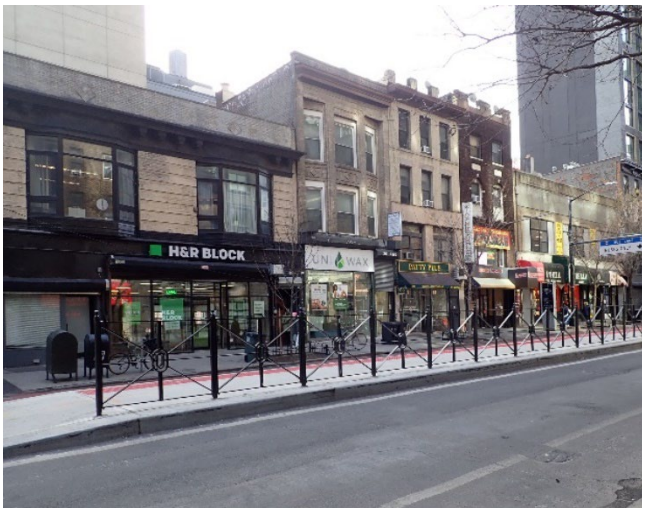


Photo taken on February 26, 2025

Photo 8-9 Facing Northwest along Flatbush Avenue



Photo taken on February 26, 2025

Photo 8-10 View of the Brooklyn Tower facing North along Bond Street



Photo taken on February 26, 2025

Photo 8-11 Facing Southeast along Fulton Street

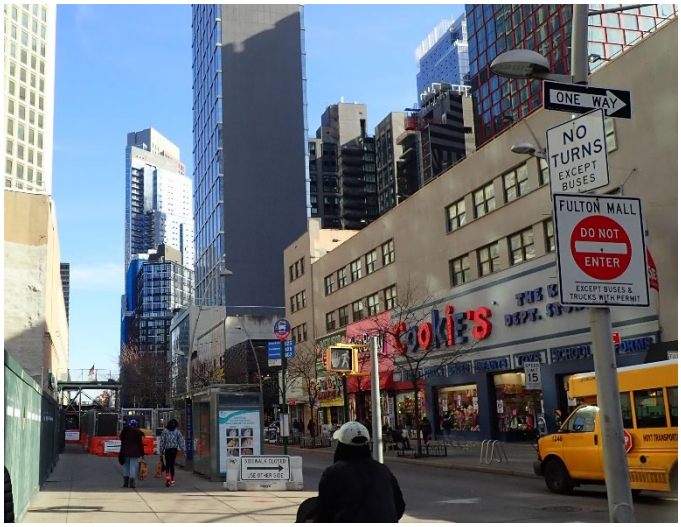


Photo taken on February 26, 2025

Open Space

As mentioned previously, the primary study area contains publicly accessible open space along the LIU campus Flatbush Avenue Extension frontage, referred to as University Place (see **Photo 8-12**). University Place is publicly accessible and contains seating, a sculpture, and landscaping with trees and shrubs. Raised planting beds are organized around a central plaza paved in red brick, where there is a painted iron arch sculpture in red and white. University Place provides space for passive recreation and serves as a buffer between the public streetscape of Flatbush Avenue Extension and Fleet Place and the private campus of LIU. A pedestrian bulb-out was recently added at the

intersection of Fleet Place and Willoughby Street directly north of University Place; this space features decorative pavement, large stones for sitting, and bike racks.

Albee Square is also located in the primary study area, west of the Development Site at the intersection of DeKalb Avenue and Fulton Street. Similar to University Place, Albee Square contains seating (benches and café tables), plantings, and trees.

Photo 8-12 View of Long Island University facing Southeast from University Park



Photo taken on February 26, 2025

Visual Resources

There are no visual resources within the primary study area.

Secondary Study Area

The secondary study area for this assessment is generally bounded by Myrtle Avenue to the north, Hoyt Street to the west, Pacific Street to the south, and South Elliott Place to the east. Consistent with the primary study area, the secondary study area consists of a highly varied built environment including newly developed mixed-use residential towers, high-density commercial buildings, institutional buildings, and three- and four-story row houses. The secondary study area generally is comprised of low-scale residential uses in the east and southwest portions of the secondary study area and mid- to high- scale commercial and mixed commercial and residential uses within the southern and northern portions of the secondary study area.

Streets

The secondary study area contains the convergence of several neighborhoods with street grids at different orientations: Downtown Brooklyn to the north and northwest, Fort Greene and Clinton Hill to the east, and Boerum Hill to the south and southwest. Each of these neighborhoods is generally characterized by regularly shaped blocks organized along a typical street grid, with elongated blocks oriented north-south in Fort Greene and Clinton Hill, blocks oriented roughly east-west in Boerum Hill, and square and short rectangular blocks in Downtown Brooklyn.

Flatbush Avenue/Flatbush Avenue Extension is a wide commercial corridor in the secondary study area, connecting the Manhattan Bridge in the north with Prospect Park and surrounding neighborhoods in the south. Though narrower and carrying less traffic than Flatbush Avenue, Fulton Street also serves as a main commercial corridor running northwest to southeast, connecting Downtown Brooklyn and Brooklyn Heights with Bedford-Stuyvesant to the east. These streets feature dense commercial and mixed-use buildings with ground-floor commercial spaces occupied by a diverse mix of restaurants, local retail and services, big-box stores, and destination retail, uses which continue on narrow side streets such as Duffield Street, Ashland Place, and others. Development density follows a gradient and increases toward the central business district (CBD) core generally located northwest of the Development Site, an area generally bordered by Fulton Street to the south and Flatbush Avenue to the north.

Running diagonally across the secondary study area, Fulton Street forms irregularly shaped blocks in the portion of the study area closer to the Development Site. The low-scale residential portions of the study area typically consist of one-lane one-way local roadways lined with curbside parking and mature street trees. Consistent with the description of the primary study area, the mid- to high-scale portion of the secondary study area consists of a mix of primary arterial roads (Flatbush Avenue, Fulton Street, and DeKalb Avenue) and local roadways. Street trees are generally sparse throughout the mid- to high-scale portions of the secondary study area.

Buildings

Low-scale residential neighborhoods located east and southwest of the Development Site consist of predominately townhome style, single- and multi-family residences that are three to five stories (up to approximately 55 feet tall; up to roughly 4.0 FAR) with flat roofs and mixed-use multi-family residential buildings with ground floor retail. Façade treatments of the townhomes consist of brick, stucco, and varying color sandstone with leaf brackets and ornamental patterns above some doorways, and high stoops. Street wall conditions of the townhome residential uses within this area are set back from the roadway, as each townhome contains a small front yard improved with a paved patio area and minimal landscaping (see **Photo 8-13**). Mixed-use residential buildings are generally built to the lot line and contain signage and awnings on the ground floor building frontages that are associated with the commercial business. Typically rising to three stories, mixed-use residential buildings within this portion of the study area consist of brick and stucco façade treatments (see **Photo 8-14**).

Built environment conditions within the western and northwestern portions of the study reflect the general conditions of the primary study area, consisting of a mix of large-footprint commercial buildings and mixed-use residential towers with ground-floor retail, ranging from 10.0 to 25.0 FAR and rising to a maximum height of 745 feet (a mixed-use tower at 138 Willoughby Street). See **Primary Study Area** for a description of typical urban design conditions exhibited by these building typologies.

North of the Development Site, to the east of Flatbush Avenue Extension, predominately consists of institutional and residential campus developments. LIU encompasses the entire block directly north of the Development Site, as described in **Primary Study Area**. North of the campus along Willoughby Avenue are University Towers and Kingsview Homes, two "tower-in-the-park" style residential co-op developments built in the late 1950s featuring several 15-story, approximately 170-foot-tall elevator apartment buildings. These developments generally contain around 2.5 FAR. Residences in this style are typically set back from the street with open space and pedestrian

pathways surrounding the building and predominately consist of brick facades (see **Photo 8-15**). Additionally, to the east of the LIU campus is the Brooklyn Hospital Center, which consists of several interconnected buildings of up to 13 stories with concrete and brick façades, set back from the street to accommodate landscaping, pedestrian pathways, and driveways associated with the hospital use (see **Photo 8-16**). Directly north of the main hospital campus, adjacent to the hospital's two-story parking structure, is a newly constructed, 33-story, 207-foot-tall residential building containing approximately 477 dwelling units (DUs).

Open Space

The secondary study area consists of several publicly accessible open spaces interspersed throughout the study area. The largest open space resource within the secondary study area is Fort Greene Park, a 30-acre open space located to the northeast of the Development Site. Fort Greene Park contains a mix of active and passive open space, featuring large lawns, sport courts, playgrounds, and barbecuing areas. Northwest of the Development Site is Abolitionist Place, a new 1.15-acre public plaza with a grass lawn. Featuring space for passive recreation and abundant seating, this space is typical of plazas found in dense downtown areas and has similar features to Albee Square and University Place, as discussed above. See **Chapter 5, Open Space** for more detail.

Photo 8-13 Facing Northeast on South Elliot Place



Photo taken on February 26, 2025

Photo 8-14 Facing Northwest along Atlantic Avenue



Photo taken on February 26, 2025

Photo 8-15 View East along Willoughby Street



Photo taken on February 26, 2025

Photo 8-16 View Northeast along Ashland Place



Photo taken on February 26, 2025

Visual Resources

Visual resources within the secondary study area include the Williamsburgh Savings Bank located at One Hanson Place and Fort Greene Park. Significant visual corridors within the secondary study area include a view from Ashland Place toward the Williamsburgh Savings Bank. The Development Site is visible from points within Fort Greene Park. The view west toward the Downtown Brooklyn skyline (including the Development Site) from within Fort Greene Park is a visual resource (see **Photo 8-17** and **Photo 8-18**). Views of these resources from the Development Site are blocked by existing buildings.

Photo 8-17 View of Williamsburgh Savings Bank at Willoughby Avenue and Ashland Place, facing South



Photo taken on February 26, 2025

Photo 8-18 View from Fort Greene Park Toward the Development Site, facing West



Photo taken on February 26, 2025

No-Action Condition

As described in **Chapter 1, Project Description**, absent the Proposed Actions, it is expected that the exiting seven-story commercial office and retail building currently occupying the Development Site would remain as under existing conditions and be fully occupied.

Primary Study Area

As discussed in **Chapter 2, Land Use, Zoning and Public Policy**, several development projects are anticipated to be constructed within the 400-foot primary study area by the 2032 analysis year. These projects are shown in **Table 8-1**.

Table 8-1 No-Action Projects within 400-Foot Study Area

Address	Net Change in DUs	Commercial Zoning Floor Area (SF)	Community Facility Zoning Floor Area (SF)	Building Height	FAR
291 Livingston Street	--	50,914 (103 hotel keys)	--	189′	14.3
625 Fulton Street*	1,044	--	--	500′	16.3
12 Rockwell Place*	52	86,693	--	50′	3.1
570 Fulton Street	163	87,000	--	550′	18.9
589 Fulton Street	557	37,356	--	575′	20.5
19 Rockwell Place	174	--	--	304′	15.6
89 DeKalb Avenue (91 DeKalb)	324	--	55,000	348′	12.0
Total	**2,314**	**261,965 (103 hotel keys)**	**55,000**		

Source: NYC DCP, Housing DB 24v\4; New York YIMBY
Note:
This list includes filed applications, approved applications, and projects permitted for construction. Excludes projects with no net change in uses.
*No.2 and No.3 are part of the same development.

Located directly across the street to the east of the Development Site is 625 Fulton Street/12 Rockwell Place, a 500-foot-tall, 16.3-FAR, mixed-use residential and commercial tower with approximately 1,096 rental units and 26,000 gsf of lower-level retail space (planned to be a food retail expansion to support health [FRESH] supermarket). The building will exhibit varying façade treatments including a mix of metal paneling, basket-weave, and glass.

Directly west of the Development Site is 589 Fulton Street, a planned 575-foot-tall, 20.5-FAR mixed-use residential and commercial tower with approximately 591 rental units and 68,693 gsf of retail space.

The No-Action developments and other recently completed developments will add more ground-floor retail to the primary study area and well as introduce new publicly accessible open space to the irregularly shaped blocks. These projects will enhance the pedestrian experience of the primary study area closest to these developments by adding active ground floor uses and improving the streetscape by replacing under-utilized sites with new active uses. Additionally, the Downtown Brooklyn Partnership (DBP) and NYC Parks Department are currently upgrading the Fulton Mall streetscape to create a greener and more aesthetically pleasing shopping corridor.

As described above, there are no visual resources within the primary study area.

Secondary Study Area

There are several development projects that fall within the quarter-mile secondary study area that are anticipated to be complete by the 2032 analysis year (see **Appendix A**). These developments are generally mixed-use residential and commercial high-rises that range between 30 and 44 stories. No-Action developments in the secondary study area will add more ground-floor retail and introduce

new residential population on sites that are currently vacant or underutilized, enhancing the pedestrian experience of the secondary study area.

Under the No-Action Condition, development in the primary and secondary study areas would continue to partially obstruct views to and from Williamsburgh Savings Bank and Fort Greene Park. However, it is anticipated that all development would be confined to within mapped tax lots, and there would be no obstruction of public streets; therefore, these views would continue to exist from the public streetscape throughout the primary and secondary study areas.

With-Action Condition

As described in **Chapter 1, Project Description**, in the future With-Action condition, the Development Site would be redeveloped with a 72-story (840-foot-tall, including bulkhead), 1,552,605-gsf mixed-use building, including 1,233,950 gsf (933,820 zsf; 19.0 FAR) of residential space, 88,500 gsf (84,445 zsf, 1.72 FAR) of commercial office and/or community facility space that may be dedicated for future city use, and 129,000 gsf (112,123 zsf; 2.28 FAR) of commercial retail space.[1] Like the Proposed Project, development under the With-Action condition would include approximately 101,155 gsf of mechanical space on the cellar, fifth, 23rd, 42nd, and 65th floors. No accessory parking spaces would be provided in the With-Action condition. The With-Action condition will include 1,263 residential units, of which 253 to 379 units would be permanently affordable for households with incomes averaging at an average of 40 to 80 percent of AMI depending on the MIH Option selected.

The Proposed Project's retail uses would be accessed along DeKalb Avenue, Flatbush Avenue Extension, Fulton Street, and portions of Hudson Avenue. Access to the Proposed Project's office and residential uses would be located along the site's DeKalb Avenue frontage. The Proposed Project's loading berths are proposed to be located along the Development Site's Hudson Avenue frontage. The retail and nonresidential uses would be accessed along all four building frontages in order to activate all of the building façades and create visual interest and foot traffic spread across the Development Site. Access to the residential uses would be located along DeKalb Avenue in close proximity to a large Citi Bike station and the subway entrance. The location of the residential entrance on DeKalb Avenue would allow the major commercial frontages along Flatbush Avenue Extension and Fulton Street to be occupied by commercial uses, while residential tenants would access the building on a quieter side street. The loading berths would remain along Hudson Avenue which has relatively less pedestrian traffic.

The Proposed Project has been designed to respond to the conditions of the Development Site and the surrounding built context. As noted in **Chapter 1, Project Description**, an existing Real Estate of Utility Companies (REUC) easement granted by Metropolitan Transit Authority (MTA) (REUC No. B119-E271) extends diagonally west to east in the Development Site which restricts development that exceeds a depth of approximately 6 feet below grade where the MTA subway lines are situated. The MTA easement runs beneath the southern 40 percent of the Development Site, requiring that all vertical development occur on the norther portion of the site. As such, the Proposed Project's L-shaped tower has been laid out along the northern portion of the site in order to maximize light and air while reducing bulk through the use of a stepped and articulated design.

[1] The future commercial office tenants are not known at this time and could include community facility tenants that may be dedicated for future city use.

The building's podium would have a maximum base height of 80 feet with the tower expected to reach a height of 800 feet, with another 40 feet allowance for the building bulkhead, for a total height of 840 feet.

The Proposed Actions would also include a number of public realm improvements, including:

- A new, publicly accessible open space (approximately 4,745 sf) on the southern portion of the Development Site; and
- An expanded sidewalk along Flatbush Avenue Extension.

Figure 8-4 through **Figure 8-10** provide comparative visualizations of the future No-Action and With-Action conditions.

These diagrams highlight both the Proposed Project (at a height of 840 feet, including bulkhead), as well as a more conservative maximum building envelope with a height of 945 feet (including bulkhead) emphasizing the development potential and anticipated urban form.

Primary Study Area

Streets

In the future with the Proposed Actions, the Proposed Project would be constructed on an existing block, and no changes to the street grid or street hierarchies would occur as a result of the Proposed Actions. The With-Action development would introduce a street wall of approximately 80 feet before setting back along DeKalb Avenue and Hudson Avenue to accommodate rooftop amenity space and the L-shaped residential tower. The proposed building would be built out to the lot line on the DeKalb Avenue, Flatbush Avenue Extension, and Fulton Street frontage, creating a continuous street wall along these building frontages and bringing double height retail to the edge of the street. The proposed building would be set back from the lot line at the Fulton Street frontage by approximately 18 feet along Flatbush Avenue Extension and 72 feet along Hudson Avenue to accommodate an approximately 4,745 sf publicly accessible open space, which would feature seating and landscaping as described below.

The Proposed Project also includes several streetscape improvements, including the expansion of the sidewalk and installation of benches and trees along Flatbush Avenue Extension and the installation of planters along Hudson Avenue.

The existing covered subway entrance at the corner of Flatbush Avenue Extension and DeKalb Avenue would be expanded with more generous clearances and circulation space around the elevator and stairs and a heightening of the ceiling to improve visibility. Together, these improvements to the subway entrance would create better proportions and more well-lit conditions. The sidewalk along Flatbush Avenue Extension would be expanded to cover a portion of the street parking. In combination with the creation of new publicly accessible open space on the southern portion of the Development Site, these streetscape improvements would improve pedestrian circulation and safety and activate key retail corridors, enhancing the pedestrian experience of the Development Site.

Buildings

The With-Action development envelope would include an 80-foot podium constructed to the sidewalk along Hudson Avenue, DeKalb Avenue, and Flatbush Avenue Extension, and an L-shaped

tower rising to a total height of 945 feet, including bulkhead.[2] The podium and tower portions of the Proposed Project would use a mix of brick piers, precast horizontal elements, and glazed infill panels for their façade design. The tower portions of the Proposed Project would be concentrated at the northeast section of the Development Site to accommodate an easement on the southwestern portion of the site. Massed in an L-shape centered at the northeastern corner of the Development Site with its legs extending south along Hudson Avenue and west along DeKalb Avenue, the tower would contain multiple setbacks and points of articulation to allow for more light and air. Specifically, the portion of tower along Hudson Avenue would initially be set back roughly 90 feet from the proposed open space along Fulton Street, with additional 10-foot setbacks above the 22nd and 41st stories. Along DeKalb Avenue, this portion of the tower would initially be set back 25 feet from Flatbush Avenue Extension before overhangs above the 23rd, 42nd, and 65th stories.

In comparison to the No-Action condition, the With-Action condition would reconfigure the building's ground floor to enhance connectivity and maximize pedestrian engagement at a level suitable for the Development Site's prime location within the downtown Brooklyn CBD and its presence along major commercial corridors such as Flatbush Avenue and Fulton Street. The community retail component has been repositioned to a key location adjacent to the subway station entrance at the northwest corner of the site, reinforcing access and visibility at a highly trafficked intersection. Ground-floor retail would contain signage and awnings consistent with other commercial uses in the primary and secondary study area.

Open Space

The Proposed Project would introduce approximately 4,745 square feet of publicly accessible, city owned, privately operated and maintained open space along the southern edge of the site at Fulton Street, extending the pedestrian continuity of Fulton Mall and reinforcing its role as a key public corridor.[3] The publicly accessible open space would be designed to support pedestrian movement, integrate seating, and introduce landscaping, contributing to the district's evolving public realm and enhancing connections between surrounding open spaces. Specifically, the open space would form a roughly triangular plaza at the southern end of the Development Site containing benches, café tables, and trees and landscaping in a mix of planters and in-ground soil. Conceptual plans for the open space include planting beds with built-in benches and linear lighting installations, though the design of the open space has not yet been finalized.

Visual Resources

As described previously, there are no visual resources within the primary study area.

Secondary Study Area

The Proposed Actions are Development Site–specific, and would not alter building uses, bulks, or arrangements in the surrounding area, or result in any changes to streets, blocks, topography, or open spaces in the secondary study area under With-Action conditions. **Figure 8-8** provides a significant view of the Williamsburgh Savings Bank and the Downtown Brooklyn skyline from the secondary study area, generally facing south toward the Development Site along Willoughby Avenue

[2] As noted above, the Proposed Project would have a maximum height of 840 feet. The maximum height that would be permitted in the With-Action condition is 945 feet.

[3] The open space is a requirement of the Brooklyn Center URP and would be deemed a Publicly Accessible Open Space (POPS) pursuant to NYC Local Law 116 as amended by Local Law 250 of 2017.

and Ashland Place, respectively. As demonstrated, from the pedestrian view the proposed With-Action building on the Development Site would not obstruct this significant view corridor to the visual resources in the secondary study area. Additionally, as shown in **Figure 8-9** and **Figure 8-10**, which provides views from within Fort Greene Park and along DeKalb Avenue adjacent to the park, respectively, the proposed With-Action building would not obstruct views from within or toward this visual resource, nor would the With-Action building negatively affect the public's enjoyment of Fort Greene Park. Although the Proposed Project would be visible from points within Fort Greene Park (see **Figure 8-9**), the building would integrate into the existing Downtown Brooklyn skyline, which consists of other tall buildings visible from the park.

Figure 8-4 Comparative View of the Development Site at DeKalb Avenue and Ashland Place, Facing West

No-Action Condition **With-Action Condition**



Source: TenBerke

Figure 8-5 Comparative View of the Development Site at DeKalb Avenue and Flatbush Avenue Extension, facing Southeast

No-Action Condition



With-Action Condition



Source: TenBerke

Figure 8-6 Comparative View of the Development Site at Flatbush Avenue Extension and Livingston Street, facing North

No-Action Condition



With-Action Condition



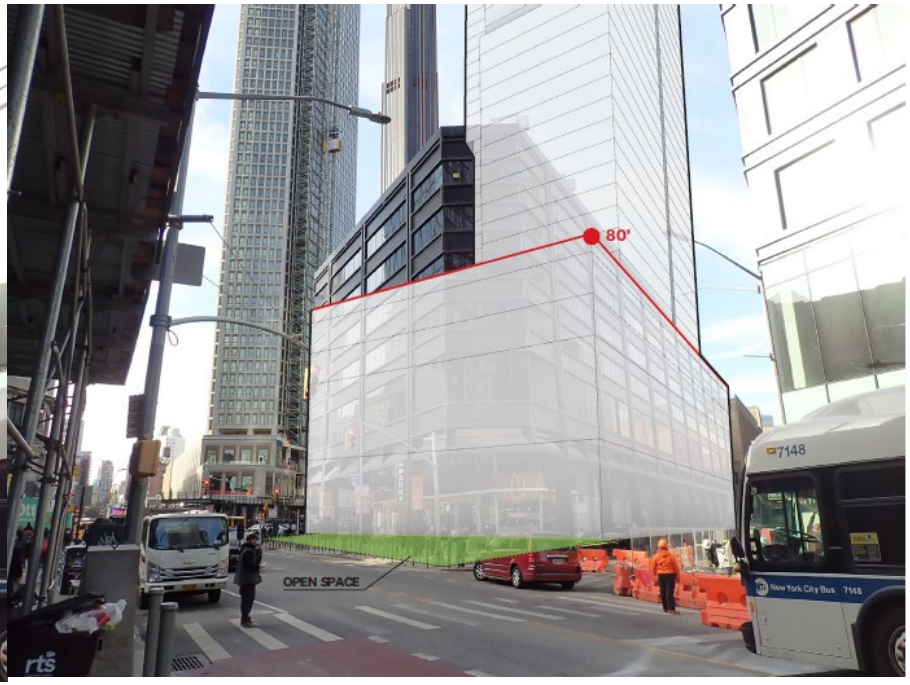
Source: TenBerke

Figure 8-7 Comparative View of the Development Site at Fulton Street, facing Northwest

No-Action Condition



With-Action Condition



Maximum building envelope: 940'
Proposed bulkhead height: 840'
Proposed building height: 800'
Proposed base height: 80'
Adjacent building height

Source: TenBerke

Figure 8-8 Comparative View of Williamsburgh Savings Bank at Willoughby Avenue and Ashland Place, facing South

No-Action Condition



With-Action Condition

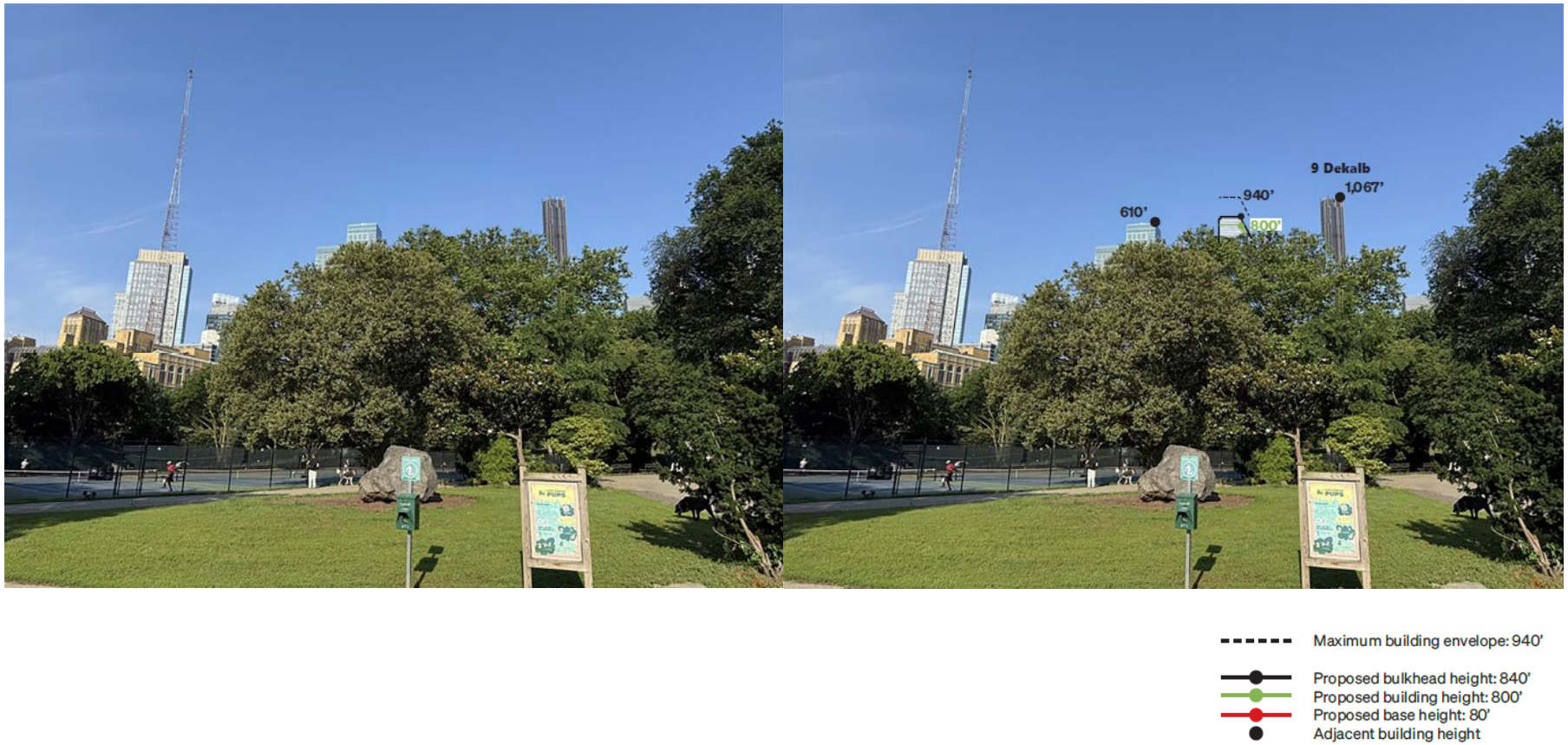


Source: TenBerke

Figure 8-9 Comparative View of the Development Site at Fort Greene Park, facing West

No-Action Condition

With-Action Condition



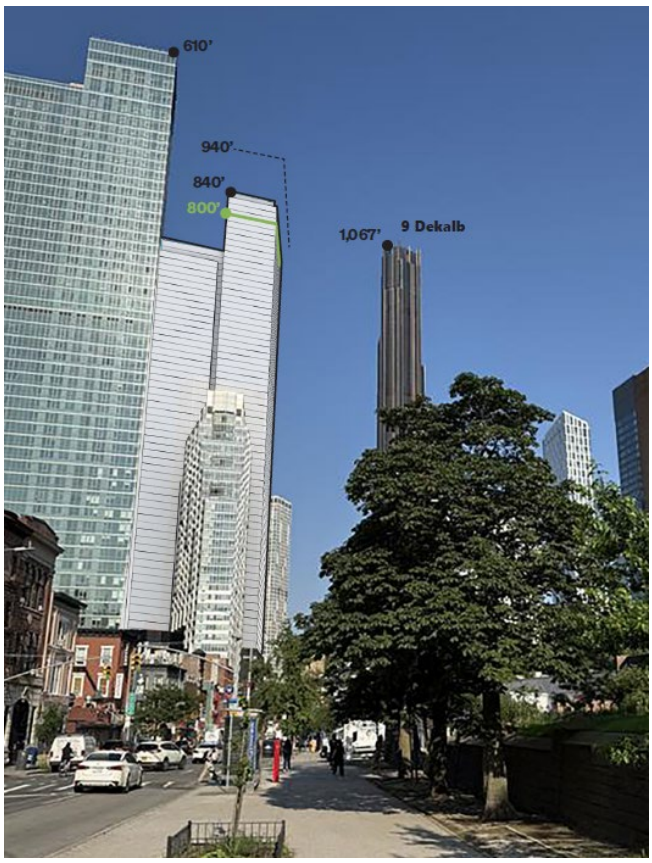
Source: TenBerke

Figure 8-10 Comparative View of the Development Site at DeKalb Ave and Fort Greene Park, facing West

No-Action Condition



With-Action Condition



Source: TenBerke

Summary and Impact Determination

The Proposed Actions would not result in a significant adverse impact to urban design or visual resources in the primary or secondary study area. The analysis presented in this chapter supports the conclusion that the Proposed Actions would facilitate development at a bulk, scale, and height that would be appropriate for the Development Site and compatible with existing and planned development in the primary and secondary study areas. Furthermore, the With-Action development would have minimal effect on publicly accessible views of visual resources within the secondary study area. Project benefits related to urban design include activation of the streetscape with non-residential uses, the addition of a 24-hour residential population, streetscape improvements, transit access improvements, and the provision of publicly accessible open space.

The Development Site is located at the intersection of major commercial corridors (Flatbush Avenue Extension and Fulton Street) forming a high-visibility block within the Downtown Brooklyn CBD. In the existing and future No-Action conditions, the Development Site would remain occupied by an outdated, aging office building with underutilized and substandard spaces at the street level, and a surplus of outdated office space in the upper levels. This condition would not represent an efficient use of the Development Site, especially given its prominent location at a bustling intersection within a high-density downtown area. In the future With-Action condition, the Development Site would be redeveloped with a 72-story (945-foot tall), mixed-use building featuring updated non-residential spaces,[4] modern amenities, and a significant amount of affordable and market-rate housing. The Proposed Actions would not create land uses or structures that would be substantially incompatible with existing and emerging character of the primary and secondary study areas. Downtown Brooklyn is emerging as a hub of high-rise, mixed-use developments at a scale comparable to the With-Action condition on the Development Site. The primary and secondary study areas contain a variety of building typologies and a wide height range. As discussed above, the primary and secondary study areas include buildings of similar heights including buildings recently completed and buildings to be completed by the 2032 build year. These include the Brooklyn Tower (1,066 feet tall; 13.3 FAR) located directly north of the Development Site, and 589 Fulton Street (575 feet tall; 20.5 FAR) located west of the Development Site, along with several others. Furthermore, the Proposed Actions would facilitate streetscape and pedestrian circulation improvements, including the widening of the sidewalk along Flatbush Avenue Extension, the installment of trees, landscaping, and benches around the Development Site, improvements to the subway entrance on the corner of DeKalb Avenue and Flatbush Avenue Extension, and the creation of publicly accessible open space at the southern portion of the Development Site. These public realm improvements would enhance the pedestrian experience around the Development Site and within the primary study area. In contrast, none of these benefits would be provided in the future without the Proposed Actions.

In addition, as demonstrated by the perspective renderings of the With-Action condition, the Proposed Actions would not result in any significant adverse impacts on views to and from the prominent visual resources within the study area. While the With-Action development envelope would be visible in existing view corridors (views of the Williamsburgh Savings Bank and views of Downtown Brooklyn from within Fort Greene Park), this would not constitute a significant adverse impact on visual resources. The proposed With-Action building on the Development Site would be constructed on an existing block and would not entail any changes to block shapes, street pattern and hierarchy, topography, or open spaces in the primary or secondary study area. Views of these resources would continue to be accessible throughout the secondary study area from publicly accessible locations. The With-Action development would represent an addition to the skyline of Downtown Brooklyn at a scale that is compatible with existing and planned development. Therefore, the Proposed Actions would not result in a significant adverse impact on urban design and visual resources, and no further analysis is necessary.

[4] As noted above, the future commercial office tenants are not known at this time and could include community facility tenants that may be dedicated for future city use.

9

Hazardous Materials

A hazardous material is any substance that poses a threat to human health or the environment if present and creates a dermal, inhalation, or vapor exposure pathway that is left uncontrolled. Substances that can be of concern include, but are not limited to, heavy metals, volatile and semi-volatile organic compounds, methane, polychlorinated biphenyls (PCBs), per- and polyfluoroalkyl substances (PFAS), and hazardous wastes (defined as substances that are chemically reactive, ignitable, corrosive, or toxic).

Introduction

As described in **Chapter 1, Project Description**, the Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with a new, approximately 1,552,605 gross-square-foot (gsf), 72-story, 840-foot-tall mixed-use building. Under With-Action conditions, the building would include 1,233,950 gsf (1,263 dwelling units [DUs]) of residential floor area, 129,000 gsf of retail space, and 88,500 gsf of office and/or community facility space that may be dedicated for future city use, as well as 4,745 sf of publicly accessible open space, an expanded sidewalk along Flatbush Avenue Extension, and surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site.

According to the *2021 City Environmental Quality Review (CEQR) Technical Manual*, the potential for significant impacts from hazardous materials can occur when:

- Hazardous materials exist on a site;
- An action would increase pathways to their exposure; or
- An action would introduce new activities or processes using hazardous materials.

As indicated in the *CEQR Technical Manual*, a hazardous materials (E)-Designation is an institutional control that may be placed on a site to establish a hazardous materials review and approval framework. It provides a mechanism to ensure that testing for and remediation of hazardous materials, if necessary, are completed prior to future development of an affected site, thereby eliminating the potential for a hazardous materials impact. (E)-designated parcels are administered under the authority of the New York City Mayor's Office of Environmental Remediation (OER).

This section presents the findings of the hazardous materials assessment and identifies potential issues of concern with respect to workers, the community, and/or the environment during construction and after implementation of the Proposed Project and how such potential issues of concern will be mitigated.

Principal Conclusions

The Proposed Actions would not result in significant adverse impacts related to hazardous materials considering the existing (E)-Designation (E-124) on the Development Site.

A Phase I Environmental Site Assessment (ESA) dated March 25, 2025, revealed one Recognized Environmental Condition (REC) in connection with the Development Site, which pertains to historic off-site activity (see **Appendix B**). To address this condition during site redevelopment, the Proposed Actions would adhere to requirements of the existing (E)-Designation for hazardous materials (E-124), which was applied to Brooklyn Block 2093, Lot 1 as part of the 2004 Downtown Brooklyn Development project. The implementation of the remedial measures required under the (E)-Designation would reduce the potential for significant adverse hazardous materials impacts due to the Proposed Actions.

Compliance with the (E)-Designation protocol would use the Phase I ESA to the extent practicable. Any testing and sampling required by OER for the Development Site would be followed in accordance with the requirements of the OER (E)-Designation process.

In addition to the (E)-Designation on the Development Site, regulatory requirements pertaining to the disturbance and handling of any lead-based paint (LBP), asbestos-containing materials (ACM), and PCB-containing building materials would be followed. As such, implementation of the Proposed Actions would not result in significant adverse impacts related to hazardous materials.

Methodology

The potential for hazardous materials on the Development Site was evaluated based on the Phase I ESA, dated March 25, 2025, prepared by VHB.

The Phase I ESA for the Development Site was prepared in general accordance with ASTM Practice E1527-21, inclusive of the All Appropriate Inquiry requirement amended in the Federal Register on December 15, 2022. The United States Environmental Protection Agency (EPA) All Appropriate Inquiry requirement establishes specific regulatory requirements for conducting appropriate inquiries into the previous ownership, uses, and environmental conditions of a property for the purposes of qualifying for certain landowner liability protections under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

As detailed in **Chapter 1, Project Description**, the Proposed Actions would facilitate the development of a mixed-use building including residential and commercial use floor area. Retail space would be provided in the subcellar, cellar, first, and second floors and commercial office and/or community space on the first, second, third and fourth floors. The fifth, 23rd, and 65th floors, as well as the lower tower roof deck and building roof top, are planned for residential amenities, and residential units would be provided on the remainder of floors six and above. Additionally, the Proposed Project would include mechanical space primarily located in the cellar and on the 23rd, 42nd, and 65th floors.

Assessment

Existing Conditions

The Development Site is currently improved with a seven-story commercial building with commercial office space, ground floor retail, and below-grade parking. It is located on Brooklyn Block 2093, Lot 1 and is currently utilized by retailers, including a pharmacy, an accountant, an eyeglass retailer, convenience stores, a salon, and eateries on the ground floor; office space was observed on floors two through seven including a Verizon call center. An (E)-Designation (E-124) for Hazardous Materials was placed on Lot 1 as part of the Downtown Brooklyn Development project (CEQR #03DME016K).

Phase I Environmental Site Assessment

A Phase I ESA dated March 25, 2025, was completed for Brooklyn Block 2093, Lot 1 (see **Appendix B**). The goal of the Phase I ESA process was to identify RECs, which means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property.

Per the ASTM E1527-21 Standard (Standard), the Phase I ESA reviewed a variety of information sources, including current and historic Sanborn Fire Insurance Maps and aerial photographs; state and federal environmental regulatory databases identifying listed sites; and local environmental records. The Phase I ESA also included a site visit to the Development Site and observation of surrounding properties.

One REC was identified in the Phase I ESA as follows:

- According to the historical data review, several nearby properties within a 500-foot radius of the subject property were identified with petroleum-related storage, manufacturing operations, and dry-cleaning operations with documented releases from at least 1887 through the present. The handling, storage, and/or disposal of materials and substances used during the historical operations at the nearby properties are unknown. Therefore, the historical operations at the nearby properties represent a potential source of off-site impact to the subsurface of the Development Site.

In addition to the REC, two Business Environmental Risks (BERs) were identified in the Phase I ESA. The following BERs represent conditions at the Development Site that may have an environmentally driven impact on the current or planned use of the Development Site, but do not constitute RECs or de minimis conditions as defined in the Standard:

- Based upon the soil classification and development history of the Development Site, urban historic fill may be present beneath the Development Site. Urban historic fill is commonly found throughout the New York City metropolitan area and can contain contaminants such as hazardous building materials (e.g., asbestos-containing materials), heavy metals, and semi-volatile organic compounds. If required to be removed from the Development Site, urban fill should be appropriately characterized prior to following appropriate transportation and disposal/recycling procedures.
- According to the historical data review, the subject property was first developed by at least 1887, with several structures along DeKalb Avenue until 1974, when the current building was constructed. Supporting documentation regarding the former heating source(s) of the former structures were not identified or provided to VHB; therefore, the potential exists for out-of-service underground storage tank(s) (UST[s]) to be present at the subject property.

There was no visible evidence of USTs observed during the site visit, nor was there any documentation of USTs reviewed during the preparation of the Phase I ESA.

Future No-Action Condition

Absent the Proposed Actions, it is assumed that the existing seven-story commercial office and retail building currently occupying the Development Site would remain as under existing conditions. Under the No-Action condition, no environmental remediation or mitigation would be performed pursuant to the existing (E)-Designation requirements for hazardous materials on Lot 1. The applicable text for the (E)-Designation that applies to the Development Site is as follows:

The (E)-Designation will require that prior to redevelopment, the property owner of an E-designated lot conduct a Phase I Environmental Site Assessment (ESA) in accordance with the American Society of Testing Materials (ASTM) E1227-00. If confirmation of potential hazardous materials impacts is identified, the owner must prepare and implement a testing and sampling protocol, and remediation where appropriate, to the satisfaction of the New York City Department of Environmental Protection (DEP) before the issuance of a building permit by the Department of Buildings (pursuant to Section 11-15 of the Zoning Resolution – Environmental Requirements). The (E)-Designation also requires mandatory construction-related health and safety plans, which must also be approved by DEP [OER].[1]

Future With-Action Condition

As described above, approval of the Proposed Actions would facilitate the development of a new, approximately 1,552,605-gsf, 72-story, 840-foot-tall mixed-use building comprising approximately 1,233,950 gsf (1,263 DUs) of residential floor area, 129,000 gsf of retail space, and 88,500 gsf of office and/or community space, as well as 4,745 sf of open space available to the public, an expanded sidewalk along Flatbush Avenue Extension, and surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site. The Proposed Actions would require compliance with the (E)-Designation (E-124) on Lot 1. The (E)-Designation for hazardous materials provides a mechanism for regulatory oversight for future remedial action as a post-demolition and/or pre-construction requirement that would reduce, or eliminate, the potential for future risk or exposure as it relates to hazardous materials and the conditions identified in the Phase I ESA.

[1] At the time the Downtown Brooklyn Development FEIS was issued, NYC DEP had jurisdiction to administer the (E)-Designation program. Administration of the program has since passed to NYC OER. References to NYC DEP in the (E)-Designation requirements should be considered references to OER.

Compliance in association with the hazardous materials (E)-Designation on the Development Site would be conducted under the administration of OER. The following measures must be implemented at the Development Site to satisfy the (E)-Designation requirements:

Task 1: Sampling Protocol

Prior to construction, the applicant submits to OER, for review and approval, a Phase II Investigation protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented.

No sampling should begin until written approval of a protocol is received from OER. The number and location of sample sites should be selected to adequately characterize the site, the specific source of suspected contamination (i.e., petroleum-based contamination and non-petroleum-based contamination), and the remainder of the Development Site's condition. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of the sampling data. Guidelines and criteria for selecting sampling locations and collecting samples are provided by OER upon request.

Task 2: Remediation Determination and Protocol

A written report with findings and a summary of the data must be submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER.

If remediation is indicated from the test results, a proposed Remedial Action Work Plan (RAWP) must be submitted to OER for review and approval. The applicant must complete such remediation as determined necessary by OER in accordance with the approved RAWP. The applicant should then provide proper documentation that remedial action has been satisfactorily completed.

An OER-approved construction-related Health and Safety Plan (CHASP) would be implemented during evacuation and construction and activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater. This plan would be submitted to OER for review and approval prior to implementation.

In addition to implementing the testing and sampling protocol, remediation, and construction-related health and safety plans, regulatory requirements relating to asbestos, lead-based paint, and PCBs in building materials would be followed as part of standard demolition practices.

Conclusion

Compliance with the requirements of the (E)-Designation (E-124) for hazardous materials will reduce or avoid significant adverse impacts associated with hazardous materials resulting from construction of the Proposed Project. To ensure the (E)-Designation requirements have been achieved, no DOB permits will be issued until OER has issued the Notice to Proceed.

In addition to the above, regulatory requirements pertaining to building materials containing ACM, LBP, and/or PCBs would be addressed under standard demolition/renovation procedures. With the implementation of the above measures, there would be no significant adverse impacts with respect to hazardous materials.

10

Transportation

This chapter assesses the potential for the Proposed Actions to result in significant adverse impacts on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, safety of all roadway users (pedestrians, cyclists, transit users, and motorists), and on- and off-street parking.

Introduction

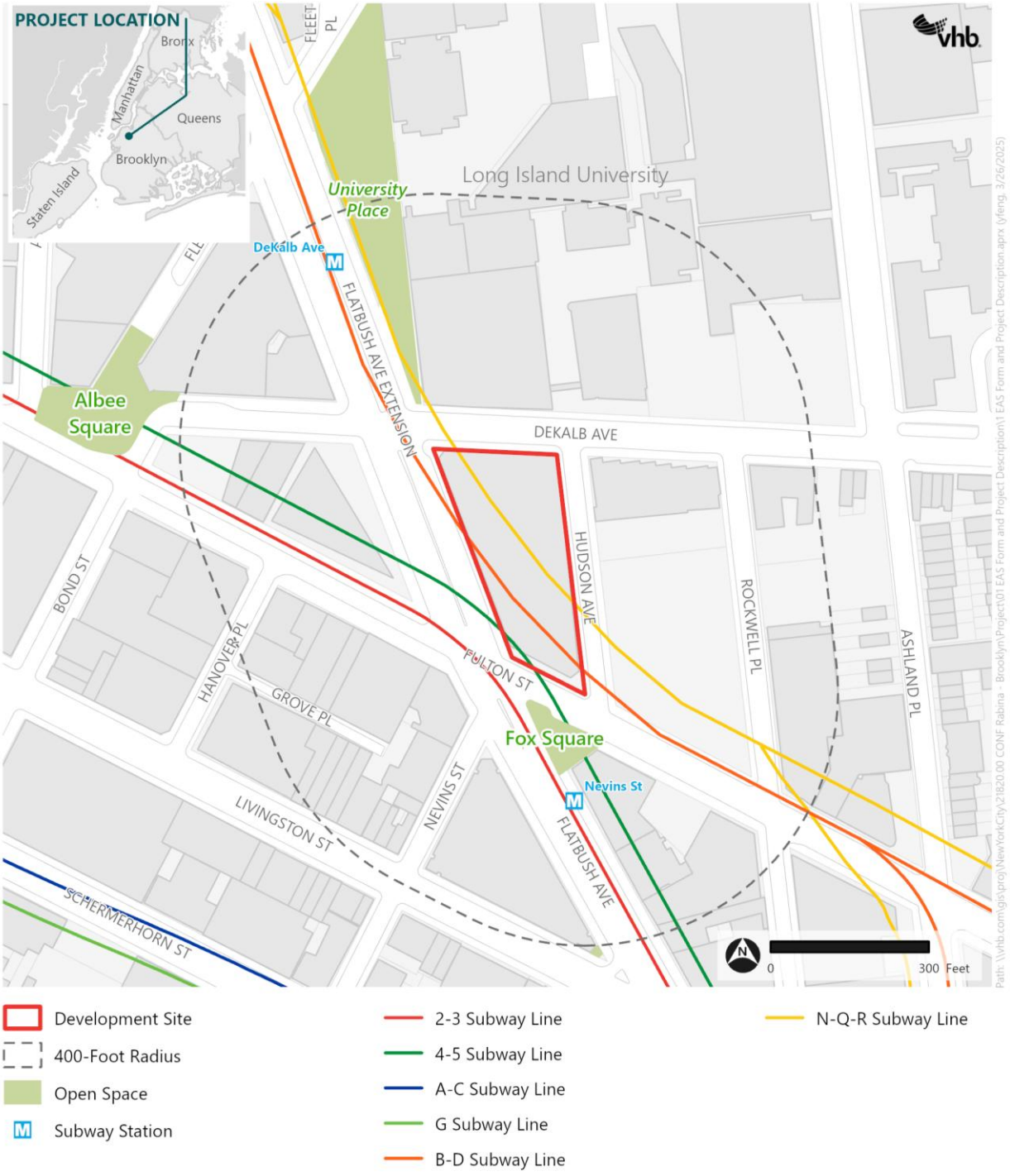
The Proposed Actions would facilitate a mixed-use development in the Downtown Brooklyn neighborhood located at 395 Flatbush Avenue Extension. **Figure 10-1** shows the location of the Development Site, which is bounded by Flatbush Avenue Extension to the west, DeKalb Avenue to the north, Hudson Street to the east, and Fulton Street to the south.

The Proposed Actions would facilitate the redevelopment of the existing building on the Development Site, which currently consists of an office, ground-floor retail, and a parking garage, to provide for a mixed-use building consisting of residential, office, and retail uses, as well as a publicly accessible open space area at the southern end of the Development Site block. The Proposed Actions would introduce a new, approximately 1,552,605 gross square feet (gsf), 72-story, 840-foot-tall (including an allowance for 40 feet of mechanical bulkhead) mixed-use building. Under With-Action conditions, the building would include 1,233,950 gsf of residential floor area and 209,770 gsf of non-residential floor area designated for commercial and/or community facility use. A total of 129,000 gsf of retail space would be provided in the cellar, first and second floors and mezzanines, with 88,500 gsf of commercial and/or community facility space that may be dedicated for future City use on the third and fourth floors. The Proposed Actions would introduce approximately 1,263 dwelling units (DUs). Additionally, the Proposed Actions would introduce a number of public realm improvements, including a new open space available to the public (approximately 4,745 sf) on the southern portion of the Development Site and an expanded sidewalk width along Flatbush Avenue Extension.

To assess the potential for significant transportation impacts, two development scenarios were analyzed based on the composition of commercial retail spaces and where local and destination retail would be located in the building's cellar, first floor, first-floor mezzanine, second floor, and second-floor mezzanine. Additionally, for conservative analysis purposes, of the 88,500 gsf of commercial office/community facility space, it is assumed that approximately 84,500 gsf would be reserved for office space and 4,000 gsf would be reserved for medical office space. The development program and increment for analysis in these scenarios are detailed in **Table 10-1** and **Table 10-2**.

The Proposed Project is anticipated to be completed by 2032.

Figure 10-1 Project Location



Source: NYC DCP (2024), NYC Parks (2024)

Table 10-1 Scenario 1 Development Increment for Analysis

Use	Existing/No-Action Condition	With-Action Condition	With-Action Increment
Residential	--	1,263 DUs	+1,263 DUs
Local Retail	35,548 gsf	28,324 gsf	-7,224 gsf
Office	293,370 gsf	84,500 gsf	-208,870 gsf
Destination Retail	--	100,676 gsf	+100,676 gsf
Medical Office	--	4,000 gsf	+4,000 gsf
Plaza	--	0.11 acres	+0.11 acres
Parking	140 spaces	0 spaces	-140 spaces

Table 10-2 Scenario 2 Development Increment for Analysis

Use	Existing/No-Action Condition	With-Action Condition	With-Action Increment
Residential	--	1,263 DUs	+1,263 DUs
Local Retail	35,548 gsf	46,183 gsf	+10,635 gsf
Office	293,370 gsf	84,500 gsf	-208,870 gsf
Destination Retail	--	82,817 gsf	+82,817 gsf
Medical Office	--	4,000 gsf	+4,000 gsf
Plaza	--	0.11 acres	+0.11 acres
Parking	140 spaces	0 spaces	-140 spaces

Principal Conclusions

Traffic

Traffic analyses were performed for 19 intersections. The Proposed Actions would result in significant adverse traffic impacts to seven, six, six, and ten intersections during the weekday AM, midday, PM, and Saturday peak hours, respectively. Mitigation measures that could be implemented to mitigate these significant adverse traffic impacts are discussed in **Chapter 18, Mitigation**.

Also, as described in further detail below, New York City Department of Transportation (NYC DOT) is currently in the process of developing the Flatbush Avenue Bus Priority plan and the DeKalb-Lafayette Avenues Bus and Safety Improvements project. If implemented, these preliminary plans have the potential to change future conditions, including travel patterns such as vehicle routing and mode choice, and may result in additional significant adverse impacts at traffic analysis locations due to the reduction in roadway capacity for general vehicle traffic.

At the time of the publication of the Draft Environmental Impact Statement (DEIS), these two plans remain in development. As such, for the purposes of the traffic analysis, the DEIS uses the existing roadway configuration (e.g., number of travel lanes, parking lanes, etc.) and signal timing plans on the Flatbush Avenue and DeKalb Avenue corridors to model the future conditions by the Proposed Project's analysis year.

The proposed Flatbush Avenue Bus Priority project and DeKalb-Lafayette Avenues Bus and Safety Improvements project would be implemented at NYC DOT's discretion. Once the design of the aforementioned projects is complete, NYC DOT would conduct post-implementation monitoring studies to assess traffic conditions, which would include, but is not limited to monitoring vehicle speeds and traffic volumes for a defined period of time. Based on the findings of these studies, NYC DOT may refine components of the project to optimize roadway conditions.

Parking

Under With-Action conditions, no on-site parking would be provided at the Development Site. Therefore, project-generated auto trips would need to park at off-site, off-street parking facilities within the study area. The peak off-site parking demand of 382 parking spaces during the Saturday afternoon period could be accommodated by the 1,968 off-site parking spaces available in the study area. The study area's parking utilization of 74 percent would be expected during the weekday midday period.

Subways

Fare control areas and stairways were analyzed at the DeKalb Avenue subway station located under the Development Site during the commuter peak hours. The analysis determined that the fare control areas and stairs analyzed would operate at acceptable levels of service (LOS) during both peak hours. Therefore, the Proposed Actions would not result in significant adverse subway impacts.

Pedestrians

Pedestrian analyses were performed for four sidewalk elements, four crosswalk elements, and five corner elements at key intersections for the weekday AM, midday, PM, and Saturday peak hours. Of the 13 pedestrian elements analyzed, the Proposed Actions would result in significant adverse impacts at one crosswalk element during the weekday AM and PM peak hours and two crosswalk elements during the Saturday peak hour. Significant pedestrian impacts are not expected during the weekday midday peak hour. Mitigation measures that could be implemented to mitigate these significant adverse pedestrian impacts are discussed in **Chapter 18, Mitigation**.

Vehicular and Pedestrian Safety

Ten of the 19 traffic and pedestrian analysis locations have been identified as high-crash locations according to the *2021 CEQR Technical Manual* criteria. Eight analysis intersections are located along the Vision Zero Priority Corridors and experienced at least three pedestrian/bicyclist crashes within a consecutive 12-month period. One of these intersections is also a Vision Zero Priority Intersection. Two other Vision Zero Priority Intersections were identified in the study area.

Methodology

According to the *CEQR Technical Manual* procedures for transportation analysis, a two-tiered screening process is undertaken to determine whether a quantified analysis is necessary. The first step, the Level 1 (Trip Generation) screening, determines whether the volume of peak hour person and vehicle trips generated by the Proposed Actions would remain below the minimum thresholds for further study. These thresholds are:

- 50 peak hour vehicle trip ends;
- 200 peak hour subway/rail or bus transit riders;
- 200 peak hour pedestrian trips; and
- 50 City Wide Ferry Service (CWFS) ferry riders

If the Proposed Actions result in increments that would exceed any of these thresholds, a Level 2 (Trip Assignment) screening assessment is usually performed. Under this assessment, project-generated trips that exceed Level 1 thresholds are assigned to and from the Development Site through their respective networks (streets, bus and subway lines, sidewalks, etc.) based on expected origin-destination patterns and travel routes.

Level 1 Screening Assessment

The travel demand factors used to calculate the projected number of project-generated trips were obtained primarily from the *CEQR Technical Manual*, 2015-2019 U.S. Census American Community Survey (ACS) journey-to-work (JTW) data, 2012-2016 American Association of State Highway and Transportation Officials (AASHTO) Census Transportation Planning Program (CTPP) reverse-journey-to-work (RJTW) data, data provided by the NYC DOT, and environmental assessments prepared for projects with similar uses such as the 2018 *ECF 80 Flatbush FEIS,* 2021 *Gowanus Neighborhood Rezoning FEIS* and the 2015 *Vanderbilt Corridor and One Vanderbilt FEIS*. **Table 10-3** presents the travel demand assumptions used to estimate the project-generated trips for the weekday AM, weekday midday, weekday PM, and Saturday peak hours.

Table 10-3 Travel Demand Characteristics

Rates	Residential	Local Retail	Office	Medical Office	Destination Retail	Open Space (Passive)
Person Trip Generation Rate (Weekday/Saturday)	8.18/9.08[1] per DU	329.0/358.0[1] per 1,000 sf	18.0/3.9[1] per 1,000 sf	74.6/37.0[1] per 1,000 sf	78.2/92.5[1] per 1,000 sf	44.0/62.0[1] per acre
Temporal Distribution						
Weekday AM Peak	9.3%[1]	4.8%[1]	12.4%[1]	11.0%[1]	3.0%[1]	3.0%[1]
Weekday Midday Peak	5.6%[1]	8.0%[1]	11.0%[1]	12.6%[1]	9.0%[1]	14.0%[1]
Weekday PM Peak	8.5%[1]	10.9%[1]	10.5%[1]	8.5%[1]	9.0%[1]	14.0%[1]
Saturday Peak	8.4%[1]	11.7%[1]	14.1%[1]	16.6%[1]	11.0%[1]	16.0%[1]
Modal Split	**All Periods**	**All Periods**	**All Periods**	**All Periods**	**AM & PM/ MD & SAT**	**All Periods**
Auto	7.5%[3]	11.0%[2]	12.0%[5]	22.0%[2]	17.0%/15.0%[6]	5.0%[9]
Taxi	1.0%[3]	--	1.0%[5]	4.0%[2]	4.0%/4.0%[6]	1.0%[9]
Bus	1.4%[3]	2.0%[2]	6.0%[5]	13.0%[2]	8.0%/8.0%[6]	4.0%[9]
Subway	73.9%[3]	3.0%[2]	65.0%[5]	13.0%[2]	26.5%/20.0%[6]	3.0%[9]
Rail	0.7%[3]	--	12.0%[5]	--	0.0%/0.0%[6]	--
Ferry	--	--	--	--	--	--
Bicycle	3.1%[3]	--	1.0%[5]	--	--	--
Walk/Other	12.4%[3]	84.0%[2]	3.0%[5]	48.0%[2]	44.5%/53.0%[6]	87.0%[9]
Vehicle Occupancy	**AM & PM/ MD & SAT**	**All Periods**	**All Periods**	**All Periods**	**AM, MD & PM / SAT**	**All Periods**
Auto	1.04/1.46[3, 7]	2.00[4]	1.42[5]	1.50[8]	1.40/1.72[6]	2.90[9]
Taxi	1.40/1.40[4]	2.00[4]	1.42[4]	1.50[8]	1.65/1.75[6]	3.00[9]
Directional Distribution						
Weekday AM Peak	22%/78%[2]	52%/48%[2]	86%/14%[2]	62%/38%[2]	63%/37%[6]	59%/41%[2]
Weekday Midday Peak	50%/50%[2]	50%/50%[2]	52%/48%[2]	53%/47%[2]	53%/47%[6]	55%/45%[2]
Weekday PM Peak	62%/38%[2]	50%/50%[2]	16%/84%[2]	39%/61%[2]	49%/51%[6]	55%/45%[2]
Saturday Peak	55%/45%[2]	50%/50%[2]	48%/52%[2]	54%/46%[2]	52%/48%[6]	55%/45%[2]
Delivery Trip Generation Rate (Weekday/Saturday)	0.06/0.02[1] per DU	0.35/0.04[1] per 1,000 sf	0.32/0.01[1] per 1,000 sf	0.29/0.29[8] per 1,000 sf	0.35/0.02[6] per 1,000 sf	0.01/0.01[9] per acre
Delivery Temporal Distribution						
Weekday AM Peak	12.0%[1]	8.0%[1]	10.0%[1]	3.0%[8]	8.0%[6]	6.0%[9]
Weekday Midday Peak	9.0%[1]	11.0%[1]	11.0%[1]	11.0%[8]	11.0%[6]	6.0%[9]
Weekday PM Peak	2.0%[1]	2.0%[1]	2.0%[1]	1.0%[8]	2.0%[6]	1.0%[9]
Saturday Peak	9.0%[1]	11.0%[1]	0.0%[1]	0.0%[8]	11.0%[6]	6.0%[9]
Delivery Trip Directional Split (In/out) - 50%/ 50%						

[1] *2021 CEQR Technical Manual,* 50 percent linked trip credit assumed for local retail use
[2] NYC DOT survey data
[3] 2015-2019 Five-year ACS JTW Census data for Brooklyn Census Tracts 15, 31, 33, 35, 37, 39, and 181
[4] 2018 *ECF 80 Flatbush Avenue FEIS*
[5] 2006 *Atlantic Yards Arena and Redevelopment FEIS*
[6] 2015 *Vanderbilt Corridor and One Vanderbilt FEIS*, destination retail modal split was adjusted to reflect local travel characteristics
[7] Due to the different travel characteristics during the off-peak hours, a multiplier of 1.4 was applied to the auto occupancy rates for the weekday midday and Saturday peak hours consistent with the 2016 *East New York Rezoning Proposal FEIS*
[8] 2021 *Gowanus Neighborhood Rezoning FEIS*
[9] 2021 *175 Park Avenue FEIS*, Saturday peak hour factors were assumed to be similar to weekday midday peak hour

Residential

For the residential use, trip generation rates of 8.18 person trips per dwelling unit for the weekday and 9.08 person trips per dwelling unit for Saturday, and temporal distributions of 9.3 percent for the weekday AM peak hour, 5.6 percent for the weekday midday peak hour, 8.5 percent for the weekday PM peak hour, and 8.4 percent for the Saturday peak hour were obtained from the *CEQR Technical Manual*. Modal splits and auto vehicle occupancy rates were based on 2015-2019 ACS journey to work data and taxi vehicle occupancy rates were obtained from the *2018 ECF 80 Flatbush Avenue FEIS*. The modal splits used were 7.5 percent by auto, one percent by taxi, 1.4 percent by bus, 73.9 percent by subway, 0.7 by rail, 3.1 percent by bike, and 12.4 percent by walking. The vehicle occupancies of 1.04 persons per auto and 1.4 persons per taxi were used, however for the weekday midday and Saturday peak hours, a multiplier of 1.4 persons per auto was applied, consistent with the *2016 East New York Rezoning Proposal FEIS*, to reflect the different travel characteristics during the off-peak hours. The directional distributions used were 22 percent "in" for the weekday AM peak hour, 50 percent "in" for the weekday midday peak hour, 62 percent "in" for the weekday PM peak hour, and 55 percent "in" for the Saturday peak hour, and were obtained from data provided by NYC DOT.

For residential delivery trips, daily trip generation rates of 0.06 trips per dwelling unit for the weekday and 0.02 trips per dwelling unit for the Saturday and a temporal distribution of 12 percent, 9 percent, 2 percent and 9 percent for the weekday AM, midday, and PM peak hours, and Saturday peak hour, respectively, were obtained from the *CEQR Technical Manual*.

Local Retail

For the local retail use, trip generation rates of 329 person trips per 1,000 sf for the weekday and 358 person trips per 1,000 sf for Saturday, and temporal distributions of 4.8 percent for the weekday AM peak hour, 8.0 percent for the weekday midday peak hour, 10.9 percent for the weekday PM peak hour, and 11.7 percent for the Saturday peak hour were obtained from the *CEQR Technical Manual*. A linked trip credit of 50 percent was assumed to account for pass-by trips from background traffic, as well as internal trips from the project's other land uses. Modal splits were based on NYC DOT's surveys of local retail use and vehicle occupancies were obtained from the *2018 ECF 80 Flatbush Avenue FEIS*. The modal splits used were 11 percent by auto, 2 percent by bus, 3 percent by subway, and 84 percent by walking. The vehicle occupancies of two persons per auto or taxi were used for all peak hours analyzed. The directional distributions used were 52 percent "in" for the weekday AM peak hour and 50 percent "in" for the weekday midday and PM, and Saturday peak hours, and were obtained from data provided by NYC DOT.

For local retail delivery trips, daily trip generation rates of 0.35 trips per 1,000 sf for the weekday and 0.04 trips per 1,000 sf for the Saturday and a temporal distribution of 8 percent, 11 percent, 2 percent and 11 percent for the weekday AM, midday, and PM peak hours, and Saturday peak hour, respectively, were obtained from the *CEQR Technical Manual*.

Office

For the office use, trip generation rates of 18 person trips per 1,000 sf for the weekday and 3.9 person trips per 1,000 sf for Saturday, and temporal distributions of 12.4 percent for the weekday AM peak hour, 11 percent for the weekday midday peak hour, 10.5 percent for the weekday PM peak hour, and 14.1 percent for the Saturday peak hour were obtained from the *CEQR Technical Manual*.

Modal splits and automobile vehicle occupancy rates were based on 2012-2016 CTPP reverse-journey-to-work data, while taxi vehicle occupancy rates were obtained from the 2018 *ECF 80 Flatbush Avenue FEIS*. The modal splits used were 28.6 percent by auto, 0.3 percent by taxi, 11.4 percent by bus, 45.9 percent by subway, 6.4 by rail, 0.2 percent by ferry, 1.6 percent by bike, and 5.6 percent by walking. The vehicle occupancies of 1.09 persons per auto and 1.42 persons per taxi were used. The directional distributions used were 86 percent "in" for the weekday AM peak hour, 52 percent "in" for the weekday midday peak hour, 16 percent "in" for the weekday PM peak hour, and 48 percent "in" for the Saturday peak hour, were obtained from data provided by NYC DOT.

For office delivery trips, daily trip generation rates of 0.32 trips per 1,000 sf for the weekday and 0.01 trips per 1,000 sf for the Saturday and a temporal distribution of 10 percent, 11 percent, 2 percent and 0 percent for the weekday AM, midday, and PM peak hours, and Saturday peak hour, respectively, were obtained from the *CEQR Technical Manual*.

Medical Office

For the medical office use, trip generation rates of 74.6 person trips per 1,000 sf for the weekday and 37.0 person trips per 1,000 sf for Saturday, and temporal distributions of 11.0 percent for the weekday AM peak hour, 12.6 percent for the weekday midday peak hour, 8.5 percent for the weekday PM peak hour, and 16.6 percent for the Saturday peak hour were obtained from the *CEQR Technical Manual*.

Modal splits were based on NYC DOT's surveys of medical office use and vehicle occupancies were obtained from the 2021 *Gowanus Neighborhood Rezoning FEIS*. The modal splits used were 22 percent by auto, 4 percent by taxi, 13 percent by bus, 13 percent by subway, and 48 percent by walking. The vehicle occupancies of 1.5 persons per auto or taxi were used for all peak hours analyzed. The directional distributions used were 62 percent "in" for the weekday AM peak hour, 53 percent "in" for the weekday midday peak hour, 39 percent "in" for the weekday PM peak hour, and 54 percent "in" for the Saturday peak hour were obtained from data provided by NYC DOT.

For medical office delivery trips, daily trip generation rates of 0.29 trips per 1,000 sf for the weekday and the Saturday and a temporal distribution of 3 percent, 11 percent, 1 percent and 0 percent for the weekday AM, midday, and PM peak hours, and Saturday peak hour, respectively, were obtained from the 2021 *Gowanus Neighborhood Rezoning FEIS*.

Destination Retail

For the destination retail use, trip generation rates of 78.2 person trips per 1,000 sf for the weekday and 92.5 person trips per 1,000 sf for Saturday, and temporal distributions of 3 percent for the weekday AM peak hour, 9 percent for the weekday midday and PM peak hours, and 11 percent for the Saturday peak hour were obtained from the *CEQR Technical Manual*. Modal splits and vehicle occupancies were obtained from the 2015 *Vanderbilt Corridor and One Vanderbilt FEIS*; mode split assumptions adjusted for local travel characteristics in coordination with NYC DOT.

For weekday AM and PM peak hours, the modal splits used were 17 percent by auto, 4 percent by taxi, 8 percent by bus, 26.5 percent by subway, and 45.5 percent by walking. For weekday midday and Saturday peak hours, the modal splits used were 15 percent by auto, 4 percent by taxi, 8 percent by bus, 20 percent by subway, and 53 percent by walking. The vehicle occupancies of 1.40 persons per auto and 1.65 persons per taxi were used for the weekday AM, midday, and PM peak hours, while 1.72 persons per auto and 1.75 person per taxi were used for the Saturday peak hour. Directional

distributions were also obtained from the 2015 *Vanderbilt Corridor and One Vanderbilt FEIS*. The directional distributions used were 63 percent "in" for the weekday AM peak hour, 53 percent "in" for the weekday midday peak hour, 49 percent "in" for the weekday PM peak hour, and 52 percent "in" for the Saturday peak hour.

For destination retail delivery trips, daily trip generation rates of 0.35 trips per 1,000 sf for the weekday and 0.02 trips per 1,000 sf for the Saturday and a temporal distribution of 8 percent, 11 percent, 2 percent and 11 percent for the weekday AM, midday, and PM peak hours, and Saturday peak hour, respectively, and were also obtained from the 2015 *Vanderbilt Corridor and One Vanderbilt FEIS*.

Publicly Accessible Open Space Area (Passive Open Space)

For the publicly accessible open space area, trip generation rates of 44 person trips per acre for the weekday and 62 person trips per acre for Saturday, and temporal distributions of 3 percent for the weekday AM peak hour, 14 percent for the weekday midday peak hour, 14 percent for the weekday PM peak hour, and 16 percent for the Saturday peak hour were assumed and were obtained from the *CEQR Technical Manual*. Modal splits and vehicle occupancies were obtained from the 2021 *175 Park Avenue FEIS*. The modal splits used were 5 percent by auto, 1 percent by taxi, 3 percent by bus, 4 percent by subway, and 87 percent by walking. The vehicle occupancies of 2.90 persons per auto and 3.00 persons per taxi were used. The directional distributions used were 59 percent "in" for weekday AM, and 55 percent "in" for the weekday midday, weekday PM and Saturday peak hours and were based on data provided by NYC DOT. It is assumed that the Saturday peak hour modal splits, vehicle occupancy rates, and directional distributions are similar to the weekday midday peak hour.

For open space delivery trips, daily trip generation rates of 0.01 trips per acre and a temporal distribution of six percent, six percent, and one percent for the weekday AM, midday, and PM peak hours, respectively, were obtained from the *175 Park Avenue FEIS*. For Saturday, it was assumed the trip generation rate and temporal distribution would be similar as those used for the weekday midday peak hour.

Parking Garage

As a result of the Proposed Actions the existing 140-space on-site parking garage would be closed and the auto trips that previously parked at this garage would be redistributed to the nearest parking garages in the immediate vicinity. As the routes of the displaced on-site parking demand would utilize nearby parking facilities, there would be minimal changes in traffic volumes. During the weekday AM, PM and Saturday peak hours, it is assumed that trips associated with the displaced parking garage would instead park at the 80 DeKalb Avenue garage across the street. Therefore, there would be no changes to routes during these peak hours. However, during the weekday midday peak hour, there would not be enough parking available at the 80 DeKalb Avenue garage and other nearby parking facilities would be used by displaced parkers. Approximately 48 percent of the displaced parking trips were assigned to the 80 DeKalb Avenue garage, 46 percent to the 66 Rockwell Place garage and 6 percent to the 97-103 DeKalb Avenue garage.

Level 1 Screening Results

Transit and Pedestrians

The number of person trips generated by the Proposed Actions under Scenario 1 is provided in **Table 10-4** and in **Table 10-5** for Scenario 2. Under both scenarios, the project-generated subway

and pedestrian trips-would be expected to exceed the *CEQR Technical Manual* Level 1 screening thresholds during the analysis peak hours. Bus, rail, and ferry trips would not exceed the Level 1 screening thresholds and further analyses are not needed for those modes.

As project-generated subway and pedestrian trips would exceed the Level 1 screening thresholds, trip assignments were conducted for these travel modes to determine whether further analysis is warranted. Project-generated subway trips would be highest under Scenario 1; therefore, subway trip assignments were conducted for this scenario. Pedestrian trip assignments were conducted under Scenario 2 when the overall project-generated pedestrian trips would be highest.

Under Scenario 1:

- During the weekday AM peak hour, the Proposed Actions would result in a decrease of 51 rail trips and an increase of seven bus trips, 471 subway trips, and 661 pedestrian trips (walk plus bus, subway, ferry, rail, and auto walk trips); the number of ferry trips would not change.
- During the weekday midday peak hour, the Proposed Actions would result in a decrease of 45 rail trips and an increase of 43 bus trips, 305 subway trips, and 778 pedestrian trips; the number of ferry trips would not change.
- During the weekday PM peak hour, the Proposed Actions would result in a decrease of 42 rail and an increase of 48 bus trips, 579 subway trips, and 1,029 pedestrian trips; the number of ferry trips would not change.
- During the Saturday peak hour, the Proposed Actions would result in a decrease of six rail trips, and an increase of 88 bus trips, 841 subway trips, and 1,669 pedestrian trips; the number of ferry trips would not change.

Table 10-4 Trip Generation Summary – Person Trips for Scenario 1

	Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
	In	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto	-7	63	56	51	48	99	87	42	129	109	94	203
Taxi	5	9	14	17	15	32	18	14	32	26	23	49
Bus	-7	14	7	23	20	43	33	15	48	47	41	88
Subway	-64	535	471	152	153	305	452	127	579	463	378	841
Rail	-48	-3	-51	-24	-21	-45	-4	-38	-42	-2	-4	-6
Ferry	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	3	22	25	7	7	14	16	6	22	15	12	27
Walk-only	65	113	178	200	176	376	171	144	315	289	254	543
Total	**-53**	**753**	**700**	**426**	**398**	**824**	**773**	**310**	**1,083**	**947**	**798**	**1,745**

Under Scenario 2:

- During the weekday AM peak hour, the Proposed Actions would result in a decrease of 51 rail trips and an increase of eight bus trips, 465 subway trips and 763 pedestrian trips; the number of ferry trips would not change.
- During the weekday midday peak hour, the Proposed Actions would result in a decrease of 45 rail trips and an increase of 37 bus trips, 286 subway trips, and 887 pedestrian trips; the number of ferry trips would not change.

- During the weekday PM peak hour, the Proposed Actions would result in a decrease of 42 rail trips and an increase of 44 bus trips, 554 subway trips, and 1,229 pedestrian trips; the number of ferry trips would not change.
- During the Saturday peak hour, the Proposed Actions would result in a decrease of six rail trips and an increase of 81 bus trips, 817 subway trips, and 1,868 pedestrian trips; the number of ferry trips would not change.

Table 10-5 Trip Generation Summary – Person Trips for Scenario 2

	Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	-3	67	64	53	51	104	95	50	145	115	101	216
Taxi	4	9	13	14	13	27	15	12	27	23	19	42
Bus	-7	15	8	20	17	37	31	13	44	43	38	81
Subway	-68	533	465	142	144	286	440	114	554	450	367	817
Rail	-48	-3	-51	-24	-21	-45	-4	-38	-42	-2	-4	-6
Ferry	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	3	22	25	7	7	14	16	6	22	15	12	27
Walk-only	114	163	277	263	242	505	278	250	528	396	364	760
Total	**-5**	**806**	**801**	**475**	**453**	**928**	**871**	**407**	**1,278**	**1,040**	**897**	**1,937**

Traffic and Parking

Table 10-6 summarizes the total peak hour vehicular volumes ("ins" plus "outs") under Scenario 1, and **Table 10-7** summarizes the total peak hour vehicular volumes for Scenario 2. The Proposed Actions would generate more vehicle trips during the weekday AM and PM peak hours under Scenario 2 and would generate more vehicle trips during the weekday midday and Saturday peak hours under Scenario 1, as described below, and therefore further assessment of project-generated vehicle trips were conducted for each scenario, respectively.

Under Scenario 1, the Proposed Actions would generate an increase of 82 vehicle trips during the weekday AM peak hour, an increase of 110 vehicle trips in the weekday midday peak hour, 142 vehicle trips in the weekday PM peak hour, and 178 vehicle trips in the Saturday peak hour. Under Scenario 2, the Proposed Actions would generate an increase of 84 vehicle trips during the weekday AM peak hour, an increase of 104 vehicle trips in the weekday midday peak hour, 143 vehicle trips in weekday PM peak hour, and 173 vehicle trips in the Saturday peak hour.

As the volume of vehicle trips generated by the Proposed Actions would exceed the 50-vehicle trip threshold during the weekday AM, midday, PM, and Saturday peak hours, a Level 2 screening assessment (trip assignments) is needed to determine the scope of the detailed traffic analysis during these peak hours.

Table 10-6 Trip Generation Summary – Vehicle Trips for Scenario 1

	Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
	In	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto (Self-park)	-1	59	58	37	35	72	72	38	110	68	58	126
Taxi	9	9	18	18	18	36	16	16	32	25	25	50
Delivery Vehicle	3	3	6	1	1	2	0	0	0	1	1	2
Total	**11**	**71**	**82**	**56**	**54**	**110**	**88**	**54**	**142**	**94**	**84**	**178**

Table 10-7 Trip Generation Summary – Vehicle Trips for Scenario 2

	Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
	In	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto (Self-park)	1	61	62	37	35	72	75	40	115	69	60	129
Taxi	8	8	16	15	15	30	14	14	28	21	21	42
Delivery Vehicle	3	3	6	1	1	2	0	0	0	1	1	2
Total	**12**	**72**	**84**	**53**	**51**	**104**	**89**	**54**	**143**	**91**	**82**	**173**

Level 2 Screening Assessment

As shown above, the number of trips generated by the Proposed Actions would exceed the *CEQR Technical Manual* Level 1 screening thresholds for vehicle, subway, and pedestrian trips during peak hours analyzed. Project-generated trips were assigned through the surrounding street network based on expected routes to and from the Development Site.

Transit and Pedestrians

The Proposed Actions would facilitate the redevelopment of the existing building on the Development Site, which currently consists of office and commercial retails uses, with a new mixed-use building consisting of residential uses, offices, medical office and commercial retail uses, as well as a publicly accessible open space area. Access to the proposed residential, office and medical office spaces would be provided on DeKalb Avenue. Commercial retail spaces, which would be located on the first and second floors, and on the cellar levels, would be accessed from several entrances along the Development Site's DeKalb Avenue, Flatbush Avenue Extension and Hudson Avenue frontages. The publicly accessible open space area would be provided along the southern portion of the Development Site, along Fulton Street. Additionally, the existing subway entrance to the B/Q/R lines would be maintained at the northwestern corner of the Development Site as under existing conditions.

Transit and pedestrian trips were assigned through the pedestrian network based on logical and direct travel routes to and from the Development Site from neighborhood attractions, commuter rail stations, CWFS landings, subway stations and/or bus stops, to determine if the number of additional pedestrian trips generated by the Proposed Actions would exceed 200 peak hour pedestrian trips at key pedestrian elements (e.g., crosswalks, sidewalks, corner reservoir areas) approaching the site – the threshold for detailed pedestrian analysis.

The Development Site is well served by bus transit; the most immediate bus routes are the B25, B26, B38, and B52, and would be the most likely options for project-generated bus trips. Access to the southern end of the DeKalb Avenue subway station (served by the B/Q/R subway lines) is provided on the northwest corner of the Development Site. Under With-Action conditions, the entrance/exit to the subway station would be maintained. Other nearby subway stations (within a one-quarter mile from the Development Site) include the Nevins Street subway station (served by the 2/3/4/5), the Hoyt–Schermerhorn Streets subway station (served by the A/C/G subway lines), and the Fulton Street subway station (served by the G subway line). The majority of project-generated subway trips were assigned to the DeKalb Avenue subway station (50 percent), 30 percent were assigned to the Nevins Street subway station, 15 percent were assigned to the Hoyt–Schermerhorn Streets subway station, and 5 percent were assigned to the Fulton Street subway station. Project-generated rail trips were assigned to Atlantic Terminal station, which is served by Long Island Rail Road. **Figure 10-2** shows the subway and **Figure 10-3** bus options within the vicinity of the Development Site.

Figure 10-2 Subway Service Near the Development Site

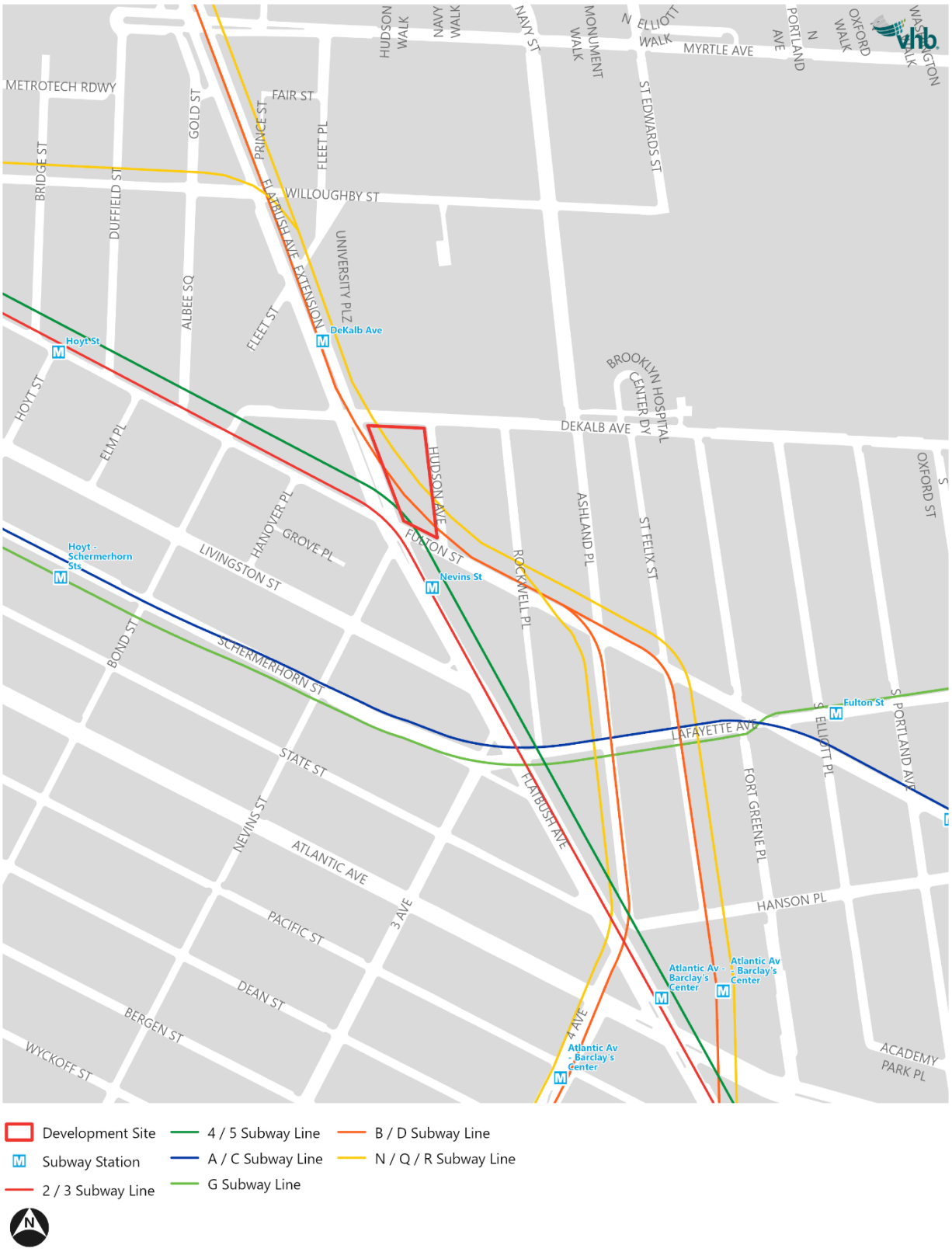


Figure 10-3 Bus Service Near the Development Site



As no on-site parking would be provided at the Development Site under future With-Action conditions, existing on-site parking demand would be expected to park in the closest parking garages, and all the project-generated auto trips would park off-site and walk to the Development Site. Project-generated auto trips were assigned to six parking garages based on surveyed parking availability and proximity of garages to the Development Site.

During the Saturday peak hour when the project-generated auto trips are highest, the majority of the parking trips (63 percent) were assigned based on availability and capacity to the three closest parking facilities, located at 80 and 97-103 DeKalb Avenue, and 66 Rockwell Place (these parking facilities are located within 400 feet from the Development Site). The remaining 37 percent were assigned to three other parking facilities located approximately 600 feet from the Development Site (300 and 333 Schermerhorn Street, and 152 Ashland Place). During the weekday AM peak hour, all project-generated auto trips were assigned to park at the three closest parking facilities.

During the weekday midday peak hour and weekday PM peak hour, the parking availability at the three closest parking facilities is lower, therefore a smaller percentage of project-generated auto trips (15 percent for the weekday midday peak hour and 23 percent for the weekday PM peak hour) were assigned to park at these parking facilities. The remaining 85 percent during the weekday midday peak hour and 77 percent during the weekday PM peak hour, would park at the three other parking facilities located further away.

The weekday and Saturday project parking demand assignments shown by parking facility are displayed in **Table 10-8** and **Table 10-9**, respectively.

Table 10-8 Weekday Parking Demand Distributions

	Project Parking Demand			Parking Demand Distribution		
Parking Garages	**AM Peak Hour**	**Midday Peak Hour**	**PM Peak Hour**	**AM Peak Hour**	**Midday Peak Hour**	**PM Peak Hour**
80 DeKalb Avenue	99	0	19	39.9%	0.0%	7.0%
66 Rockwell Place	89	0	17	36.0%	0.0%	6.0%
97-103 DeKalb Avenue	60	36	28	24.1%	15.3%	10.1%
300 Schermerhorn Street	0	14	20	0.0%	6.2%	7.4%
333 Schermerhorn Street	0	58	10	0.0%	24.6%	3.5%
152 Ashland Place	0	126	182	0.0%	53.9%	66.0%
Total Weekday Project Parking Demand	**248**	**234**	**276**	**100%**	**100%**	**100%**

Table 10-9 Saturday Parking Demand Distributions

Parking Garages	Saturday Peak Hour Project Parking Demand	Saturday Peak Hour Project Demand Distribution
80 DeKalb Avenue	43	11.5%
66 Rockwell Place	81	21.6%
97-103 DeKalb Avenue	111	29.7%
300 Schermerhorn Street	11	3.0%
333 Schermerhorn Street	46	12.2%
152 Ashland Place	82	22.0%
Total Saturday Project Parking Demand	**375**	**100%**

Walk-only pedestrian trips were distributed evenly to the north, west and south of the Development Site due to the number of attractions in the vicinity of the Development Site and then assigned throughout the network.

The results of the pedestrian trip assignments for the weekday AM, midday, PM, and Saturday peak hours are shown in **Figure 10-4** through **Figure 10-7**.

Figure 10-4 Project-Generated Pedestrian Trips – Weekday AM Peak Hour

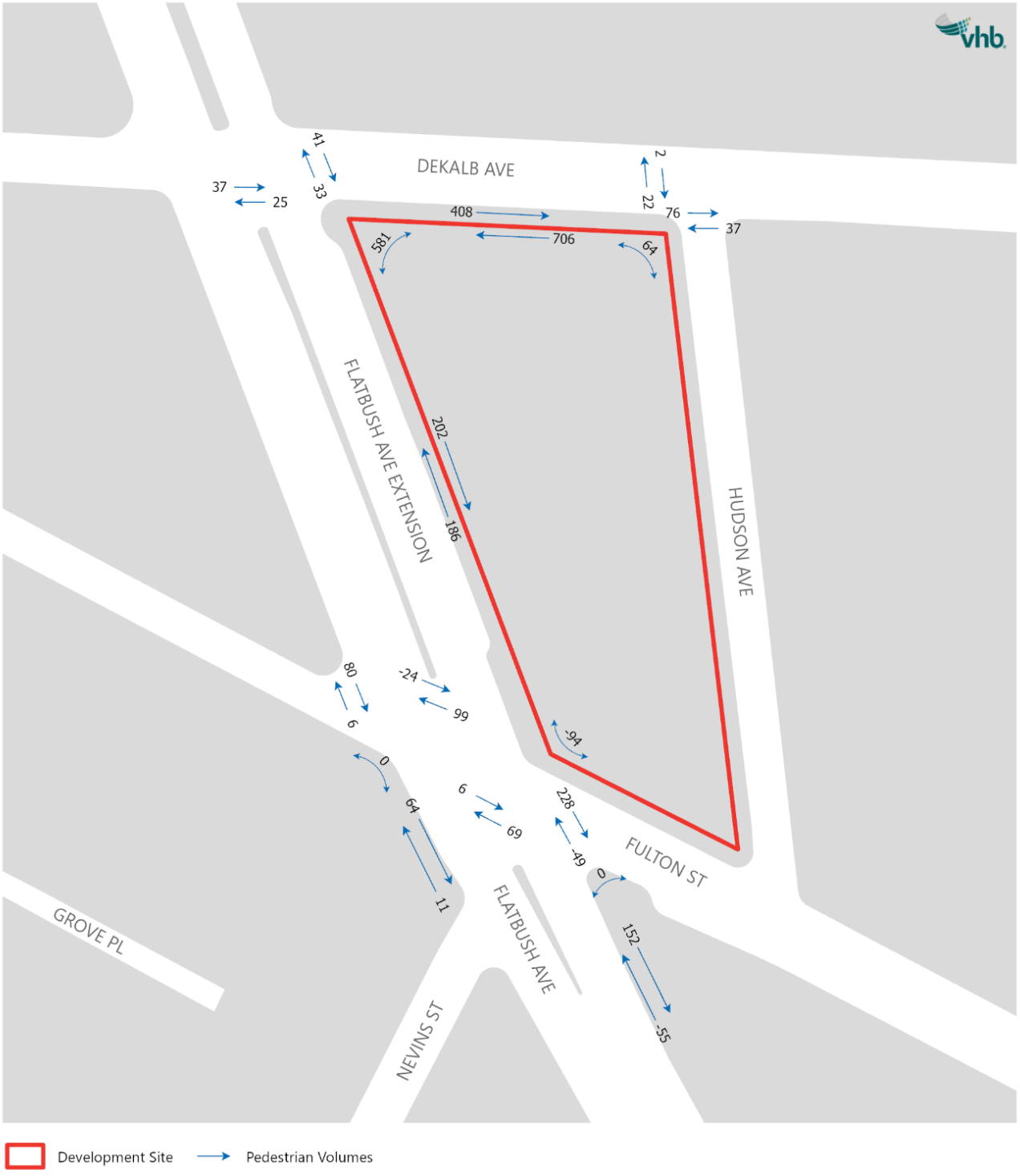


Figure 10-5 Project-Generated Pedestrian Trips – Weekday Midday Peak Hour

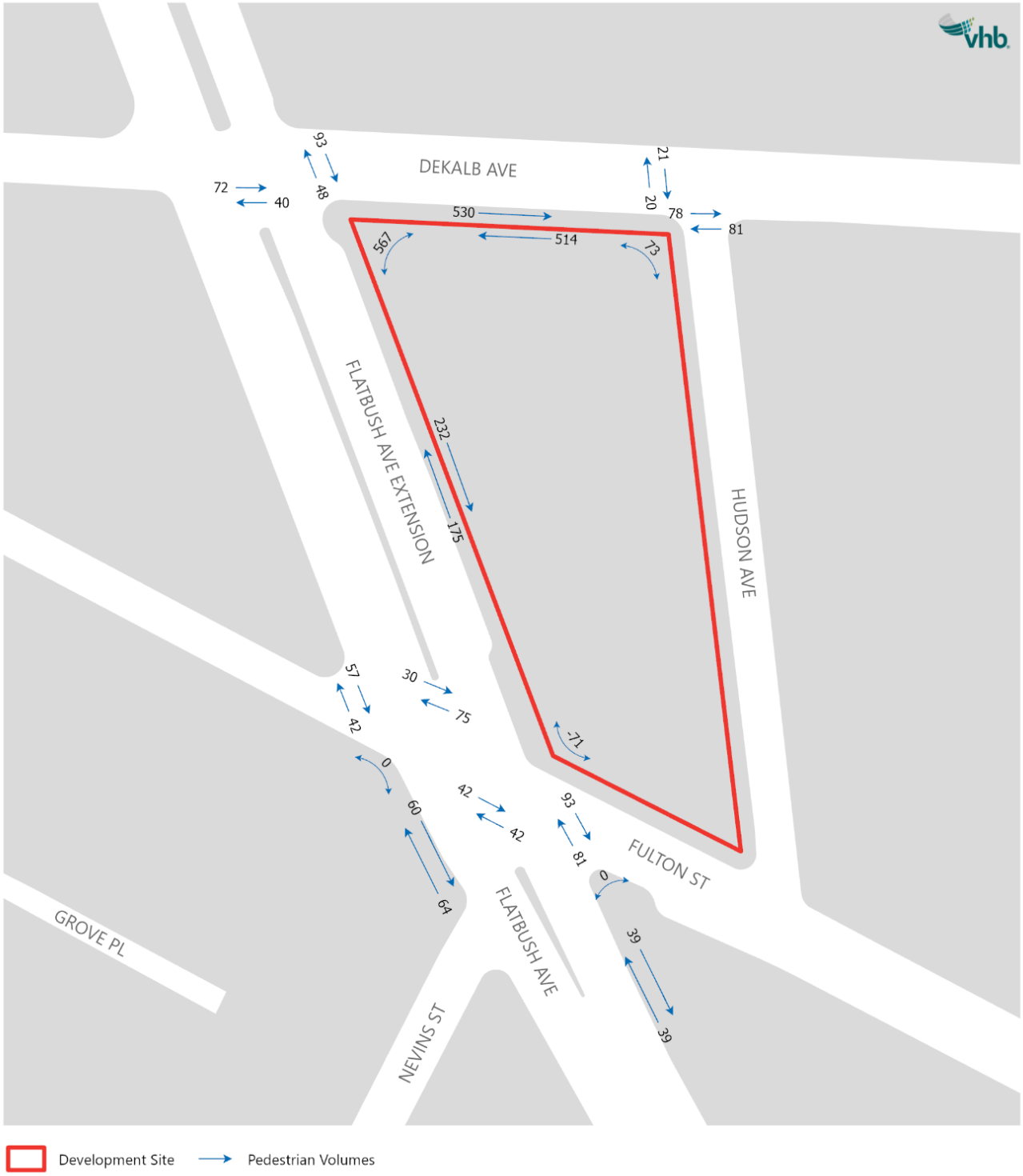


Figure 10-6 Project-Generated Pedestrian Trips – Weekday PM Peak Hour

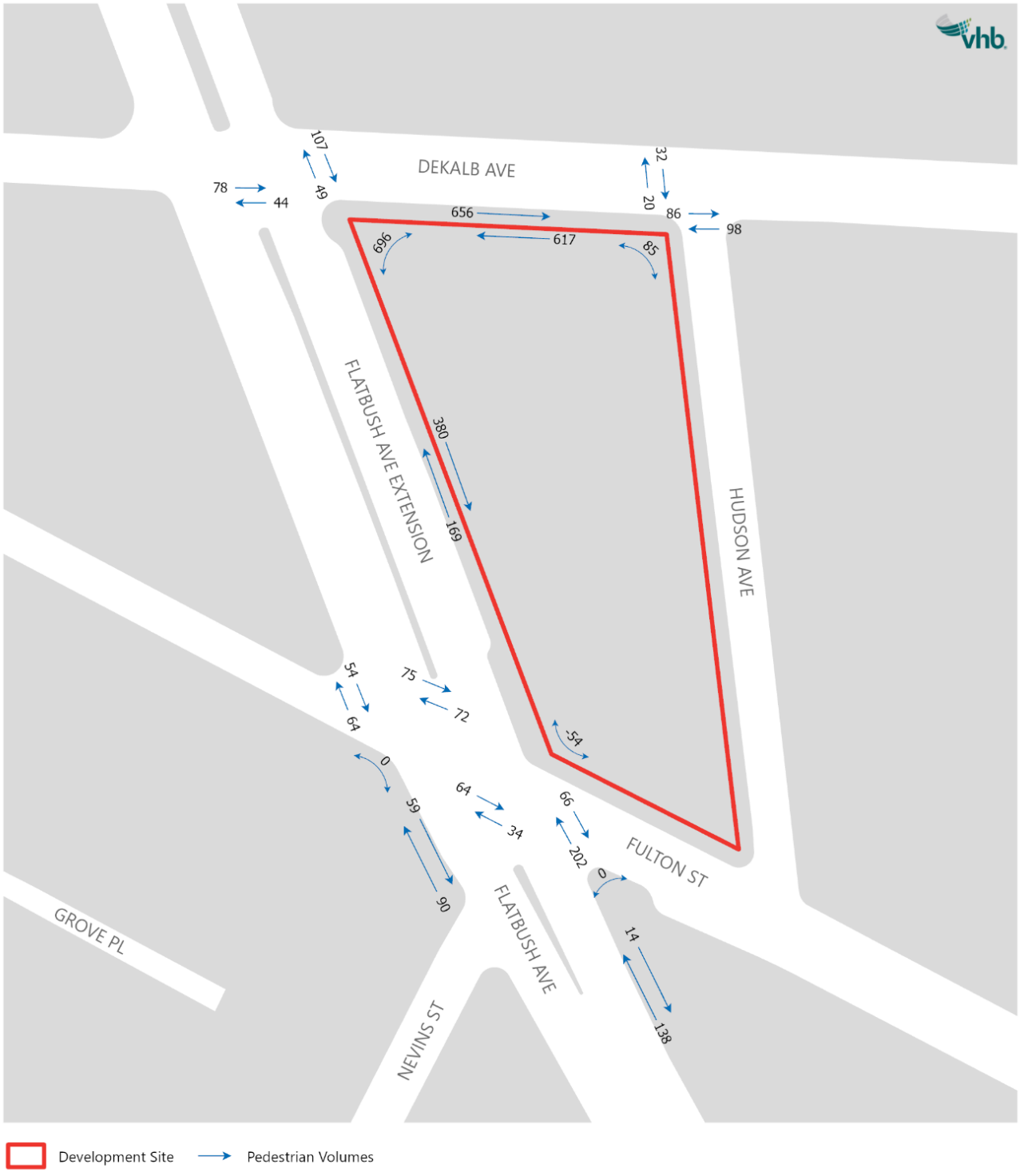
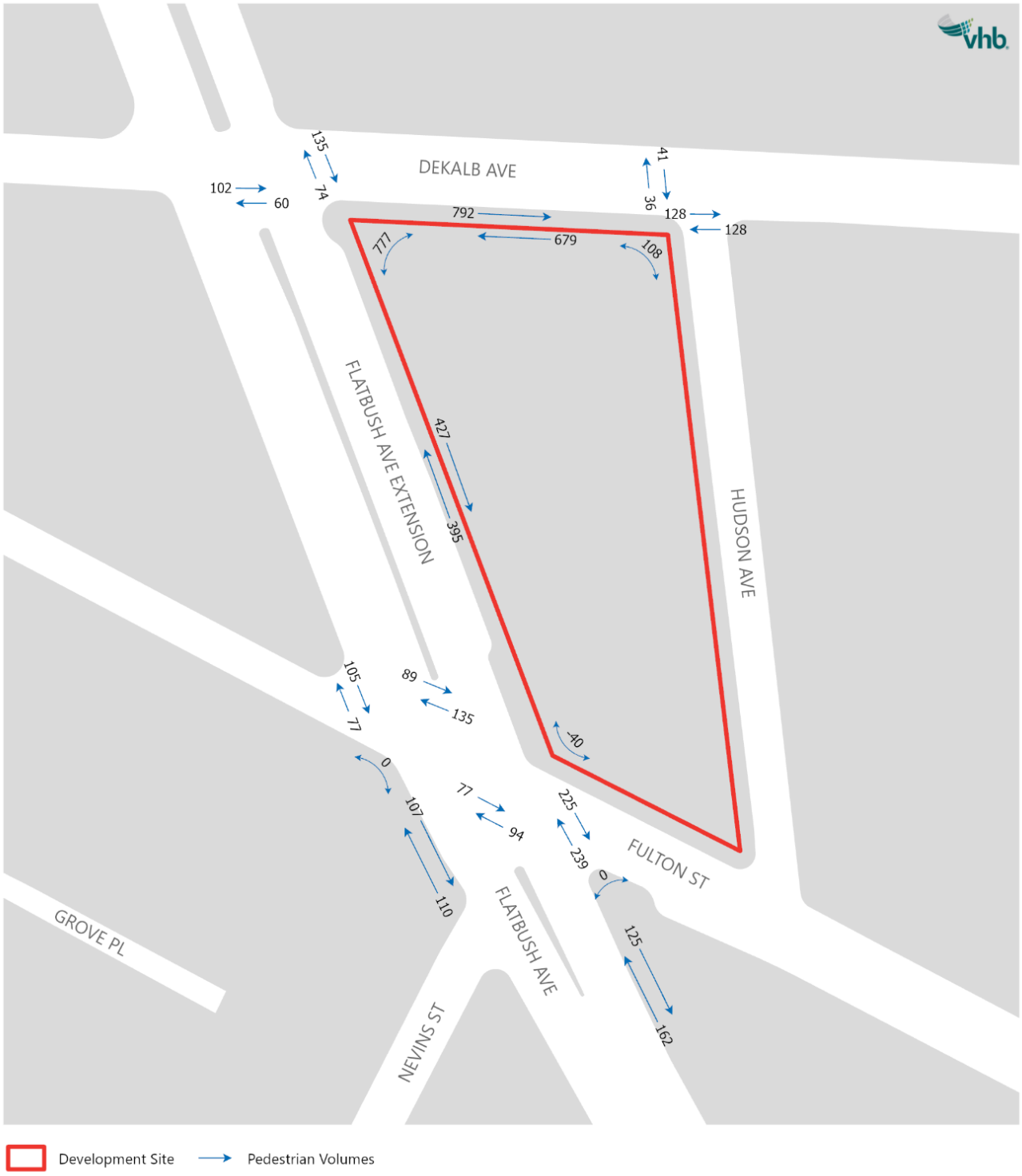


Figure 10-7 Project-Generated Pedestrian Trips – Saturday Peak Hour



Traffic

Project-generated vehicle trips were assigned through the surrounding street network based on expected routes to and from the Development Site, the configuration of the street network, and parking facilities within the vicinity of the Development Site. As described above, no parking would be provided on-site and project-generated auto trips would be assigned to nearby parking garages depending on their availabilities as described in the Transit and Pedestrians Level 2 Screening discussion above.

Residential Auto Trips

Residential auto trips were assigned based on 2012–2016 AASHTO CTPP JTW data for Brooklyn Census tracts 15, 31, 33, 35, 37, 39 and 181. Approximately 22 percent of these auto trips are expected to be destined to Manhattan, 31 percent to Brooklyn, 18 percent to Queens, 1 percent to Staten Island, and 8 percent to the Bronx and New York counties to the north of New York City (Westchester and Upstate New York). Approximately 10 percent of worker trips were assigned to Long Island, 9 percent to New Jersey, and 1 percent to Connecticut. Most residential-centric auto trips were assumed to use predominant commuter travel routes such as the Brooklyn-Queen Expressway (BQE), the Brooklyn and Manhattan Bridges, and Flatbush Avenue Extension.

Trips to the north en route to the Brooklyn and Manhattan Bridges (29 percent) and the BQE (41 percent) would account for the majority of residential auto trips. Approximately 4 percent of residential auto trips were assigned to use local roadways to reach the BQE, and 7 percent were assigned to the north to Tillary Street. Southbound trips were assigned to Flatbush Avenue (5 percent) or to other roadways such as Atlantic Avenue, Nevins Street, 4th Avenue, and Hoyt Street (8 percent in total). The remaining 6 percent of residential auto trips were assigned to east-west roadways such as Myrtle Avenue, Fulton Street and Lafayette Avenue. Inbound trips would use these same roadways to depart from the Development Site.

Local Retail and Open Space Auto Trips

Auto trips generated by local retail uses were assumed to be local in nature and were assigned to the immediately surrounding areas. These auto trips were generally assigned based on the population densities within a 1-mile radius of the Development Sites.

Office (Worker) Auto Trips

The distribution of worker-centric auto trips for the office uses was based upon the 2012–2016 AASHTO CTPP RJTW data for Brooklyn Census tracts 15, 31, 33, 35, 37, 39 and 181. The majority of worker auto trips are expected to originate from Brooklyn (45 percent). Approximately 2 percent of worker auto trips were assigned from Manhattan, 18 percent from Queens, 7 percent from Staten Island, 9 percent from the Bronx and New York counties to the north of New York City (Westchester and Upstate New York), and 11 percent from Long Island. A portion of worker auto trips (9 percent) would originate from outside of New York State, primarily from New Jersey and Pennsylvania. Most worker-centric auto trips were assumed to use predominant commuter travel routes such as the BQE, the Brooklyn and Manhattan Bridges, and Flatbush Avenue Extension.

Trips from the north arriving via Flatbush Avenue Extension and Ashland Place account for approximately 36 percent of worker trips, while trips from the south arriving via Flatbush Avenue, Atlantic Avenue, 3rd Avenue and 4th Avenue account for approximately 45 percent of worker trips.

The remaining 19 percent would utilize east-west local streets such as Fulton Street, DeKalb Avenue, and Schermerhorn Street. Outbound trips would use these same roadways to depart from the Development Site.

Destination Retail Auto Trips

Auto trips generated by destination retail and medical office uses were assumed to attract trips from a wider geographic area than local retail trips. These auto trips were assigned based on the population densities within a three-mile radius of the Development Sites.

Taxi Trips

Taxi auto pick-ups and drop-offs were primarily assigned to the Development Site's entrances located along Flatbush Avenue Extension, DeKalb Avenue and Hudson Avenue.

Delivery Trips

Delivery trips were assigned along the nearest NYC DOT-designated truck routes such as Flatbush Avenue Extension/Flatbush Avenue, Myrtle Avenue, 3rd Avenue, and Tillary Street. At the Development Site, all delivery trips were assigned to proposed loading dock located on Hudson Avenue.

The results of the vehicle trip assignments for the weekday AM, midday, PM, and Saturday peak hours are shown in **Figure 10-8** through **Figure 10-15**.

Figure 10-8 Project-Generated Vehicle Trips – Weekday AM Peak Hour (North Study Area)

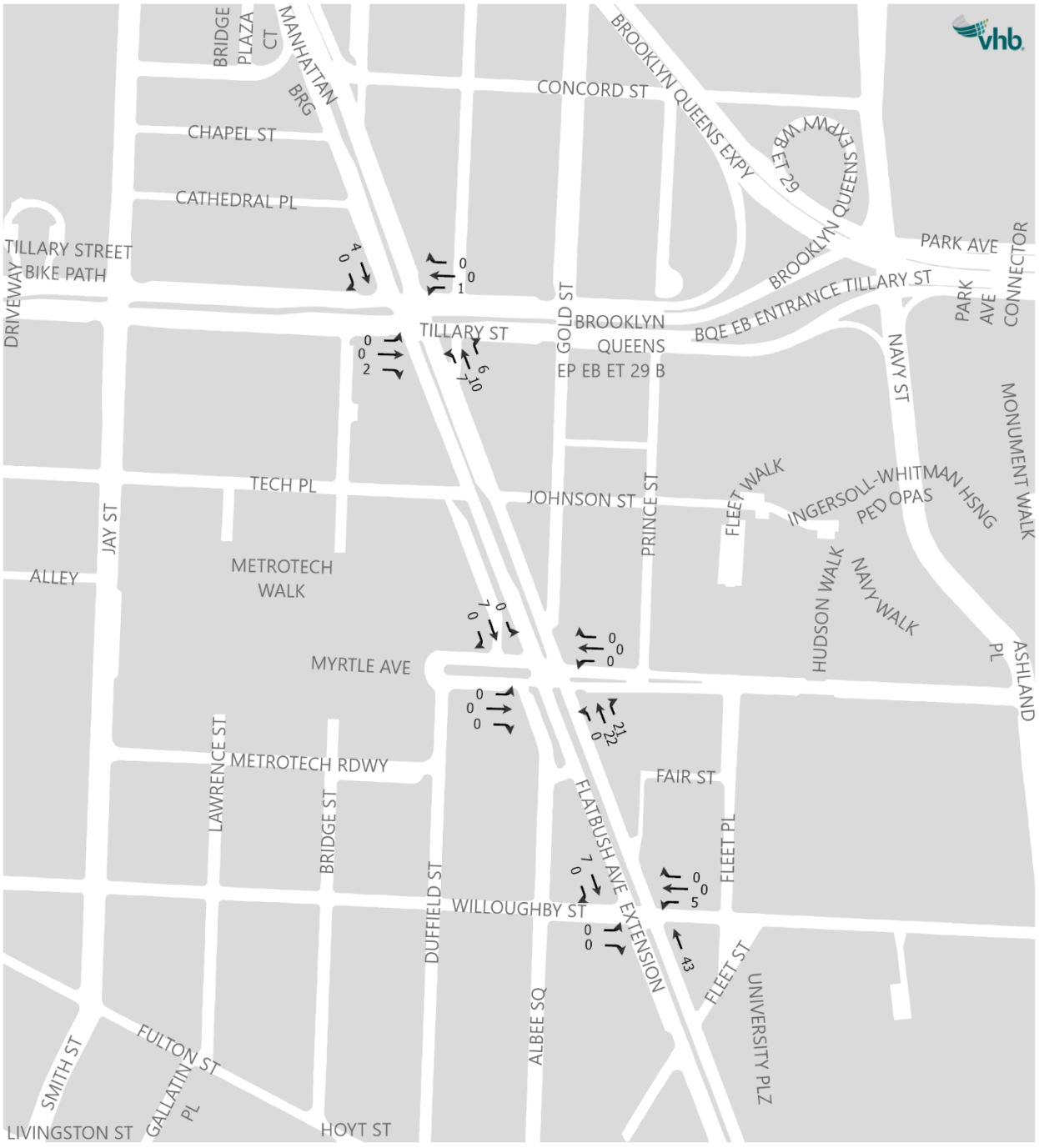


Figure 10-9 Project-Generated Vehicle Trips – Weekday AM Peak Hour (South Study Area)

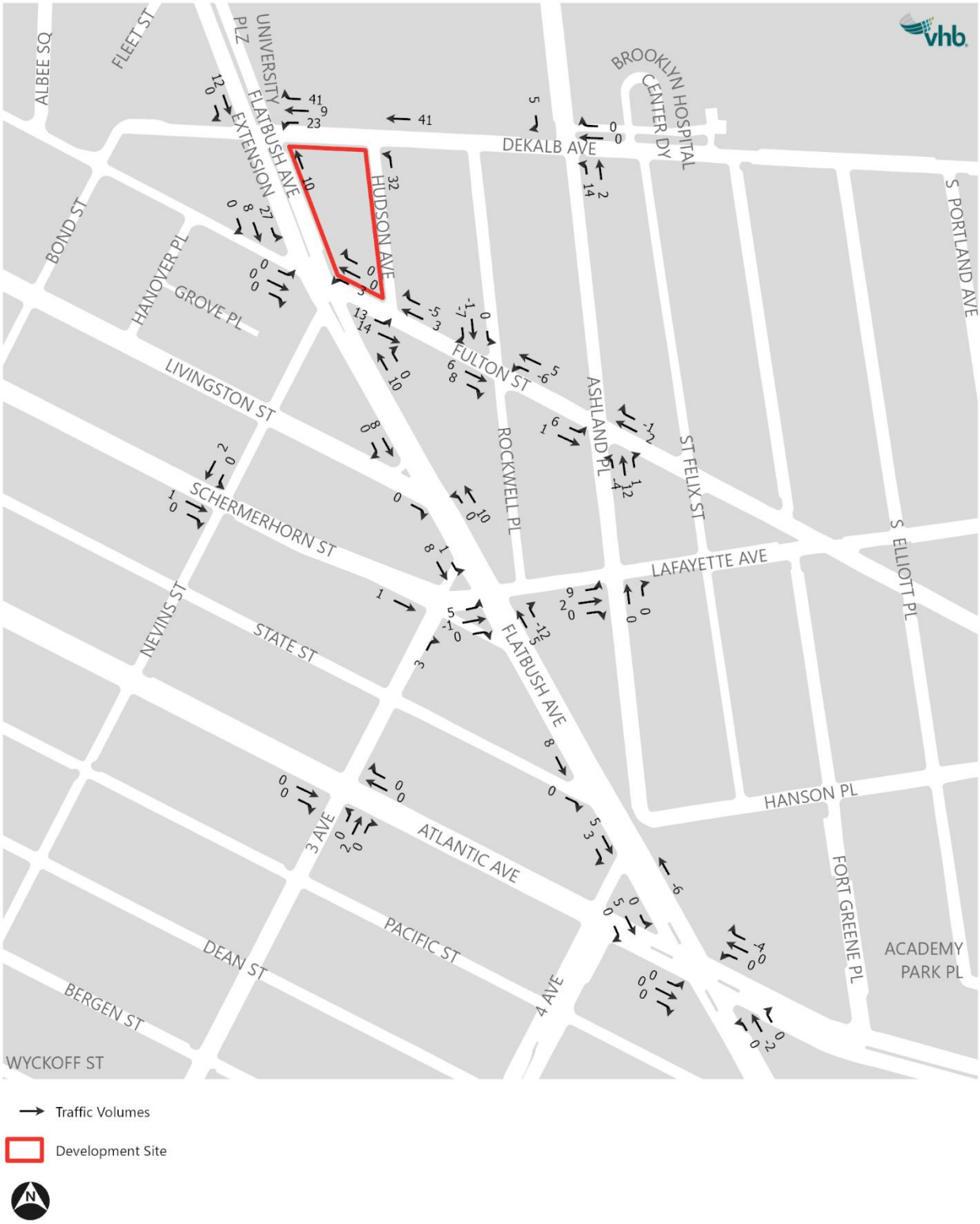


Figure 10-10 Project-Generated Vehicle Trips – Weekday Midday Peak Hour (North Study Area)



Figure 10-11 Project-Generated Vehicle Trips – Weekday Midday Peak Hour (South Study Area)

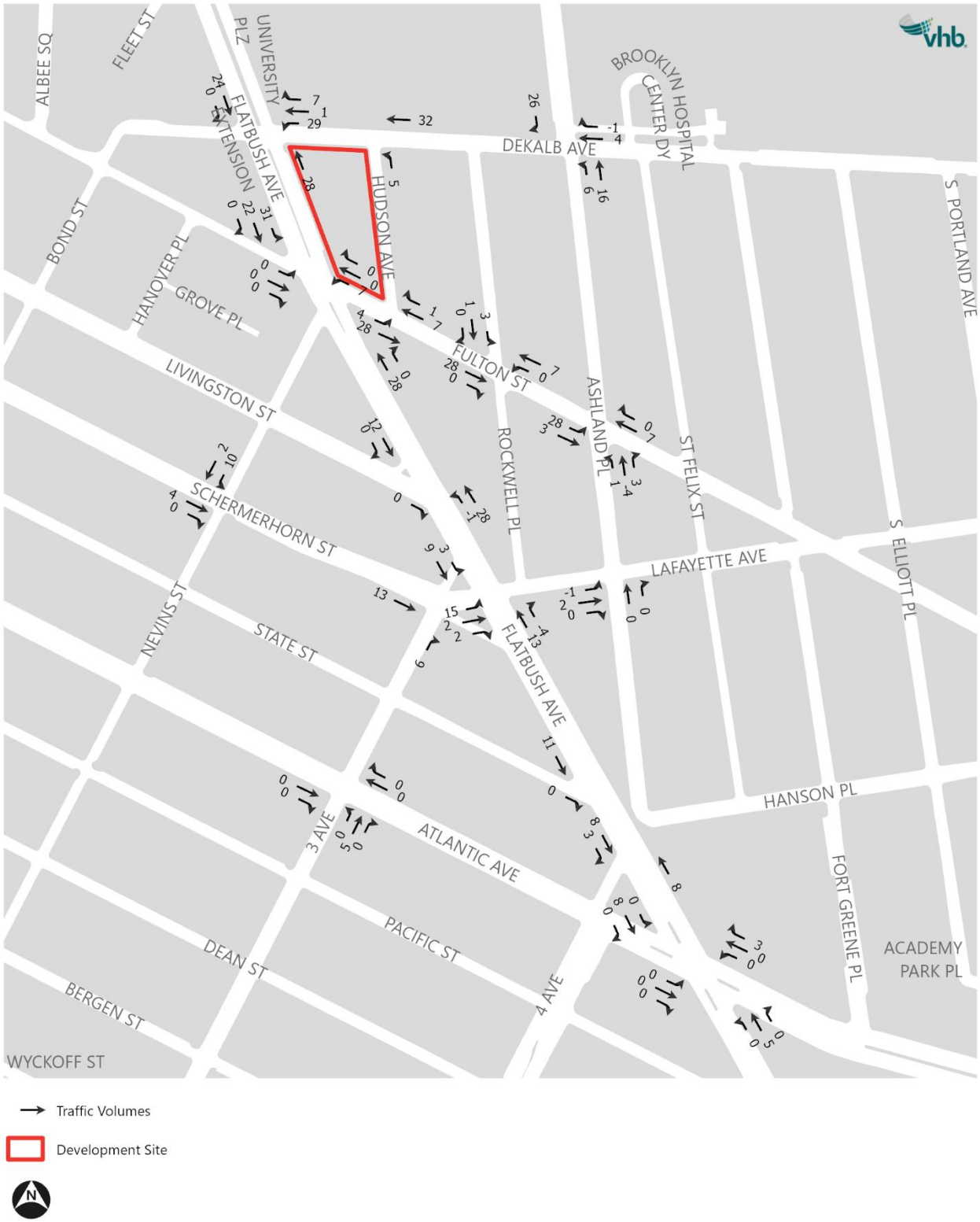


Figure 10-12 Project-Generated Vehicle Trips – Weekday PM Peak Hour (North Study Area)



Figure 10-13 Project-Generated Vehicle Trips – Weekday PM Peak Hour (South Study Area)

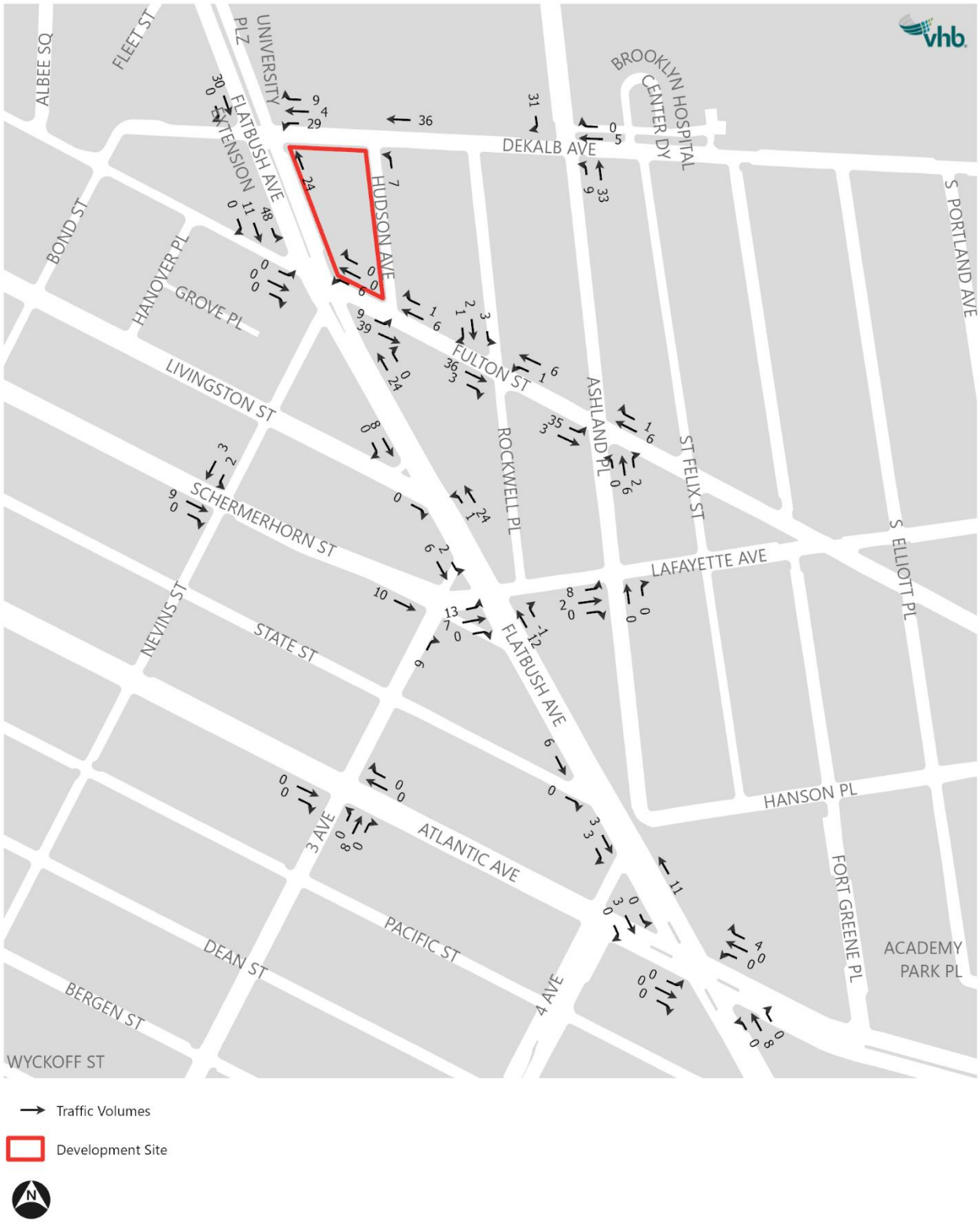
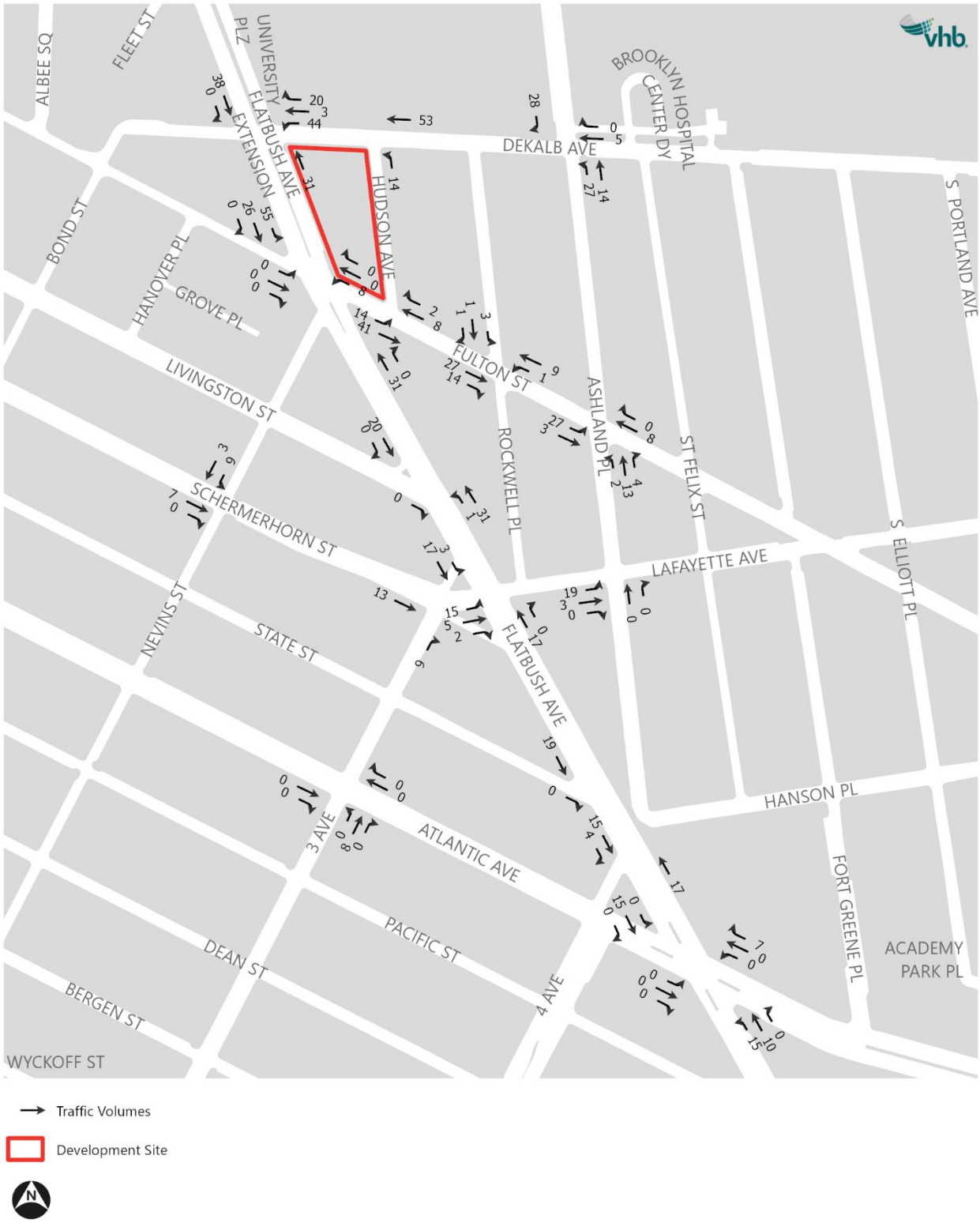


Figure 10-14 Project-Generated Vehicle Trips – Saturday Peak Hour (North Study Area)



Figure 10-15 Project-Generated Vehicle Trips – Saturday Peak Hour (South Study Area)



Level 2 Screening Results

Traffic

Based on the vehicular traffic assignments described above, project-generated trips would exceed the Level 2 screening thresholds at 11 intersections. However, unmitigated significant traffic impacts were identified in the vicinity of the traffic study area, and per the *CEQR Technical Manual* guidance, unmitigated significant traffic impacts indicate that there is congestion in the area and a moderate increase in vehicle traffic could result in significant traffic impacts. The 2018 *ECF 80 Flatbush Avenue FEIS* identified unmitigated significant traffic impacts at seven intersections during at least one of the weekday AM, midday, or PM peak hours. Three of these intersections (Flatbush Avenue Extension at DeKalb Avenue, Flatbush Avenue at Lafayette Avenue and Ashland Place at Fulton Street) exceed the screening thresholds for project-generated trips and screened into traffic analysis. Four of these intersections did not exceed the Level 2 screening thresholds (Flatbush Avenue at 4th Avenue, Ashland Place at Lafayette Avenue, 3rd Avenue at Atlantic Avenue, and Nevins Street at Schermerhorn Street) but were included for analysis. In addition, three intersections were added to the traffic study area due to their proximity to a nearby traffic analysis location (3rd Avenue with Schermerhorn Street, and Flatbush Avenue with Atlantic Avenue and with State Street). Lastly, the intersection of Flatbush Avenue Extension with Tillary Street was included to the traffic study area per consultation with NYC DOT.

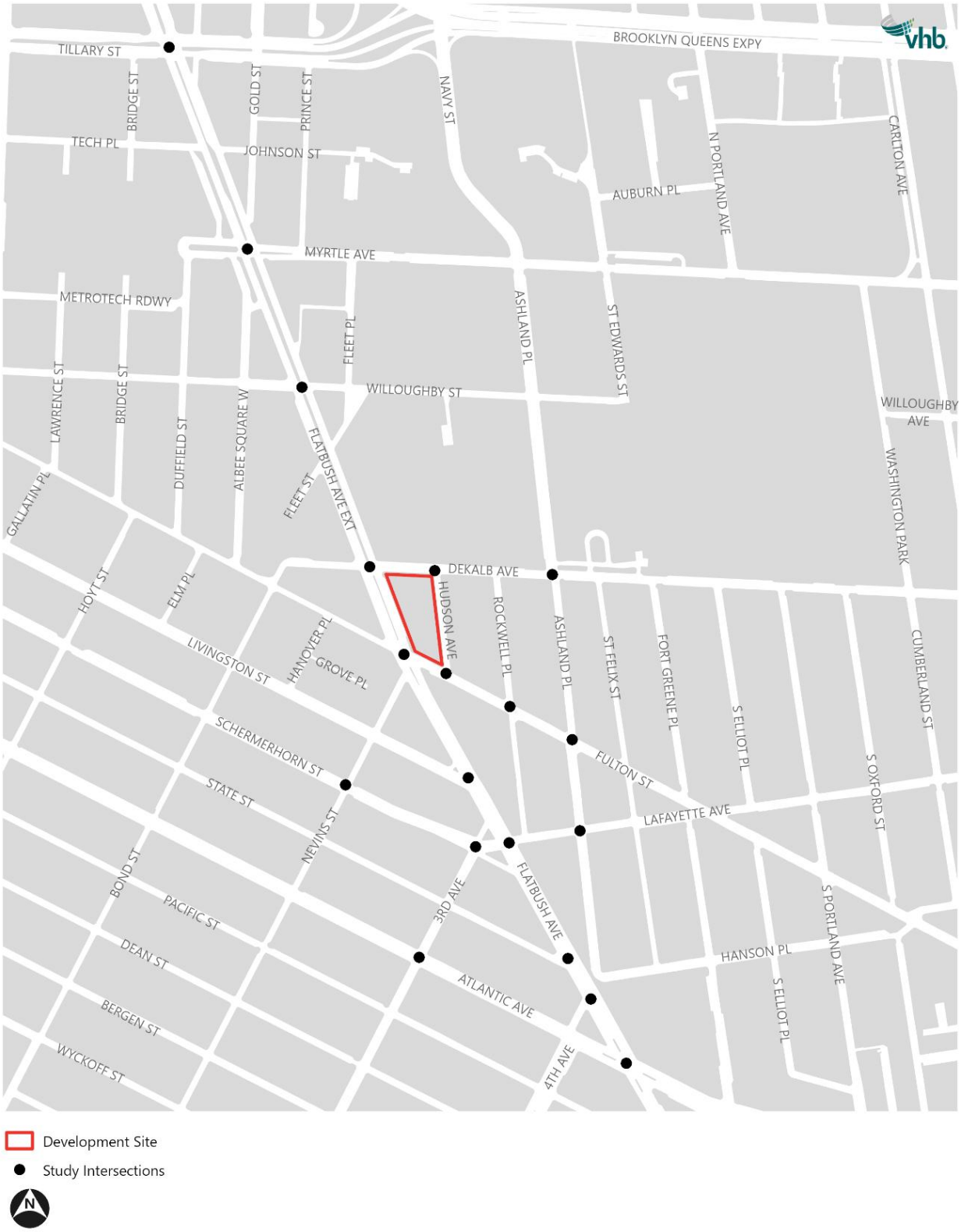
In addition to the 19 intersections identified in the screening analysis described above, traffic analysis may be needed at intersections located within a quarter mile of the Development Site that are identified as high-crash locations per the *CEQR Technical Manual* screening thresholds and would experience an increase in project-generated vehicle trips. An intersection is considered a high-crash location if it is a Vision Zero Priority Intersection or has experienced five or more pedestrian/bicyclist injury crashes in any consecutive 12 months during the 3-year analysis period. The crash data was reviewed for the intersections within a quarter mile of the Development Site and determined that the seven intersections that meet this criteria were accounted for in the traffic study area. Five intersections would exceed the *CEQR Technical Manual* safety screening thresholds for pedestrian/bicyclist injury crashes: Flatbush Avenue Extension at DeKalb Avenue, Flatbush Avenue at Fulton Street, Fulton Street at Rockwell Place, DeKalb Avenue at Ashland Place, and Fulton Street at Ashland Place and two intersections (DeKalb Avenue at Ashland Place and 3rd Avenue at Nevins Street) are Vision Zero Priority intersections.

Therefore, detailed level of service analyses was conducted during the weekday AM, midday, PM, and Saturday peak hours at a total of 19 intersections. These traffic analysis intersections are shown in **Table 10-10** and presented in **Figure 10-16**.

Table 10-10 Traffic Study Area Intersections

Intersection Name	Exceeded Level 2 Screening Thresholds for Analysis				Identified as Unmitigated Significant Traffic Impact in the *2018 ECF 80 Flatbush Avenue FEIS*
	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	
Flatbush Avenue Extension at Tillary Street					
Flatbush Avenue Extension at Myrtle Avenue	Yes		Yes	Yes	
Flatbush Avenue Extension at Willoughby Street	Yes		Yes	Yes	
Flatbush Avenue Extension at DeKalb Avenue	Yes	Yes	Yes	Yes	
Flatbush Avenue Extension at Fulton Street		Yes	Yes	Yes	Yes
Flatbush Avenue at Livingston Street				Yes	
Flatbush Avenue at Lafayette Avenue				Yes	Yes
Flatbush Avenue at State Street					
Flatbush Avenue at 4th Avenue					Yes
Flatbush Avenue at Atlantic Avenue					
Hudson Avenue at DeKalb Avenue	Yes			Yes	
Hudson Avenue at Fulton Street			Yes	Yes	
Rockwell Place at Fulton Street			Yes	Yes	
Ashland Place at DeKalb Avenue		Yes	Yes	Yes	
Ashland Place at Fulton Street			Yes	Yes	Yes
Ashland Place at Lafayette Avenue					Yes
3rd Avenue at Schermerhorn Street					
3rd Avenue at Atlantic Avenue					Yes
Nevins Street at Schermerhorn Street					Yes

Figure 10-16 Traffic Study Area



Subway

The distribution of subway riders by subway station is shown in **Table 10-11**. The Proposed Actions would result in an increase in subway riders at the DeKalb Avenue subway station during the weekday AM and PM commuter peak hours. Therefore, selected subway station elements at the southern end of the subway station, including surface and platform stairways, and the fare control area, were analyzed.

Table 10-11 Distribution of Subway Riders by Subway Station and Subway Lines

Subway Station	Subway Lines Served	Distribution Percentage	Trips by Station	
			AM Peak Hour	PM Peak Hour
DeKalb Avenue	B/Q/R	50%	235	289
Nevin Streets	2/3/4/5	30%	141	174
Hoyt-Schermerhorn Street	A/C/G	15%	71	87
Fulton Street	G	5%	24	29

A subway line-haul analysis is warranted if the Proposed Actions result in an increase of more than 200 subway trips on a subway line. The B, Q, and R subway lines would experience an increase of over 200 subway trips during the weekday AM and PM peak hours. However, once the trips are distributed between these three subway lines, the increase of subway riders per subway line would be below the thresholds for line-haul analysis.

Pedestrians

Based on the pedestrian assignments described above, detailed pedestrian level of service analyses are performed at the following pedestrian elements (four crosswalks, five corners, and four sidewalks):

Crosswalk and Corner Locations:

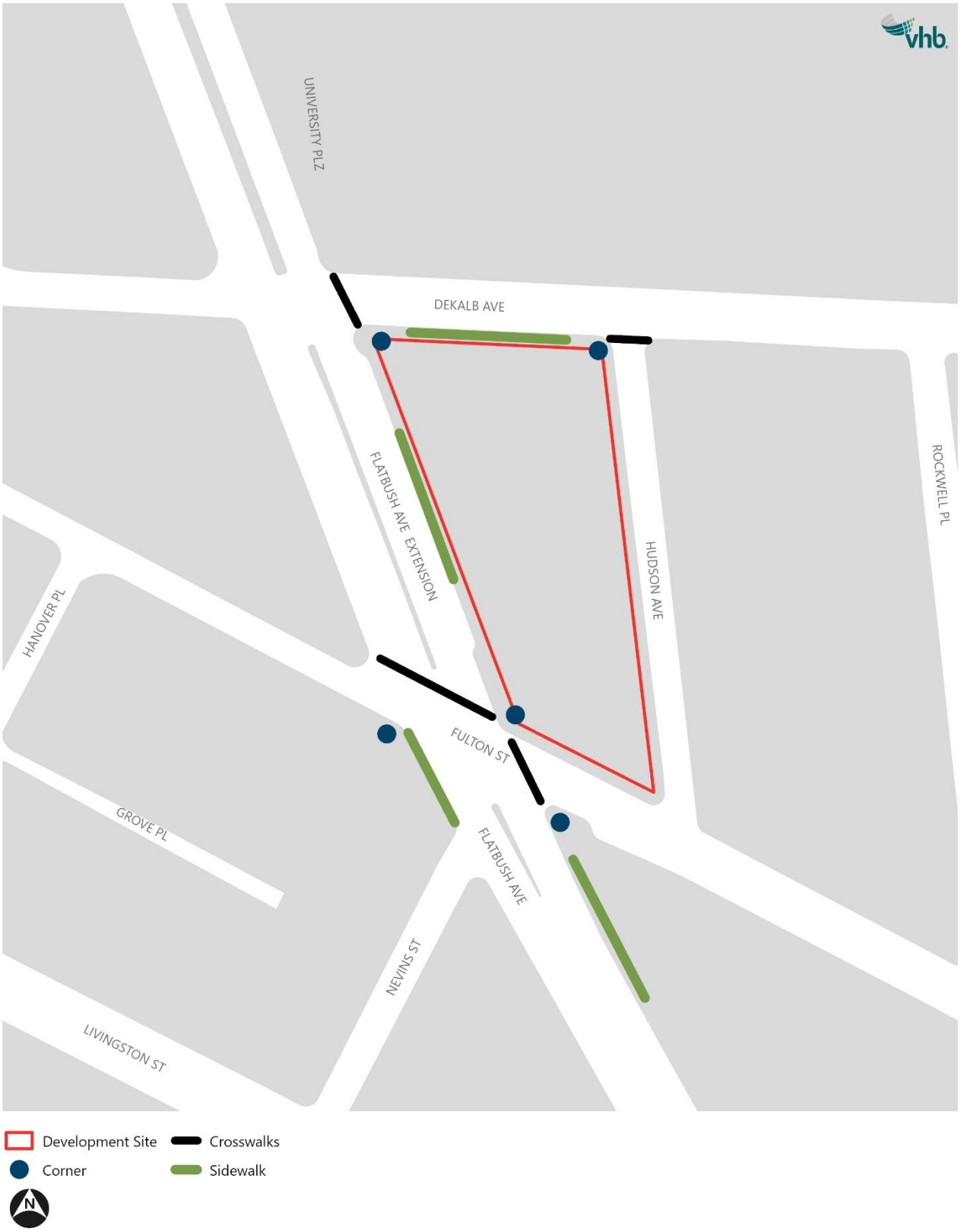
- Flatbush Avenue Extension and DeKalb Avenue
  - East crosswalk
  - Southeast corner
- Flatbush Avenue Extension and Fulton Street
  - North and east crosswalks
  - Northeast, southwest, and southeast corners
- Hudson Avenue and DeKalb Avenue
  - South crosswalk
  - Southwest corner

Sidewalk Locations:

- South sidewalk along DeKalb Avenue between Flatbush Avenue Extension and Hudson Avenue
- East sidewalk along Flatbush Avenue Extension between DeKalb Avenue and Fulton Street
- East sidewalk along Flatbush Avenue Extension between Fulton Street and Nevins Street subway station entrance
- West sidewalk along Flatbush Avenue Extension between Fulton Street and Nevins Street

Pedestrian analyses were performed at these pedestrian elements for the weekday AM, midday, PM, and Saturday peak hours (shown in **Figure 10-17** below).

Figure 10-17 Pedestrian Study Area



Detailed Analysis Methodology

This section describes the methodology used for the detailed traffic, subway, and pedestrian analyses.

Traffic

The operation of all signalized and unsignalized intersection analysis locations were assessed using Synchro software which are based on methodologies presented in the *Highway Capacity Manual (HCM)*. The HCM procedures evaluate the levels of service for signalized and unsignalized intersections using average stop control delay, in seconds per vehicle, as described below.

- LOS A describes operations with very low delays, i.e., 10.0 seconds or less per vehicle. This occurs when signal progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all.
- LOS B describes operations with delays in excess of 10.0 seconds up to 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. Again, most vehicles do not stop at the intersection.
- LOS C describes operations with delays in excess of 20.0 seconds up to 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. The number of vehicles stopping is noticeable at this level, although many still pass through the intersection without stopping.
- LOS D describes operations with delays in excess of 35.0 seconds up to 55.0 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity (v/c) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines.
- LOS E describes operations with delays in excess of 55.0 seconds up to 80.0 seconds per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios.
- LOS F describes operations with delays in excess of 80.0 seconds per vehicle. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios with cycle failures. Poor progression and long cycle lengths may also contribute to such delays. Often, vehicles do not pass through the intersection in one signal cycle.

Based on the *CEQR Technical Manual* guidelines, LOS A, B, and C are considered clearly acceptable conditions, LOS D is generally considered tolerably acceptable in dense urban environments, and LOS E and F indicate congestion. These guidelines are applicable to individual traffic movements and overall intersection levels of service.

For unsignalized intersections, delay is defined as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line: LOS A describes operations with very low delay, i.e., 10.0 seconds or less per vehicle; LOS B describes operations with delays in excess of 10.0 seconds up to 15.0 seconds; LOS C has delays in excess of 15.0 seconds up to 25.0 seconds; LOS D, excess of 25.0 seconds up to 35.0 seconds per vehicle; and LOS E, excess of 35.0 seconds up to 50.0 seconds per vehicle. LOS F describes operation with delays in excess of 50.0 seconds per vehicle. This condition exists when there are insufficient gaps of suitable size in a major vehicular

traffic stream to allow side street traffic to cross safely. Based on *CEQR Technical Manual* guidelines, LOS A, B, C, and D are considered acceptable for unsignalized intersections.

Significant Impact Criteria

The assessment of potential significant traffic impacts of a proposed project is based on significant impact criteria defined in the *CEQR Technical Manual*. If a lane group in the future With-Action condition is within acceptable LOS A, B, C, or D, the impact is not considered significant.

For a lane group at With-Action LOS E, an increase in projected delay of 5.0 or more seconds compared to the No-Action condition is considered a significant impact. For a lane group at With-Action LOS F, an increase in projected delay of 4.0 or more seconds compared to the No-Action condition is considered a significant impact. For unsignalized intersections, for the minor street to generate a significant impact, a total approach volume of 90 passenger car equivalents (PCEs) must be identified in the With-Action condition in any peak hour.

Parking

The parking analysis identifies the extent to which off-street parking is available and utilized under existing and future conditions. It takes into consideration anticipated changes in area parking supply and provides a comparison of parking needs versus availability to determine if a parking shortfall is likely to result from additional demand generated by a proposed project. This analysis typically encompasses a study area within a quarter mile of the Development Site. If the analysis concludes that there would be a shortfall in parking within the quarter-mile study area, the study area may be extended to a half mile to identify additional parking supply.

For projects located in Manhattan or other CBD areas,[1] the inability of a proposed project or the surrounding area (on-street and off-street) to accommodate the project's future parking demand is considered a parking shortfall but is generally not considered significant due to the magnitude of available alternative modes of transportation. For other areas in New York City, a parking shortfall that exceeds more than half the available on-street and off-street parking spaces within a quarter mile of the Development Site may be considered significant. Additional factors, such as the availability and extent of transit in the area and the patterns of automobile usage by area residents, could be considered to determine the significance of the identified parking shortfall. If there is an adequate parking supply within a half mile of the Development Site, the projected parking shortfall may not be considered significant.

Transit

The *CEQR Technical Manual* provides methodologies to assess several components of transit operations including the line-haul capacities of bus and subways lines, and the capacity of subway station circulation elements including stairways, escalators, passageway, and fare controls (turnstiles, high entry/exit turnstiles [HEETs], and high exit turnstiles [HXTs]).

[1] Parking shortfalls in Zone 1 and Zone 2, as identified in the *CEQR Technical Manual*, are generally not considered to be significant. The Development Site is located within Zone 1.

Subway Station Elements

Subway station elements are assessed based on the ratio of passenger volume and the capacity of the element (the v/c ratio). The v/c ratio criteria are used to determine the levels of service, which are shown in **Table 10-12**. LOS A and LOS B depict free flow and fluid flow conditions, respectively, at a subway station element. Station elements operating at LOS C still exhibit fluid flow, but pedestrian activities begin to become somewhat restricted. When conditions become crowded and there is restriction on walking speeds, the station element is considered to be operating at LOS D. At LOS E the station element is considered to be congested. There is shuffling and frequent interactions between pedestrians which result in some queueing. Severe congestion with constant queuing signifies that a station element is operating at LOS F.

Table 10-12 Level of Service Criteria for Subway Station Elements

LOS	v/c Ratio
A	0.00 to 0.45
B	0.45 to 0.70
C	0.70 to 1.00
D	1.00 to 1.33
E	1.33 to 1.67
F	Above 1.67

Source: *2021 CEQR Technical Manual*

Stairways and passageways are analyzed based on the width of the station element and the 15-minute pedestrian flow passing through. These analyses also take into account pedestrian surging resulting from an arriving train or platooning volumes from a major attraction such as a stadium or school (the effect of surging can reduce capacity by up to 25 percent) and friction from pedestrian interactions (the effect of friction can reduce capacity by up to 10 percent). Other station elements including escalators and turnstiles are measured against the operational capacities designated by New York City Transit (NYCT).

Significant Impact Criteria

Significant impacts to stairs and passageways are determined by the width increment threshold (WIT) between the No-Action and With-Action conditions for elements operating at v/c ratios greater than 1.0 in the With-Action condition. The WIT for significant impacts is detailed in **Table 10-13** below. If a stairway or passageway is significantly impacted, mitigation measures identified would need to restore the levels of service back to the No-Action levels of service or to a v/c ratio of 1.0. For escalators and turnstile elements, a With-Action v/c ratio of 1.0 or greater when the No-Action v/c ratio was less than 1.0 is considered a significant impact. For these elements where the No-Action v/c ratio is already in excess of 1.0, an incremental change in the v/c ratio of 0.01 would be considered a significant impact.

Table 10-13 Significant Impact Guidance for Stairs and Passageways

No-Action v/c Ratio	Width Increment Threshold (WIT) for Significant Impacts (Inches)	
	Stairway	Passageway
1.00 to 1.09	8.0	13.0
1.10 to 1.19	7.0	11.5
1.20 to 1.29	6.0	10.0
1.30 to 1.39	5.0	8.5
1.40 to 1.49	4.0	6.0
1.50 to 1.59	3.0	4.5
1.60 and up	2.0	3.0

Source: *2021 CEQR Technical Manual*

Pedestrians

Pedestrian level of service standards are determined on the basis of walking speed, pedestrian spacing, and probabilities of pedestrian and vehicular conflict, and are assessed based on the methodologies presented in the *2010 Highway Capacity Manual* and the *CEQR Technical Manual*. These standards are primarily based on the space needs of people involved in various activities and are widely used for planning and design of facilities for pedestrians. Analysis of crosswalks, street corners, and sidewalks along key walking paths to and from the Development Site were performed to assess the adequacy of these pedestrian elements.

To evaluate sidewalks, the pedestrian flow per unit width (p/ft/min) is calculated based on the pedestrian flow and the effective walkway width.[2] The analysis of sidewalk conditions should consider "platoon" flow as it is considered more representative of pedestrian activities within New York City. Platooning occurs when pedestrians move in groups or "platoons" as a result of pedestrian metering from a traffic signal, or from attractions such as subway stations or bus stops. The ratio of the walking speed[3] over the pedestrian flow per unit width determines the average pedestrian space (sf/p).

Crosswalk conditions are expressed as a measurement of the area available (the area consists of the crosswalk width multiplied by the crossing distance) and available pedestrian crossing time. The pedestrian flow is compared to the "time-space" available to determine the crosswalk level of service which is expressed as square feet per pedestrian (sf/p). This analysis also takes account of pedestrian conflicts in the crosswalk with turning vehicles.

Similar to crosswalks, street corners must provide sufficient space for a mix of standing pedestrians (queued to cross a street) and circulating pedestrians (crossing the other street or passing around the corner). The analysis applies a measure of time and space availability based on the area of the corner reservoir, pedestrian crossing time available, and the estimated time used by circulating pedestrians.

[2] The effective walkway width is the space along the walkway that pedestrians could use that is free of obstruction. This width also takes account of the "shy distance" (the space between pedestrians and the obstacle such as a wall or building façade).

[3] The typical average pedestrian walking speed specified in the *CEQR Technical Manual* is 4.4 feet per second (ft/s). For pedestrian elements located within the NYC DOT designated Senior Pedestrian Zone, an average pedestrian walking speed of 3.3 ft/s is used.

The level of service standards for pedestrian elements are based on the time and space available per pedestrian during the analysis period. Level of service grades from A to F are assigned, with LOS A representative of free flow conditions without pedestrian conflicts and LOS F depicting significant capacity limitations and inconvenience. **Table 10-14** defines the level of service criteria for crosswalks, corner area, and sidewalk conditions, as per the *2010 HCM*. The *CEQR Technical Manual* identifies acceptable levels of service in non-Central Business District (CBD) areas as LOS C or better, and mid-LOS D or better for CBD areas (such as the area in this study).

Table 10-14 Level of Service Criteria for Pedestrian Elements

LOS	Sidewalks		Corner Reservoirs and Crosswalks
	Non-Platoon Flow	Platoon Flow	
A	> 60 sf/p	> 530 sf/p	> 60 sf/p
B	> 40 and ≤ 60 sf/p	> 90 and ≤ 530 sf/p	> 40 and ≤ 60 sf/p
C	> 24 and ≤ 40 sf/p	> 40 and ≤ 90 sf/p	> 24 and ≤ 40 sf/p
D	> 15 and ≤ 24 sf/p	> 23 and ≤ 40 sf/p	> 15 and ≤ 24 sf/p
E	> 8 and ≤ 15 sf/p	> 11 and ≤ 23 sf/p	> 8 and ≤ 15 sf/p
F	≤ 8 sf/p	≤ 11 sf/p	≤ 8 sf/p

Source: *2021 CEQR Technical Manual*

Significant Impact Criteria

The identification of significant pedestrian impacts is dependent on the area type (CBD or non-CBD) and is determined by the decrease of time and space available for pedestrians between the No-Action and With-Action conditions. The Development Site and surrounding analysis locations are located in a CBD area. The *CEQR Technical Manual* identifies significant impacts for the pedestrian sidewalk, crosswalk, and corner elements on a sliding scale detailed below. With-Action pedestrian level of service that is considered acceptable (LOS C or better in non-CBD areas, and mid-LOS D or better in CBD areas) would not have a potential for significant impacts.

For sidewalks, the assessment of potential significant impacts is based on a sliding-scale formula provided in the *CEQR Technical Manual*. Consideration as to whether pedestrian flow along the sidewalk is platooning or non-platooning, and whether the sidewalk being analyzed is in a CBD or non-CBD condition is necessary.

For sidewalks with non-platoon pedestrian flow, the formula used to determine the decrease in pedestrian space from the No-Action to With-Action condition that would trigger a significant impact is $Y \geq (X / 9.0) - 0.31$, where Y is the decrease in pedestrian space (sf/p) to be considered a potential significant impact and X is the No-Action pedestrian space (sf/p). If the decrease in pedestrian space is greater than Y and the With-Action level of service is considered to be unacceptable, the sidewalk is considered to be significantly impacted. For sidewalks with platoon pedestrian flow, the formula to determine if the decrease in pedestrian space would trigger a significant impact is $Y \geq X / (9.5 - 0.321)$. **Table 10-15** provides a summary of the sliding-scale guidelines provided in the *CEQR Technical Manual*.

For corners and crosswalks, the assessment of potential significant impacts is also based on a sliding-scale formula provided in the *CEQR Technical Manual*. The formula used to determine the decrease in pedestrian space from the No-Action to With-Action condition that would trigger a significant

impact is Y ≥ (X / 9.0) – 0.31, where Y is the decrease in pedestrian space (sf/p) to be considered a potential significant impact and X is the No-Action pedestrian space (sf/p). If the decrease in pedestrian space is greater than Y and the With-Action level of service is considered to be unacceptable, the corner or crosswalk is considered to be significantly impacted. **Table 10-16** provides a summary of the sliding-scale guidelines provided in the *CEQR Technical Manual*.

Table 10-15 Significant Impact Criteria for Sidewalks

Platoon Flow (CBD Areas)			
No-Action Pedestrian Space (sf/p)	**With-Action Pedestrian Space Reduction (sf/p)**	**No-Action Pedestrian Space (sf/p)**	**With-Action Pedestrian Space Reduction (sf/p)**
>34.7	With-Action Condition <31.4		
34.0 to 34.6	≥ 3.3	18.8 to 19.6	≥ 1.7
33.0 to 33.9	≥ 3.2	17.8 to 18.7	≥ 1.6
32.1 to 32.9	≥ 3.1	16.9 to 17.7	≥ 1.5
31.1 to 32.0	≥ 3.0	15.9 to 16.8	≥ 1.4
30.2 to 31.0	≥ 2.9	15.0 to 15.8	≥ 1.3
29.2 to 30.1	≥ 2.8	14.0 to 14.9	≥ 1.2
28.3 to 29.1	≥ 2.7	13.1 to 13.9	≥ 1.1
27.3 to 28.2	≥ 2.6	12.1 to 13.0	≥ 1.0
26.4 to 27.2	≥ 2.5	11.2 to 12.0	≥ 0.9
25.4 to 26.3	≥ 2.4	10.2 to 11.1	≥ 0.8
24.5 to 25.3	≥ 2.3	9.3 to 10.1	≥ 0.7
23.5 to 24.4	≥ 2.2	8.3 to 9.2	≥ 0.6
22.6 to 23.4	≥ 2.1	7.4 to 8.2	≥ 0.5
21.6 to 22.5	≥ 2.0	6.4 to 7.3	≥0.4
20.7 to 21.5	≥ 1.9	< 6.3	≥0.3
19.7 to 20.6	≥ 1.8		

Source: *2021 CEQR Technical Manual*

Table 10-16 Significant Impact Criteria for Corners and Crosswalks

CBD Areas	
No-Action Pedestrian Space (sf/p)	**With-Action Pedestrian Space Reduction (sf/p)**
≥21.5	With-Action Condition <19.4
21.3 to 21.4	≥ 2.1
20.4 to 21.2	≥ 2.0
19.5 to 20.3	≥ 1.9
18.6 to 19.4	≥ 1.8
17.7 to 18.5	≥ 1.7
16.8 to 17.6	≥ 1.6
15.9 to 16.7	≥ 1.5
15.0 to 15.8	≥ 1.4
14.1 to 14.9	≥ 1.3
13.2 to 14.0	≥ 1.2
12.3 to 13.1	≥ 1.1
11.4 to 12.2	≥ 1.0
10.5 to 11.3	≥ 0.9
9.6 to 10.4	≥ 0.8
8.7 to 9.5	≥ 0.7
7.8 to 8.6	≥ 0.6
6.9 to 7.7	≥ 0.5
6.0 to 6.8	≥ 0.4
5.1 to 5.9	≥ 0.3
≤ 5.0	≥ 0.2

Source: *2021 CEQR Technical Manual*

Vehicle and Pedestrian Safety

An evaluation of vehicular and pedestrian safety was conducted for locations within the traffic study area. Consistent with *CEQR Technical Manual* guidelines this evaluation identifies high-crash locations, as locations that are Vision Zero Priority Intersections or where five or more pedestrian/bicyclist injury crashes occurred in any consecutive 12 months of the most recent three-year period for which data are available. Additionally, per NYC DOT's guidance, intersections located along a Vision Zero Priority Corridor are considered a high-crash location if three or more pedestrian/bicyclist injury crashes occurred in any consecutive 12 months of the most recent three-year period for which data are available. For these locations, crash trends are identified to determine whether projected vehicular and pedestrian traffic could further impact safety at these locations. The determination of potential significant safety impacts depends on the type of area where a proposed project is located, traffic volumes, crash types and severity, and other contributing factors. Where appropriate, measures to improve traffic and pedestrian safety are identified.

Existing Conditions

Traffic

Roadway Network

The Development Site is located on a block bounded by Flatbush Avenue Extension to the west, DeKalb Avenue to the north, Fulton Street to the south, and Hudson Avenue to the east. The study area is primarily characterized by commercial (retail and office) space as well as recent residential development projects.

Flatbush Avenue Extension runs north-south through the study area and is a key roadway traversing Downtown Brooklyn, providing access to the Manhattan Bridge along its northern end. This roadway is known as Flatbush Avenue south of Fulton Street. Within the study area, Flatbush Avenue Extension generally consist of three travel lanes in each direction with limited curbside parking. Left turns are prohibited in one or both direction at most intersections along Flatbush Avenue Extension.

Hudson Avenue borders the Development Site on the east and runs north-south. Hudson Avenue is primarily a one-way northbound roadway with no curbside parking but is two-way at its northern section in order to provide access to the parking garages located on the Development Site and across the street at 80 DeKalb Avenue.

DeKalb Avenue is a key westbound roadway that extends from Bushwick to Downtown Brooklyn. It generally consists of two travel lanes, a bike lane, and curbside parking on both sides of the street. Fulton Street is a key east-west street that extends from Cypress Hills to Downtown Brooklyn. Within the study area, Fulton Street consists of one travel lane and curbside bus lane in each direction. To the west of Flatbush Avenue, Fulton Street is a busway with limited automobile access.

Tillary Street, Myrtle Avenue, Lafayette Avenue, and Atlantic Avenue are other key east-west roadways within the study area. Tillary is a two-way roadway that extends between Cadman Plaza West and Navy Street and provides connections between major roadways in the area such as the Brooklyn-Queens Expressway, Flatbush Avenue Extension, and the Brooklyn and Manhattan Bridges. At its intersection with Flatbush Avenue Extension, Tillary Street consists of four travel lanes in the eastbound direction (one left-turn lane, two through lanes, and one right-turn lane) and five travel lanes in the westbound direction (two left-turn lanes, one through lane, one shared through-right lane and one right-turn lane). Myrtle Avenue is a two-way roadway with one travel lane and curbside parking in each direction; Myrtle Avenue also features an eastbound bike lane. Lafayette Avenue generally consists of two travel lanes, an eastbound bike lane, and curbside parking on each side. Atlantic Avenue consists of three travel lanes in each direction east of the study area. West of the study area Atlantic Avenue consists of two travel lanes in each direction with curbside parking on either side.

Ashland Place is a key north-south roadway within the study area. Ashland Place features a protected two-way bike lane along the east curb within the study area. Between Lafayette Avenue and Fulton Street, Ashland Place has one travel lane with parking on both sides. Between Fulton Street and DeKalb Avenue, Ashland Place has one travel lane with curbside parking on the west curb. Between Myrtle Avenue and DeKalb Avenue, Ashland Place is a two-way roadway with one travel lane, with parking in each direction.

Traffic Volumes

To establish the existing conditions for the traffic network, traffic counts were conducted for the weekday AM, midday, PM, and Saturday peak periods via traffic turning movement counts and 24-

hour Automatic Traffic Recorder (ATR) machine counts. The traffic counts were conducted in November 2024, and supplemental counts were also conducted in 2025 during the months of February, March, and June.

Using the traffic count data and supplemented by field observations, the traffic analysis peak hours identified for the weekday were 7:45 AM to 8:45 AM, 1 PM to 2 PM, and 4:30 PM to 5:30 PM, and the Saturday peak hour of 3 PM to 4 PM.

Travel volumes along northbound Flatbush Avenue Extension/Flatbush Avenue between Atlantic Avenue and Willoughby Street are approximately 1,425 to 1,800 vehicles per hour (vph) in the weekday AM peak hour with the exception of the section between Livington Street and Fulton Street where traffic volumes are lower (approximately 1,200 vph). During the other peak hours, northbound Flatbush Avenue Extension/Flatbush Avenue traffic volumes are lower—approximately 1,050 vph to 1,575 vph. In the section approaching the Manhattan Bridge, between Willoughby Street and Tillary Street, northbound Flatbush Avenue Extension traffic volumes range from 1,825 to 2,000 vph during the weekday AM peak hour, 1,475 vph to 1,675 vph during the weekday midday and PM peak hours, and 1,625 vph to 1,725 vph during the Saturday peak hour.

Travel volumes along southbound Flatbush Avenue Extension/Flatbush Avenue between Tillary Street and 4th Avenue range from approximately 825 vph to 1,375 vph during the weekday AM peak hour, 850 vph to 1,200 vph during the weekday midday peak hour, 1,075 vph to 1,550 vph during the weekday PM peak hour, and 950 vph to 1,475 vph during the Saturday peak hour. South of 4th Avenue, southbound Flatbush Avenue traffic volumes are lower —approximately 575 vph to 725 vph during the four analysis peak hours.

Travel volumes along DeKalb Avenue between Ashland Place and Flatbush Avenue Extension range from approximately 400 vph to 550 vph during the weekday AM, midday, and Saturday peak hours. Traffic volumes are higher during weekday PM peak hour—approximately 500 vph to 650 vph.

Travel volumes along eastbound Fulton Street between Ashland Place and Flatbush Avenue are approximately 250 vph and approximately 450 vph in the westbound direction during the weekday AM peak hour. During the weekday PM peak hour, eastbound Fulton Street carries approximately 325 vph to 425 vph and approximately 275 vph in the westbound direction. During the weekday midday and Saturday peak hours, traffic volumes range from approximately 275 vph to 350 vph in each direction.

Travel volumes along northbound Hudson Avenue range from approximately 20 vph to 40 vph across all periods. Southbound Hudson Avenue traffic volumes are low, less than 15 vph.

Tillary Street and Atlantic Avenue are two major arterials within the traffic study area. Along Tillary Street approaching Flatbush Avenue Extension, traffic volumes range from approximately 1,025 vph to 1,200 vph during the weekday peak hours. During the Saturday peak hour, eastbound Tillary Street volumes are approximately 1,125 vph and westbound approach volumes are approximately 1,275 vph. Travel volumes along eastbound Atlantic Avenue between 3rd Avenue and Flatbush Avenue range from approximately 625 vph to 925 vph during the weekday AM and midday peak hours, 650 vph to 1,100 vph during the weekday PM peak hour, and 775 vph to 1,100 vph during the Saturday peak hour. Travel volumes in the westbound direction range from approximately 700 vph to 975 vph during the weekday AM and PM peak hours, 475 vph to 650 vph during the weekday midday peak hour, and 700 vph to 825 vph during the Saturday peak hour.

Existing traffic volumes are shown in **Figure 10-18** through **Figure 10-25**.

Figure 10-18 Existing Traffic Volumes – Weekday AM Peak Hour (North Study Area)

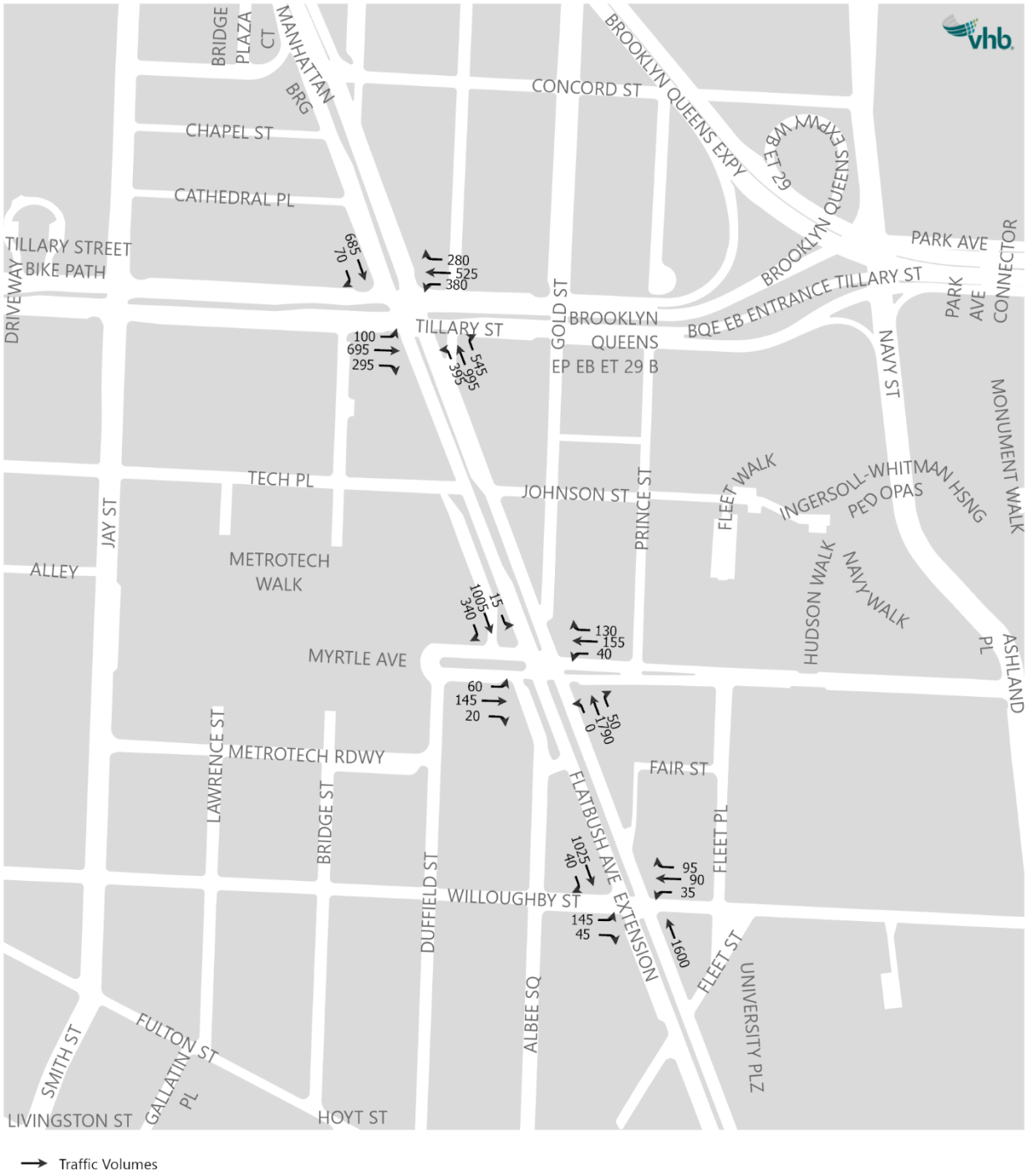


Figure 10-19 Existing Traffic Volumes – Weekday AM Peak Hour (South Study Area)

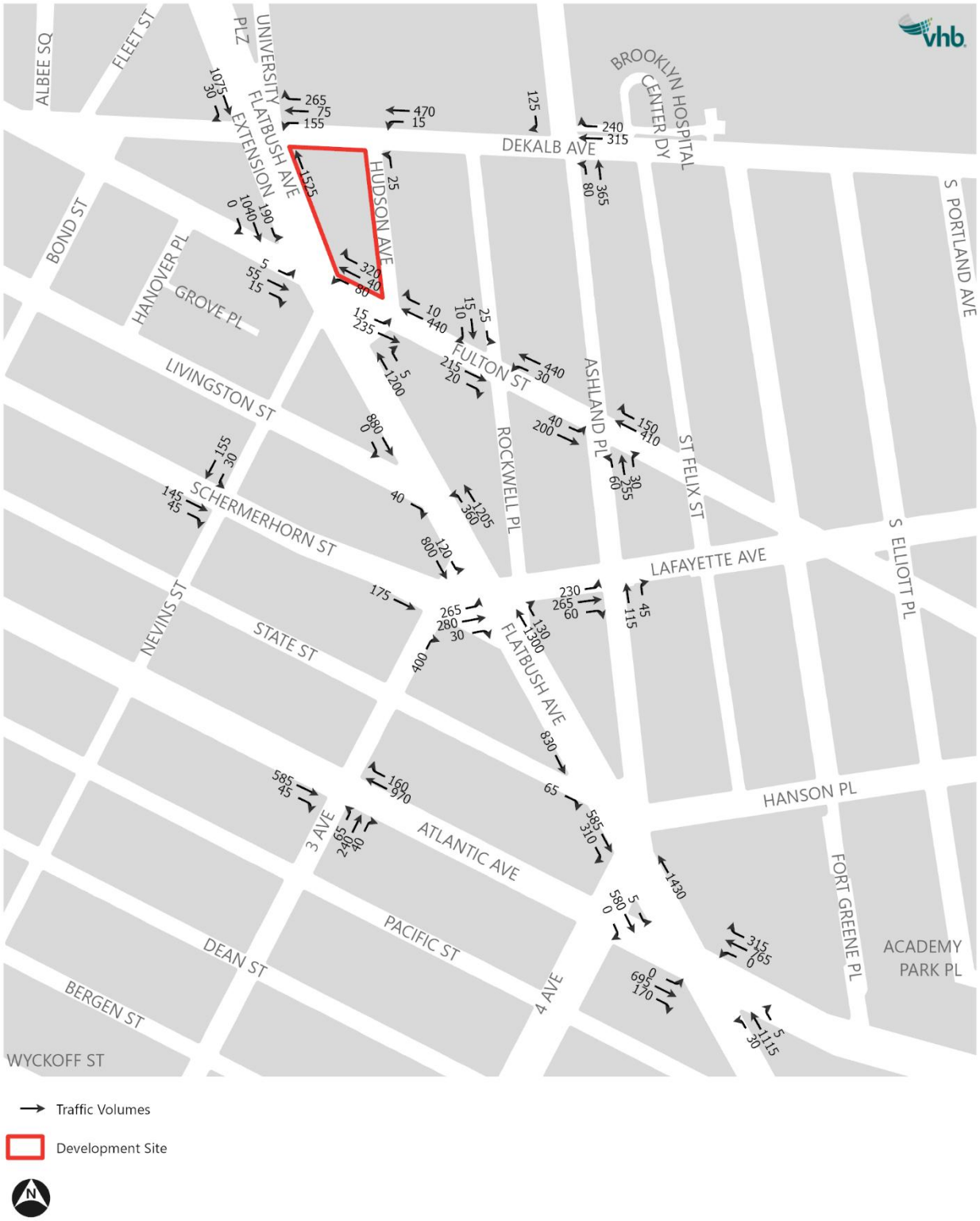


Figure 10-20 Existing Traffic Volumes – Weekday Midday Peak Hour (North Study Area)



Figure 10-21 Existing Traffic Volumes – Weekday Midday Peak Hour (South Study Area)

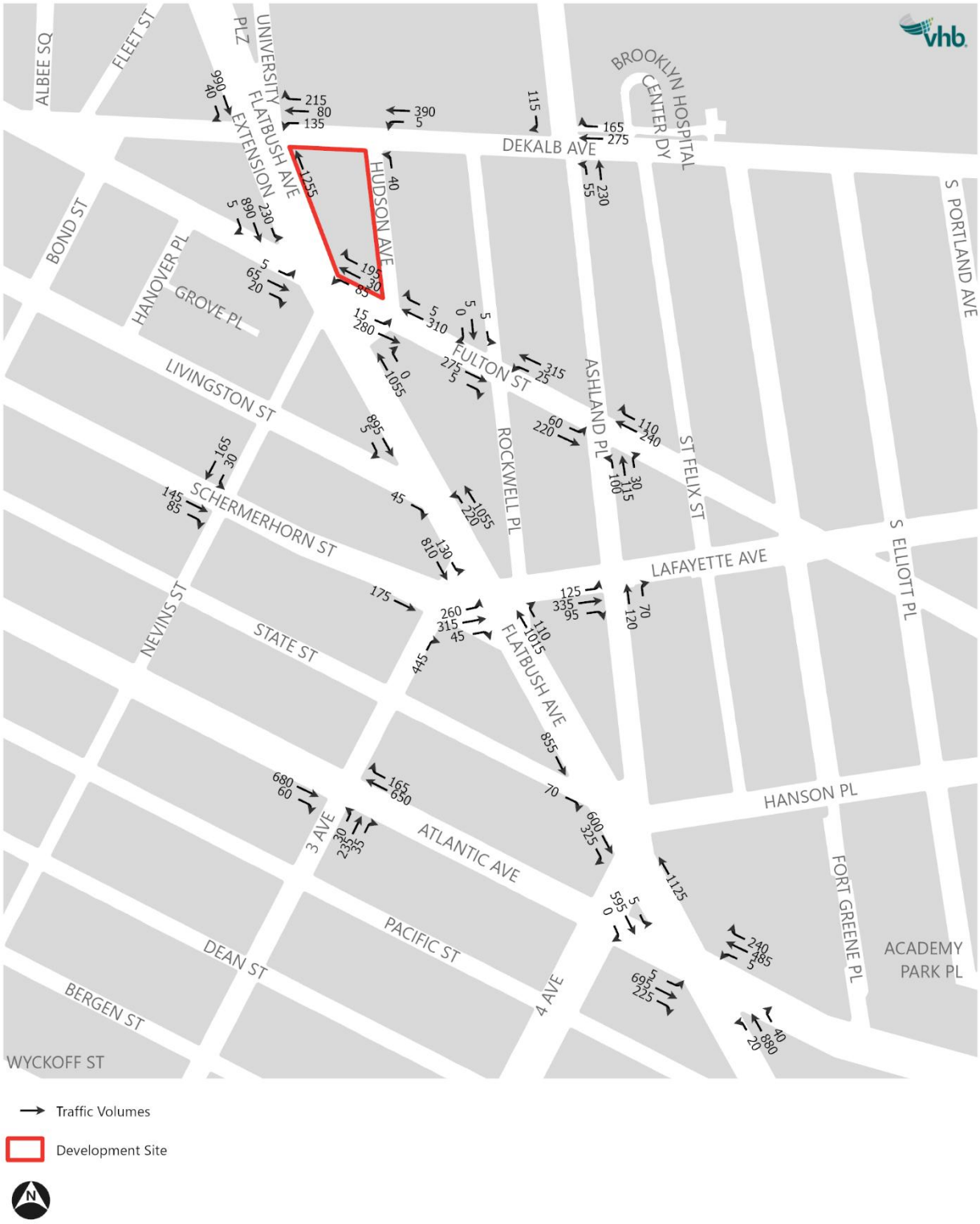


Figure 10-22 Existing Traffic Volumes – Weekday PM Peak Hour (North Study Area)

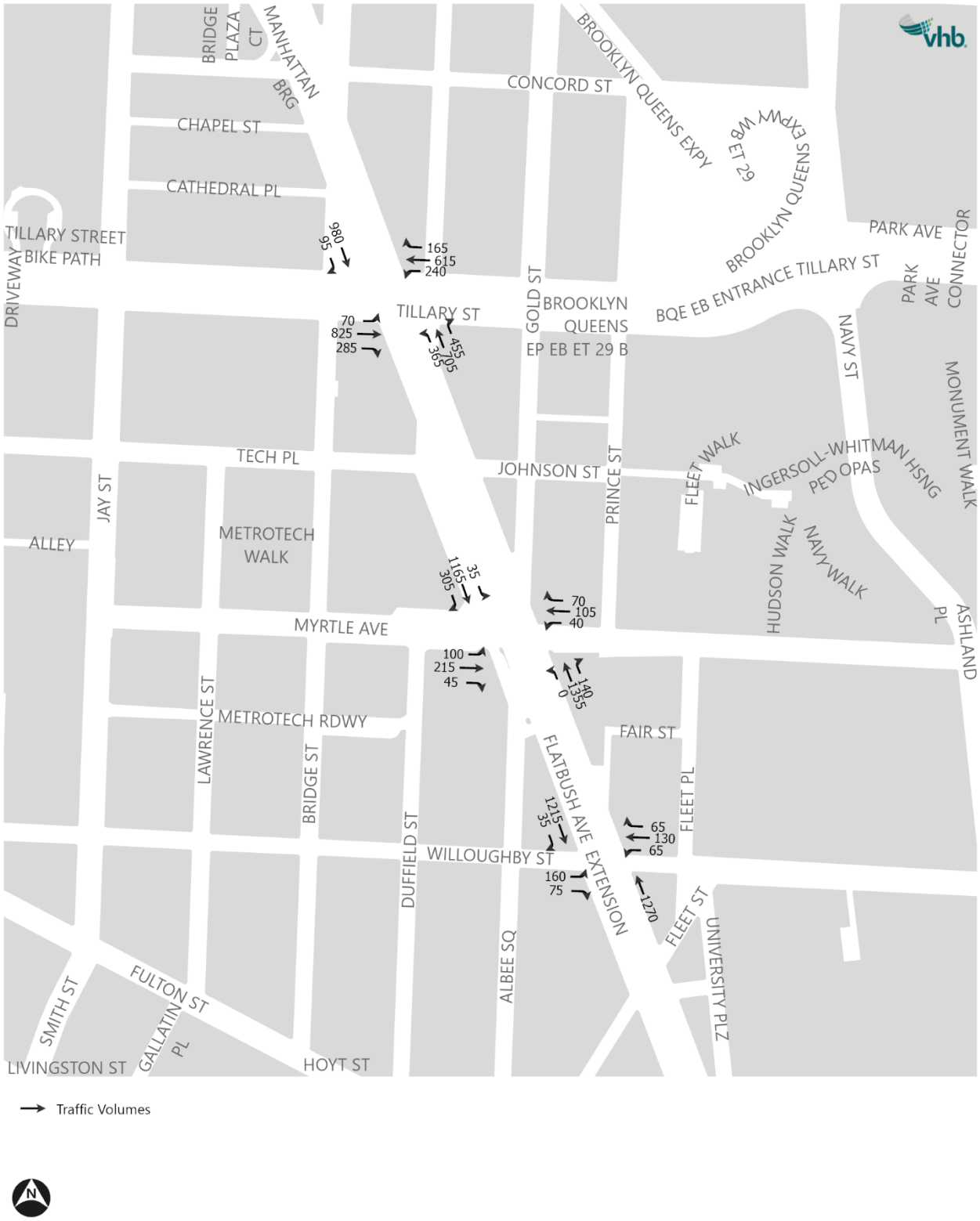


Figure 10-23 Existing Traffic Volumes – Weekday PM Peak Hour (South Study Area)

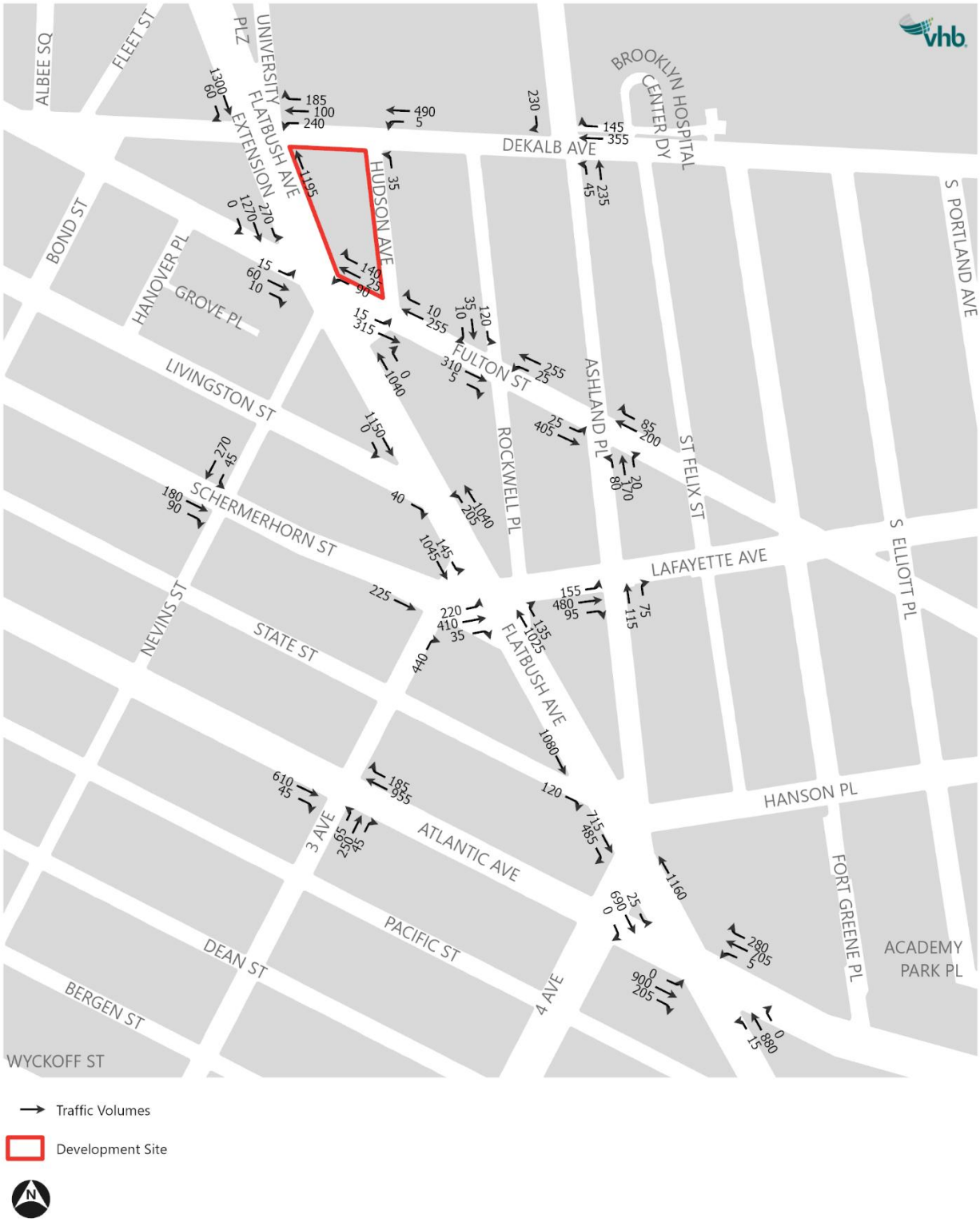
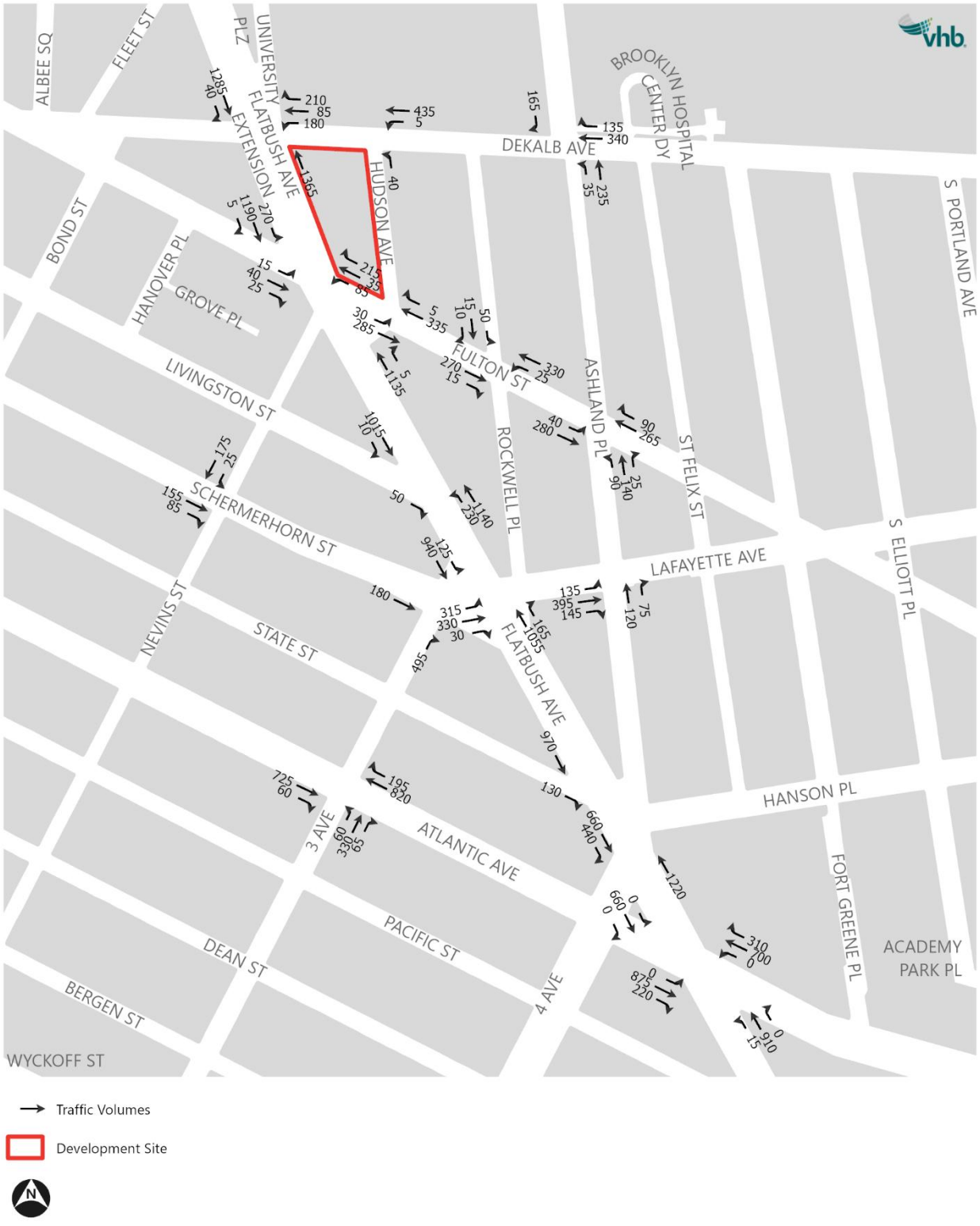


Figure 10-24 Existing Traffic Volumes – Saturday Peak Hour (North Study Area)



Figure 10-25 Existing Traffic Volumes – Saturday Peak Hour (South Study Area)



Levels of Service

Table 10-17 and **Table 10-18** provide an overview of the levels of service that characterize existing "overall" intersection conditions and individual traffic movements, respectively, during the weekday AM, midday, and PM peak hours, and the Saturday peak hour. Detailed existing traffic levels of service are provided in **Table 10-19**.

Table 10-17 Existing Traffic Level of Service Summary – Overall Intersections

	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour
Intersections at Overall LOS A/B/C	11	14	17	15
Intersections at Overall LOS D	6	3	1	3
Intersections at Overall LOS E	1	2	1	1
Intersections at Overall LOS F	1	0	0	0

Note: Includes 19 signalized intersections

Table 10-18 Existing Traffic Level of Service Summary – Traffic Movements

	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour
Traffic Movements at LOS A/B/C	43	53	48	48
Traffic Movements at LOS D	23	13	14	15
Traffic Movements at LOS E	5	6	13	7
Traffic Movements at LOS F	10	9	6	8
Number of Individual Traffic Movements	81	81	81	78

Note: Number of movements may vary between peak hours due to turn prohibitions, parking regulations, and the presence of de facto left-turn movements.

Table 10-19 Existing Traffic Level of Service

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Flatbush Avenue Extension and Tillary Street																	
Flatbush Avenue Extension	NB	L	1.03	76.5	E	L	1.03	97.3	F	L	1.04	89.6	F	L	1.04	98.2	F
	NB	T	0.90	47.2	D	T	0.69	32.8	C	T	0.57	41.8	D	T	0.60	34.1	C
	NB	R	0.47	1.1	A	R	0.44	0.7	A	R	0.43	0.7	A	R	0.45	0.9	A
	SB	T	0.67	41.4	D	T	0.68	41.6	D	T	0.88	51.1	D	T	0.60	39.5	D
	SB	R	0.19	19.1	B	R	0.24	19.7	B	R	0.24	19.8	B	R	0.17	18.7	B
Tillary Street	EB	L	0.63	64.9	E	L	0.53	59.1	E	L	0.40	53.3	D	L	0.54	58.8	E
	EB	T	0.88	53.8	D	T	0.95	62.8	E	T	1.01	76.5	E	T	0.91	57.2	E
	EB	R	0.80	46.0	D	R	0.55	30.8	C	R	0.73	39.8	D	R	0.65	34.6	C
	WB	L	1.02	98.4	F	L	0.79	65.6	E	L	0.71	60.1	E	L	1.05	104.4	F
	WB	T	0.86	53.7	D	T	0.85	52.2	D	T	0.89	55.6	E	T	0.85	51.7	D
	WB	R	1.02	102.5	F	R	0.95	88.2	F	R	0.60	47.4	D	R	0.92	77.4	E
Overall Intersection		**-**	**-**	**52.4**	**D**	**-**	**-**	**48.7**	**D**	**-**	**-**	**51.6**	**D**	**-**	**-**	**50.5**	**D**

Table 10-19 Existing Traffic Level of Service

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Flatbush Avenue Extension and Myrtle Avenue																	
Flatbush Avenue Extension	NB	TR	1.04	39.0	D	TR	0.91	33.8	C	TR	0.82	30.5	C	TR	0.97	37.6	D
	SB	L	0.25	54.9	D	L	0.29	51.2	D	L	0.47	77.6	E	L	0.18	47.9	D
	SB	TR	0.68	15.1	B	TR	0.57	18.0	B	TR	0.69	8.3	A	TR	0.60	16.4	B
Myrtle Avenue	EB	L	1.03	163.0	F	L	1.01	121.7	F	L	0.83	82.9	F	L	0.59	62.0	E
	EB	TR	0.55	46.1	D	TR	0.78	58.2	E	TR	0.93	78.5	E	TR	0.68	51.7	D
	WB	L	0.36	46.4	D	L	0.32	46.1	D	L	0.50	58.6	E	L	0.21	40.0	D
	WB	TR	1.04	102.7	F	TR	1.03	104.3	F	TR	0.68	52.9	D	TR	0.91	77.1	E
Overall Intersection		**-**	**-**	**38.4**	**D**	**-**	**-**	**39.6**	**D**	**-**	**-**	**28.9**	**C**	**-**	**-**	**33.6**	**C**
Flatbush Avenue Extension and Willoughby Street																	
Flatbush Avenue Extension	NB	T	0.86	35.7	D	T	0.79	15.9	B	T	0.68	16.1	B	T	0.78	16.1	B
	SB	TR	0.62	28.8	C	TR	0.55	30.6	C	TR	0.69	9.7	A	TR	0.68	31.9	C
Willoughby Street	EB	L	0.70	50.4	D	L	0.57	41.0	D	L	0.77	56.5	E	L	0.58	40.0	D
	EB	R	0.15	29.0	C	R	0.20	28.4	C	R	0.24	30.6	C	R	0.35	31.7	C
	WB	LTR	0.59	38.9	D	LTR	0.60	37.6	D	LTR	0.61	39.5	D	LTR	0.52	35.0	C
Overall Intersection		**-**	**-**	**34.3**	**C**	**-**	**-**	**24.6**	**C**	**-**	**-**	**18.3**	**B**	**-**	**-**	**25.4**	**C**

Table 10-19 Existing Traffic Level of Service

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Flatbush Avenue Extension and DeKalb Avenue																	
Flatbush Avenue Extension	NB	T	0.92	45.3	D	T	0.75	10.1	B	T	0.67	46.6	D	T	0.72	9.3	A
	SB	TR	0.70	46.6	D	TR	0.58	2.5	A	TR	0.72	4.7	A	TR	0.71	6.1	A
DeKalb Avenue	WB	LT	0.66	22.4	C	LT	0.65	24.1	C	LT	1.03	75.7	E	LT	0.79	30.8	C
	WB	R	0.94	57.7	E	R	0.93	62.5	E	R	0.93	63.3	E	R	1.05	91.5	F
Overall Intersection		**-**	**-**	**45.0**	**D**	**-**	**-**	**12.6**	**B**	**-**	**-**	**33.4**	**C**	**-**	**-**	**15.8**	**B**
Flatbush Avenue Extension and Fulton Street																	
Flatbush Avenue Extension	NB	T	0.85	12.8	B	T	0.81	13.6	B	T	0.79	12.4	B	T	0.84	13.0	B
	SB	L	1.04	122.2	F	L	0.99	103.6	F	L	1.01	99.0	F	L	1.05	114.5	F
	SB	T	0.50	16.3	B	T	0.43	21.8	C	T	0.53	6.1	A	T	0.52	23.0	C
Fulton Street	EB	LTR	0.39	41.2	D	LTR	0.39	40.3	D	LTR	0.35	40.0	D	LTR	0.36	39.5	D
	WB	LT	0.62	25.0	C	LT	0.69	25.8	C	LT	0.65	20.7	C	LT	0.66	30.7	C
	WB	R	0.72	9.5	A	R	0.43	3.2	A	R	0.29	2.4	A	R	0.50	6.9	A
Overall Intersection		**-**	**-**	**22.8**	**C**	**-**	**-**	**25.5**	**C**	**-**	**-**	**18.6**	**B**	**-**	**-**	**26.9**	**C**

Table 10-19 Existing Traffic Level of Service

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Flatbush Avenue and Livingston Street																	
Flatbush Avenue	NB	L	0.63	54.8	D	L	0.37	14.9	B	L	0.43	22.4	C	L	0.42	16.6	B
	NB	T	0.66	12.8	B	T	0.57	5.8	A	T	0.62	9.1	A	T	0.59	6.3	A
	SB	T	0.51	2.9	A	T	0.54	13.0	B	T	0.61	4.7	A	T	0.54	11.4	B
Livingston Street	EB	R	0.14	23.3	C	R	0.14	22.5	C	R	0.13	22.2	C	R	0.17	23.0	C
Overall Intersection		-	**-**	**16.1**	**B**	-	**-**	**10.1**	**B**	-	**-**	**8.6**	**A**	**-**	**-**	**9.9**	**A**
Flatbush Avenue and Lafayette Avenue																	
Flatbush Avenue	NB	TR	0.95	41.0	D	TR	0.74	23.9	C	TR	0.75	21.6	C	TR	0.83	24.7	C
	SB	L	0.72	112.2	F	L	0.59	21.5	C	L	0.61	99.0	F	L	0.61	97.6	F
	SB	T	0.42	6.3	A	T	0.43	2.2	A	T	0.52	2.6	A	T	0.46	3.1	A
Schermerhorn Street	EB	L	1.04	110.6	F	L	1.00	103.4	F	L	0.91	104.8	F	L	1.03	98.8	F
	EB	TR	0.46	79.5	E	TR	0.53	73.3	E	TR	0.59	78.7	E	TR	0.47	62.8	E
Overall Intersection		-	**-**	**45.9**	**D**	-	**-**	**32.5**	**C**	-	**-**	**33.5**	**C**	**-**	**-**	**33.7**	**C**
Flatbush Avenue and State Street																	
Flatbush Avenue	NB	T	0.79	5.1	A	T	0.64	2.9	A	T	0.58	2.4	A	T	0.65	2.7	A
	SB	T	0.67	32.1	C	T	0.68	24.1	C	T	0.77	23.1	C	T	0.64	23.2	C
State Street	EB	R	0.14	22.6	C	R	0.15	22.7	C	R	0.24	24.0	C	R	0.25	24.5	C
Overall Intersection		-	**-**	**15.3**	**B**	-	**-**	**12.6**	**B**	-	**-**	**13.3**	**B**	**-**	**-**	**12.3**	**B**

Table 10-19 Existing Traffic Level of Service

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Flatbush Avenue and 4th Avenue																	
Flatbush Avenue	NB	T	0.73	10.8	B	T	0.62	8.6	A	T	0.61	8.8	A	T	0.64	10.1	B
	SB	TR	0.59	6.2	A	TR	0.62	6.4	A	TR	0.73	12.0	B	TR	0.68	11.6	B
	SB	R	0.61	10.9	B	R	0.68	15.7	B	R	0.86	58.3	E	R	0.80	39.2	D
Overall Intersection		-	**-**	**9.5**	**A**	-	**-**	**8.9**	**A**	-	**-**	**17.5**	**B**	**-**	**-**	**14.8**	**B**
Flatbush Avenue and Atlantic Avenue																	
Flatbush Avenue	NB	LT	0.85	34.7	C	LT	0.71	28.9	C	LT	0.62	26.2	C	LT	0.60	25.7	C
	SB	T	0.60	7.4	A	T	0.59	5.7	A	T	0.73	7.6	A	T	0.52	5.5	A
Atlantic Avenue	EB	T	0.67	29.4	C	T	0.70	30.6	C	T	0.78	33.2	C	T	0.75	31.8	C
	EB	R	0.55	40.4	D	R	0.75	51.1	D	R	0.79	56.0	E	R	0.59	41.0	D
	WB	T	0.70	30.1	C	T	0.47	24.7	C	T	0.65	28.7	C	T	0.59	26.9	C
	WB	R	1.05	102.2	F	R	1.01	97.6	F	R	1.03	99.6	F	R	1.05	102.3	F
Overall Intersection		-	**-**	**34.6**	**C**	-	**-**	**31.2**	**C**	-	**-**	**32.1**	**C**	**-**	**-**	**31.3**	**C**
DeKalb Avenue and Hudson Avenue																	
Hudson Avenue	NB	L	0.05	22.0	C	L	0.08	25.4	C	L	0.07	27.5	C	L	0.08	26.0	C
DeKalb Avenue	WB	LT	0.44	24.1	C	LT	0.35	21.9	C	LT	0.44	11.5	B	LT	0.40	20.8	C
Overall Intersection		-	**-**	**22.1**	**C**	-	**-**	**25.0**	**C**	-	**-**	**26.3**	**C**	**-**	**-**	**25.6**	**C**

Table 10-19 Existing Traffic Level of Service

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Fulton Street and Hudson Avenue																	
Fulton Street	EB	LT	0.45	10.6	B	LT	0.44	7.0	A	LT	0.49	12.6	B	LT	0.46	13.6	B
	WB	T	0.98	116.6	F	T	0.78	103.8	F	T	0.55	45.9	D	TR	0.90	114.5	F
	WB	R	0.06	28.2	C	R	0.03	27.6	C	R	0.06	28.4	C	-	-	-	-
Overall Intersection		-	**-**	**74.8**	**E**	-	**-**	**59.3**	**E**	-	**-**	**26.8**	**C**	**-**	**-**	**65.4**	**E**
Fulton Street and Rockwell Place																	
Rockwell Place	SB	LTR	0.13	20.0	B	LTR	0.02	18.5	B	LTR	0.44	25.3	C	LTR	0.18	20.6	C
Fulton Street	EB	T	0.40	16.7	B	T	0.42	17.4	B	T	0.45	18.2	B	TR	0.50	19.7	B
	EB	R	0.07	11.5	B	R	0.01	10.6	B	R	0.02	10.6	B	-	-	-	-
	WB	LT	0.76	14.2	B	LT	0.56	13.4	B	LT	0.44	11.5	B	LT	0.64	12.8	B
Overall Intersection		-	**-**	**15.3**	**B**	-	**-**	**15.2**	**B**	-	**-**	**17.3**	**B**	**-**	**-**	**16.3**	**B**
DeKalb Avenue and Ashland Place																	
Ashland Place	NB	LT	1.03	74.0	E	LT	0.73	27.6	C	LT	0.71	26.4	C	LT	0.64	22.9	C
	SB	R	0.39	17.9	B	R	0.31	16.2	B	R	0.60	22.8	C	R	0.48	19.3	B
DeKalb Avenue	WB	TR	0.93	42.6	D	TR	0.65	21.2	C	TR	0.66	21.0	C	TR	0.61	19.9	B
Overall Intersection		-	**-**	**51.7**	**D**	-	**-**	**22.9**	**C**	-	**-**	**23.0**	**C**	**-**	**-**	**20.7**	**C**
Fulton Street and Ashland Place																	

Table 10-19 Existing Traffic Level of Service

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Ashland Place	NB	L	0.22	25.1	C	L	0.33	26.9	C	L	0.27	26.0	C	L	0.26	25.5	C
	NB	TR	0.70	36.8	D	TR	0.37	27.2	C	TR	0.50	29.9	C	TR	0.40	27.6	C
Fulton Street	EB	LT	0.53	12.9	B	LT	0.63	15.1	B	LT	0.70	22.8	C	LT	0.73	20.5	C
	WB	T	0.64	22.5	C	T	0.46	19.3	B	T	0.31	14.8	B	TR	0.78	32.7	C
	WB	R	0.42	18.0	B	R	0.30	17.2	B	R	0.26	15.1	B	-	-	-	-
Overall Intersection		-	**-**	**23.6**	**C**	-	**-**	**19.8**	**B**	-	**-**	**22.2**	**C**	**-**	**-**	**27.0**	**C**
Lafayette Avenue and Ashland Place																	
Ashland Place	NB	TR	0.46	37.2	D	TR	0.64	47.8	D	TR	0.71	51.7	D	TR	0.60	45.1	D
Lafayette Avenue	EB	LTR	0.56	13.9	B	LTR	0.49	37.9	D	LTR	0.60	13.3	B	LTR	0.59	45.2	D
Overall Intersection		-	**-**	**19.1**	**B**	-	**-**	**40.4**	**D**	-	**-**	**22.0**	**C**	**-**	**-**	**45.2**	**D**
Schermerhorn Street and 3rd Avenue																	
3rd Avenue	NB	R	0.85	104.9	F	R	0.86	83.6	F	R	0.80	77.6	E	R	0.80	60.1	E
Schermerhorn Street	EB	T	0.36	27.3	C	T	0.47	42.3	D	T	0.49	40.0	D	T	0.51	42.6	D
Overall Intersection		-	**-**	**81.5**	**F**	-	**-**	**72.4**	**E**	-	**-**	**64.9**	**E**	**-**	**-**	**55.0**	**D**
Atlantic Avenue and 3rd Avenue																	

Table 10-19 Existing Traffic Level of Service

Intersection & Approach		Weekday AM Peak Hour				Weekday Midday Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
3rd Avenue	NB	LTR	0.54	37.8	D	LTR	0.51	41.3	D	LTR	0.67	44.1	D	LTR	0.76	48.9	D
Atlantic Avenue	EB	TR	0.60	28.2	C	TR	0.68	26.8	C	TR	0.63	27.1	C	TR	0.65	25.8	C
	WB	T	0.90	42.7	D	T	0.61	24.6	C	T	0.86	37.1	D	T	0.68	26.4	C
	WB	R	0.46	28.1	C	R	0.47	24.8	C	R	0.56	29.6	C	R	0.44	23.6	C
Overall Intersection		-	**-**	**36.4**	**D**	-	**-**	**28.0**	**C**	-	**-**	**34.6**	**C**	**-**	**-**	**30.8**	**C**
Nevins Street and Schermerhorn Street																	
Nevins Street	SB	LT	0.58	31.9	C	LT	0.74	44.3	D	LT	0.70	32.7	C	LT	0.64	36.6	D
Schermerhorn Street	EB	TR	0.48	22.7	C	TR	0.49	20.1	C	TR	0.71	31.9	C	TR	0.57	22.4	C
Overall Intersection		-	**-**	**27.1**	**C**	-	**-**	**31.6**	**C**	-	**-**	**32.3**	**C**	**-**	**-**	**28.7**	**C**

Note: Overall intersection v/c ratio is the critical lane groups' v/c ratio.
[1] Control delay is measured in seconds per vehicle.

The summary overview of existing conditions indicates that:

- In the weekday AM peak hour, two intersections operate at LOS E or LOS F. "Overall" LOS E or F means that serious congestion exists—either one specific traffic movement has severe delays or two or more of the specific traffic movements at the intersection are at LOS E or F with significant delays (the overall intersection level of service is a weighted average of all individual traffic movements). Fifteen individual traffic movements out of approximately 81 total movements analyzed operate at unacceptable LOS E or LOS F (e.g. left turns from one street to another, through traffic on one street passing through the intersection, etc.).
- In the weekday midday peak hour, two intersections operate at LOS E, and 15 individual traffic movements operate at unacceptable LOS E or LOS F.
- In the weekday PM peak hour, one intersection operates at LOS E, and 19 individual traffic movements operate at unacceptable LOS E or LOS F.
- In the Saturday peak hour, one intersection operates at LOS E, and 15 individual traffic movements operate at unacceptable LOS E or LOS F.

Traffic movements operating at unacceptable levels of service under the existing conditions are listed below.

- Flatbush Avenue Extension and Tillary Street
  - Northbound Flatbush Avenue Extension left-turn movement (AM, midday, PM, and Saturday)
  - Eastbound Tillary Street left-turn movement (AM and midday, Saturday)
  - Eastbound Tillary Street through movement (midday, PM, and Saturday)
  - Westbound Tillary Street left-turn movement (AM, midday, PM, and Saturday)
  - Westbound Tillary Street through movement (PM)
  - Westbound Tillary Street right-turn movement (AM, midday, and Saturday)
- Flatbush Avenue Extension and Myrtle Avenue
  - Southbound Flatbush Avenue Extension left-turn movement (PM)
  - Eastbound Myrtle Avenue left-turn movement (AM, midday, PM, and Saturday)
  - Eastbound Myrtle Avenue shared through-right movement (midday and PM)
  - Westbound Myrtle Avenue left-turn movement (PM)
  - Westbound Myrtle Avenue shared through-right movement (AM, midday, and Saturday)
- Flatbush Avenue Extension and Willoughby Street
  - Eastbound Willoughby Street left-turn movement (PM)
- Flatbush Avenue Extension and DeKalb Avenue
  - Westbound DeKalb Avenue shared left-through movement (PM)
  - Westbound DeKalb Avenue right-turn movement (AM, midday, PM, and Saturday)
- Flatbush Avenue Extension and Fulton Street
  - Southbound Flatbush Avenue Extension left-turn movement (AM, midday, PM, and Saturday)
- Flatbush Avenue and Lafayette Avenue
  - Southbound Flatbush Avenue left-turn movement (AM, PM, and Saturday)
  - Eastbound Lafayette Avenue left-turn movement (AM, midday, PM, and Saturday)

- Eastbound Lafayette Avenue shared through-right movement (AM, midday, PM, Saturday)

› Flatbush Avenue and 4th Avenue
- Southbound Flatbush Avenue right-turn movement (PM)

› Flatbush Avenue and Atlantic Avenue
- Eastbound Atlantic Avenue right-turn movement (PM)
- Westbound Atlantic Avenue right-turn movement (AM, midday, PM, and Saturday)

› Fulton Street and Hudson Avenue
- Westbound Fulton Street shared through-right movement (AM, midday, and Saturday)

› DeKalb Avenue and Ashland Place
- Northbound Ashland Place shared left-through movement (AM)

› Schermerhorn Street and 3rd Avenue
- Northbound 3rd Avenue right-turn movement (AM, midday, PM, and Saturday)

Parking

A detailed inventory of off-street parking facilities within a quarter-mile radius of the Development Site was conducted for a typical weekday and Saturday. Per the *CEQR Technical Manual*, this quarter-mile distance is considered an acceptable walking distance to and from parking. There are 17 public parking facilities within or close to this quarter-mile area, as shown in **Figure 10-26**, including 470 Hudson Avenue, which is located on the Development Site. **Table 10-20** presents the capacity and occupancy of the off-street parking facilities during the midday, PM, and overnight peak periods on a typical weekday and the Saturday early afternoon period. The total capacity of the 18 parking garages is 2,609 parking spaces. However, three parking garages did not respond to parking utilization surveys (parking garages #2, 3 and 13); therefore, the 501 parking spaces associated with these garages were not accounted for and the analysis assumes 2,108 off-street parking spaces are available within the study area.

The highest parking utilization occurs during the weekday midday peak period (approximately 61 percent occupancy). Parking utilization is lower during the other peak periods—38 percent occupancy during the weekday PM peak period, 18 percent occupancy during the overnight period, and 26 percent occupancy during the Saturday early afternoon period.

Figure 10-26 Off-Street Parking Inventory

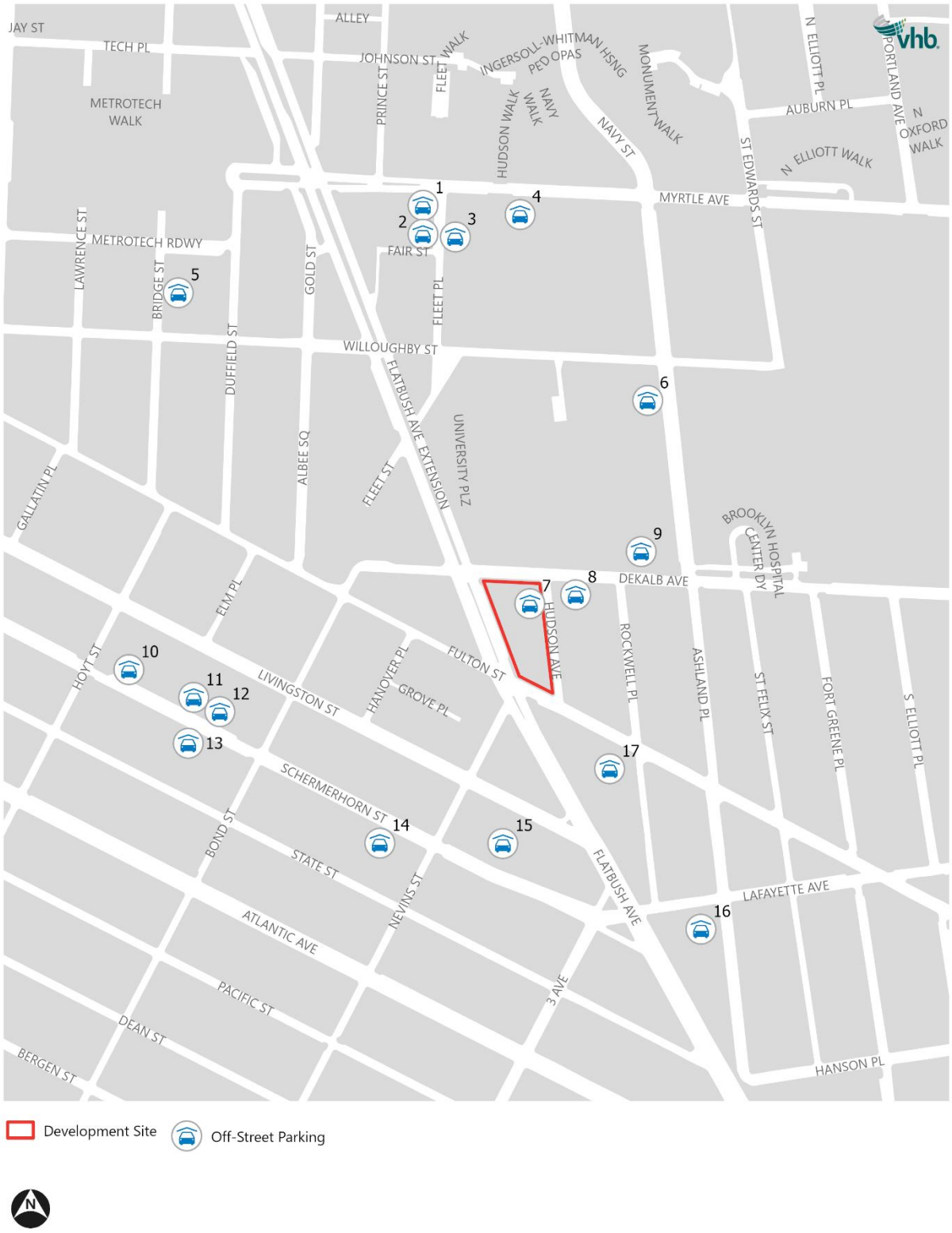


Table 10-20 Off-Street Parking Inventory

Map No.	Location	Licensed Capacity	Occupancy			
			Weekday Midday Period	Weekday PM Period	Overnight Period	Saturday Early Afternoon Period
1	150 Myrtle Ave	97	49	19	10	24
2	86 Fleet Pl	184	Operator did not response to occupancy surveys			
3	81 Fleet Pl	157	Operator did not response to occupancy surveys			
4	180 Myrtle Ave	144	130	58	7	14
5	365 Bridge St	88	44	26	0	70
6	152 Ashland Pl	564	310	141	141	28
7	470 Hudson Ave	140	126	54	25	37
8	80 DeKalb Ave	126	63	50	0	38
9	97-103 DeKalb Ave	155	109	124	39	41
10	197 Schermerhorn St	120	36	24	12	48
11	215 Schermerhorn St	109	98	33	11	44
12	200 Schermerhorn St	148	118	37	15	30
13	255 Schermerhorn St	160	Operator did not response to occupancy surveys			
14	300 Schermerhorn St	30	15	9	12	18
15	333 Schermerhorn St	120	60	108	96	72
16	286 Ashland Pl	175	105	53	2	79
17	66 Rockwell Pl	92	32	74	1	9
Total		**2,108**	**1,295 (61%)**	**809 (38%)**	**370 (18%)**	**551 (26%)**

Subways

The DeKalb Avenue subway station is located under the Development Site and provides access to the B, Q, and R subway lines. The B subway line operates between the Bedford Park Blvd station in the Bronx and the Brighton Beach station in Brooklyn. The Q subway line operates between the 96th St station in Manhattan and the Coney Island – Stillwell Av station in Brooklyn. The R subway line operates between the Forest Hills 71st Av station in Queens and the Bay Ridge 95th St station in Brooklyn.

Other nearby subway stations (within a one-quarter mile from the Development Site) include the Nevins Street subway station (served by the 2/3/4/5), the Hoyt–Schermerhorn Streets subway station (served by the A/C/G subway lines), and the Fulton Street subway station (served by the G subway line). The majority of project-generated subway trips were assigned to the DeKalb Avenue and this station was identified for analysis during the weekday AM and PM commuter peak hours.

Subway Station Elements

The DeKalb Avenue subway station has access at the northern and southern ends of the station. At the north end, access is provided at the northeast corner of the intersection of Flatbush Avenue

Extension and Fleet Street, and in the City Point development at the northwest corner of the intersection. At the south end, access is provided at the southeast corner of the intersection of Flatbush Avenue Extension and DeKalb Avenue (within the footprint of the Development Site) and the southwest corner of this intersection. The southwest access is currently closed due to construction of a new building on top of this entrance but is expected to be reopened prior to the analysis year of 2032. This station is ADA accessible with elevator service to both the southbound and northbound platform at the southern end.

Project-generated trips would primarily use the south end of the station for subway access. There are two sets of surface stairs at the southeast corner of the intersection of Flatbush Avenue and DeKalb Avenue and one set of surface stairs at the southwest corner of the intersection. The south end is served by one fare control area with nine regular turnstiles at the mezzanine level. Northbound and southbound service is provided at the platform level one floor below the mezzanine level.

Pedestrian counts were conducted at the subway station elements identified above in April 2025. **Table 10-21** shows the results of the level of service analyses at the analyzed fare control area at the south end of the subway station. The fare control area operates at LOS A during the AM and PM peak hours. **Table 10-22** and **Table 10-23** show the results of level of service analyses at the analysis stairs during the AM and PM peak hours, respectively. In the AM peak hour all stairs operate at LOS C or better. In the PM peak hour, all stairs operate at LOS A.

Table 10-21 Existing Subway Station Level of Service – Fare Control Areas

Peak Hour	Control Element	Pedestrian Volume (15-min)		Surging Factor	Friction Factor	v/c Ratio	LOS
		In	Out				
AM	DeKalb Avenue South End Fare Control 9 turnstiles	225	375	0.90	0.90	0.15	A
PM	DeKalb Avenue South End Fare Control 9 Turnstiles	259	147	0.90	0.90	0.11	A

Note:
Methodology based on *2021 CEQR Technical Manual* guidelines
Surging factors only apply to exiting volumes. The surge factor for entry volumes is 1.0.

Table 10-22 Existing Subway Station Level of Service – Stairways – AM Peak Hour

Stairway	Effective Width (ft.)	Pedestrian Volume (15-min)		Surging Factor		Friction Factor	v/c Ratio	LOS
		Down	Up	Down	Up			
DeKalb Ave Station – Surface Access Stairs								
S4B/M8B	6.8	112	103	0.90	0.90	0.90	0.26	A
S2B/M2B	6.8	126	253	0.90	0.90	0.90	0.46	B
S1A/S1B[1]	11.8	0	0	0.90	0.90	1.00	-	-
DeKalb Ave Station – Northbound Platform Stairs								
P10B/P10A	11.8	82	48	0.75	0.75	0.90	0.11	A
P2	4.5	82	48	0.75	0.75	0.90	0.29	A
P4/P6	4.5	115	212	0.75	0.75	0.90	0.72	C
DeKalb Ave Station - Southbound Platform Stairs								
P1	4.5	9	36	0.75	0.75	0.90	0.10	A
P3/P5	4.5	41	100	0.75	0.75	0.90	0.31	A

Notes:
1. S1A/S1B was closed due to construction

Table 10-23 Existing Subway Station Level of Service – Stairways – PM Peak Hour

Stairway	Effective Width (ft.)	Pedestrian Volume (15-min)		Surging Factor		Friction Factor	v/c Ratio	LOS
		Down	Up	Down	Up			
DeKalb Ave Station – Surface Access Stairs								
S4B/M8B	6.8	109	87	0.90	0.90	0.90	0.24	A
S2B/M2B	6.8	129	43	0.90	0.90	0.90	0.21	A
S1A/S1B[1]	11.8	0	0	0.90	0.90	1.00	-	-
DeKalb Ave Station – Northbound Platform Stairs								
P10B/P10A	11.8	52	10	0.75	0.75	0.90	0.05	A
P2	4.5	52	10	0.75	0.75	0.90	0.14	A
P4/P6	4.5	72	47	0.75	0.75	0.90	0.26	A
DeKalb Ave Station - Southbound Platform Stairs								
P1	4.5	35	25	0.75	0.75	0.90	0.13	A
P3/P5	4.5	112	77	0.75	0.75	0.90	0.41	A

Notes:
1. S1A/S1B was closed due to construction

Pedestrians

The pedestrian analysis uses counts conducted in November 2024. The weekday pedestrian peak hours of 8:15 AM to 9:15 AM, 11:45 AM to 12:45 PM, 4:45 PM to 5:45 PM, and the Saturday pedestrian peak hour of 2:00 PM to 3:00 PM, were identified for analysis.

As shown in **Table 10-24**, all pedestrian elements analyzed operate at acceptable LOS C or better during all peak hours. The existing peak hour volumes and levels of service for each pedestrian element analyzed are presented in **Table 10-25** through **Table 10-27**.

Table 10-24 Existing Pedestrian Levels of Service Summary

	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour
Sidewalk Elements				
Sidewalks at LOS A/B/C and Acceptable LOS D	4	4	4	4
Sidewalks at Unacceptable LOS D	0	0	0	0
Sidewalks at LOS E	0	0	0	0
Sidewalks at LOS F	0	0	0	0
Crosswalk Elements				
Crosswalks at LOS A/B/C and Acceptable LOS D	4	4	4	4
Crosswalks at Unacceptable LOS D	0	0	0	0
Crosswalks at LOS E	0	0	0	0
Crosswalks at LOS F	0	0	0	0
Corner Elements				
Corners at LOS A/B/C and Acceptable LOS D	5	5	5	5
Corners at Unacceptable LOS D	0	0	0	0
Corners at LOS E	0	0	0	0
Corners at LOS F	0	0	0	0

Note: Includes four sidewalk, four crosswalk, and five corner analysis locations

Table 10-25 Existing Pedestrian Levels of Service – Sidewalks

		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Sidewalk	Effective Width, ft	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS
DeKalb Avenue, between Flatbush Avenue Extension and Hudson Avenue (south side)	17.5	1,380	170.0	B	424	607.8	A	1,108	224.0	B	436	549.9	A
Flatbush Avenue Extension, between DeKalb Avenue and Fulton Street (east side)	18.0	735	358.0	B	726	375.0	B	1,061	250.8	B	1,007	271.9	B
Flatbush Avenue Extension, between Fulton Street and Nevins Street (west side)	10.0	571	248.8	B	600	206.0	B	892	143.6	B	975	153.1	B
Flatbush Avenue Extension, between Fulton Street and Nevins Street subway entrance (east side)	11.5	962	170.2	B	629	274.1	B	972	172.2	B	788	203.0	B

Table 10-26 Existing Pedestrian Levels of Service – Crosswalks

		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Intersection	Crosswalk	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Flatbush Avenue Extension at DeKalb Avenue	East	667	84.8	A	539	142.5	A	839	87.1	A	755	85.8	A
DeKalb Avenue at Hudson Avenue	South	1,227	29.1	C	388	123.7	A	1,005	35.9	C	468	74.8	A
Flatbush Avenue Extension at Fulton Street	North	229	80.2	A	327	59.5	B	366	58.1	B	311	71.7	A
	East	608	62.3	A	543	58.8	B	774	43.5	B	664	46.7	B

Table 10-27 Existing Pedestrian Levels of Service – Corners

		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Intersection	Corner	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Flatbush Avenue Extension at DeKalb Avenue	Southeast	14	86.8	A	8	124.2	A	16	70.1	A	34	74.5	A
DeKalb Avenue at Hudson Avenue	Southwest	22	72.8	A	23	240.3	A	26	102.4	A	14	212.1	A
Flatbush Avenue Extension at Fulton Street	Northeast	178	398.5	A	238	348.4	A	283	297.1	A	161	356.6	A
	Southeast	0	170.8	A	0	172.9	A	0	131.5	A	0	145.5	A
	Southwest	378	184.8	A	573	151.3	A	649	123.6	A	102	203.1	A

No Action Conditions

Traffic

Traffic Volumes

This section establishes the baseline (No-Action) condition against which potential impacts of the project can be identified. Future year conditions were analyzed for the year 2032. No-Action traffic, pedestrian, and transit volumes were established by applying a background growth rate of 0.25 percent per year for the first 5 years (years 2024 to 2029) and a growth rate of 0.125 percent per year for the subsequent 3 years (years 2029 to 2032) in accordance with *CEQR Technical Manual* guidelines for Downtown Brooklyn projects. This background growth is applied to existing traffic volumes and accounts for smaller projects and general increases in travel demand. As detailed in **Chapter 2, Land Use, Zoning, and Public Policy**, several developments are being planned and will be expected to be developed by the year 2032 within the study area. Eleven projects were identified that would contribute a meaningful increase in vehicle, transit, or pedestrian volumes to the study area and were therefore incorporated in the 2032 No-Action condition analyses. The development programs of these 11 background developments would total to approximately 4,200 residential units and 526,000 sf of office and commercial space and 103 hotel rooms and are detailed in **Table 10-28**. No-Action condition traffic volume maps for the weekday AM, midday, and PM, and Saturday peak hours are provided in **Figure 10-18** through **Figure 10-34**.

Table 10-28 Background Development Projects

No.	Project Name/Address	Description	Projected Completion Date
1	180 Ashland Place	569 residential units	Anticipated to be completed by 2032
2	19 Rockwell Place	174 residential units	To be completed by 2025
3	285 Schermerhorn Place	84 residential units 2,080 sf retail space 14,131 sf community space	Anticipated to be completed by 2032
4	570 Fulton Street	163 residential units 87,000 sf retail space	Anticipated to be completed by 2032
5	589 Fulton Street	557 residential units 37,358 sf retail space	Anticipated to be completed by 2032
6	625 Fulton Street	1,096 residential units 86,693 sf retail space	To be completed by 2024
7	89 DeKalb Avenue	324 residential units 55,000 sf office space	To be completed by 2025
8	90 Flatbush Avenue	850 residential units 45,000 sf retail space 165,000 sf office space	To be completed by 2024
9	95 Rockwell Place	158 residential units 32,568 sf retail space	Started demolition
10	99 Fleet Place	294 residential units	Anticipated to be completed by 2032
11	291 Livingston Street	103 hotel rooms	Anticipated to be completed by 2032

Figure 10-27 No-Action Condition Traffic Volumes – Weekday AM Peak Hour (North Study Area)



Figure 10-28 No-Action Condition Traffic Volumes – Weekday AM Peak Hour (South Study Area)

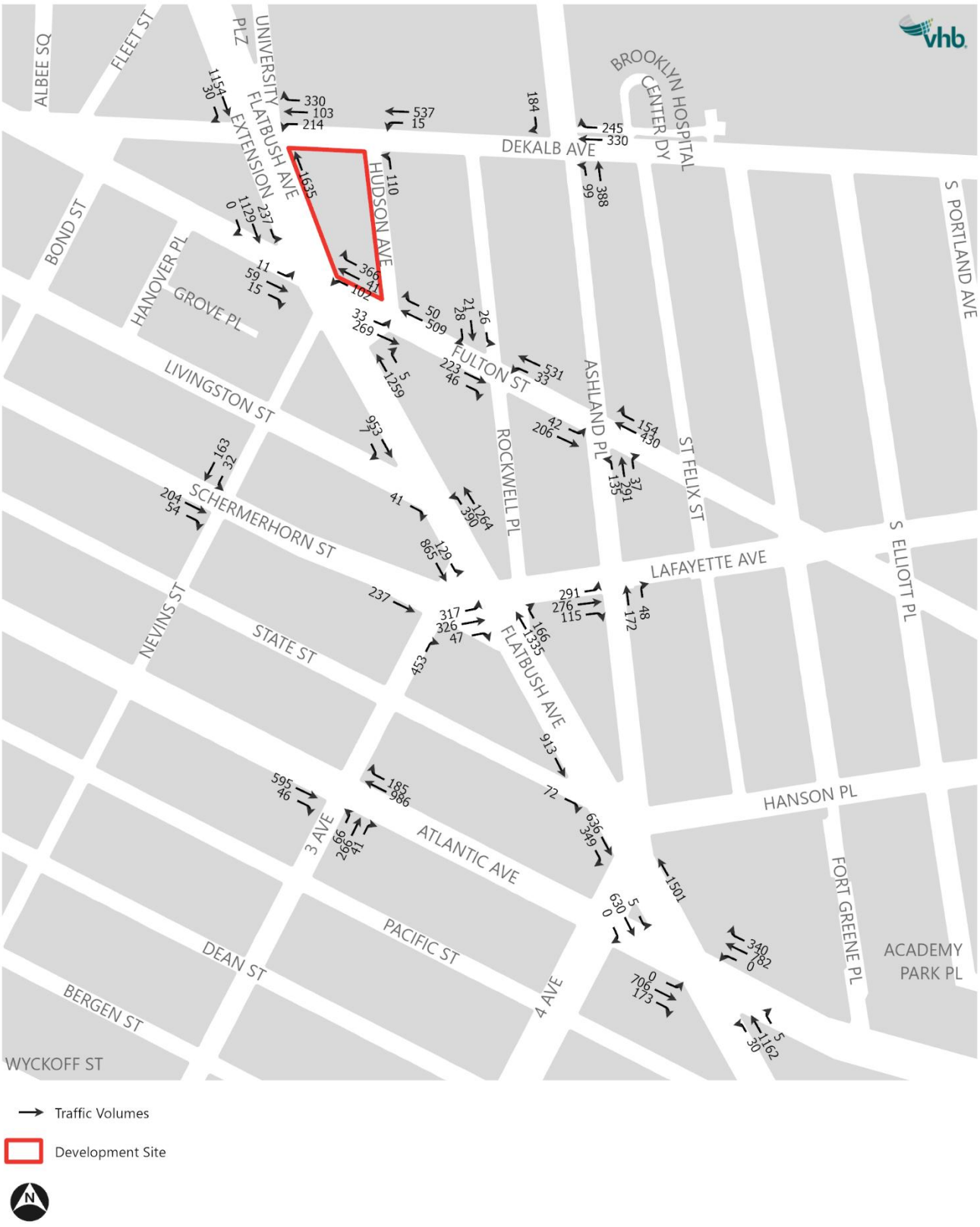


Figure 10-29 No-Action Condition Traffic Volumes – Weekday Midday Peak Hour (North Study Area)

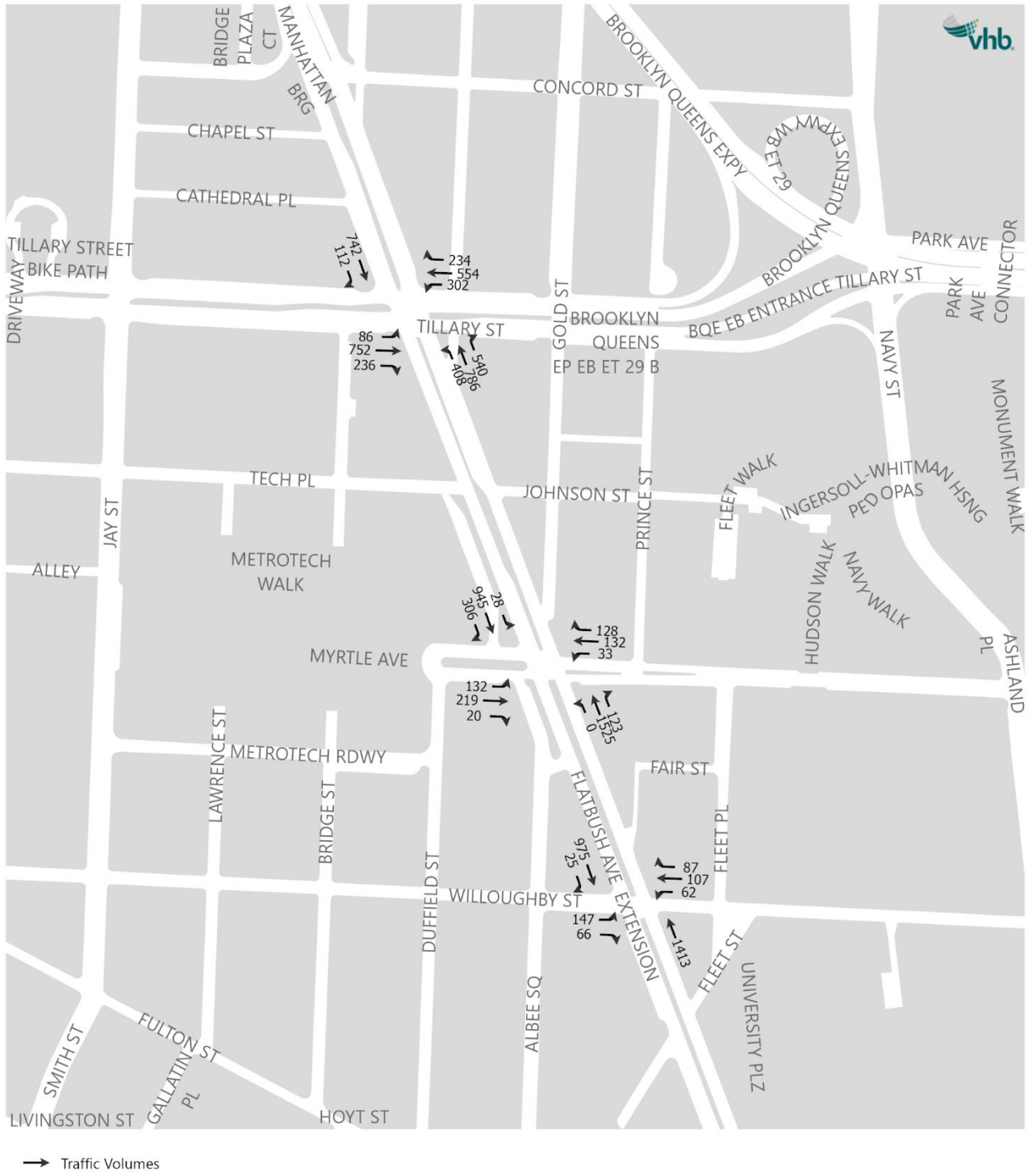


Figure 10-30 No-Action Condition Traffic Volumes – Weekday Midday Peak Hour (South Study Area)

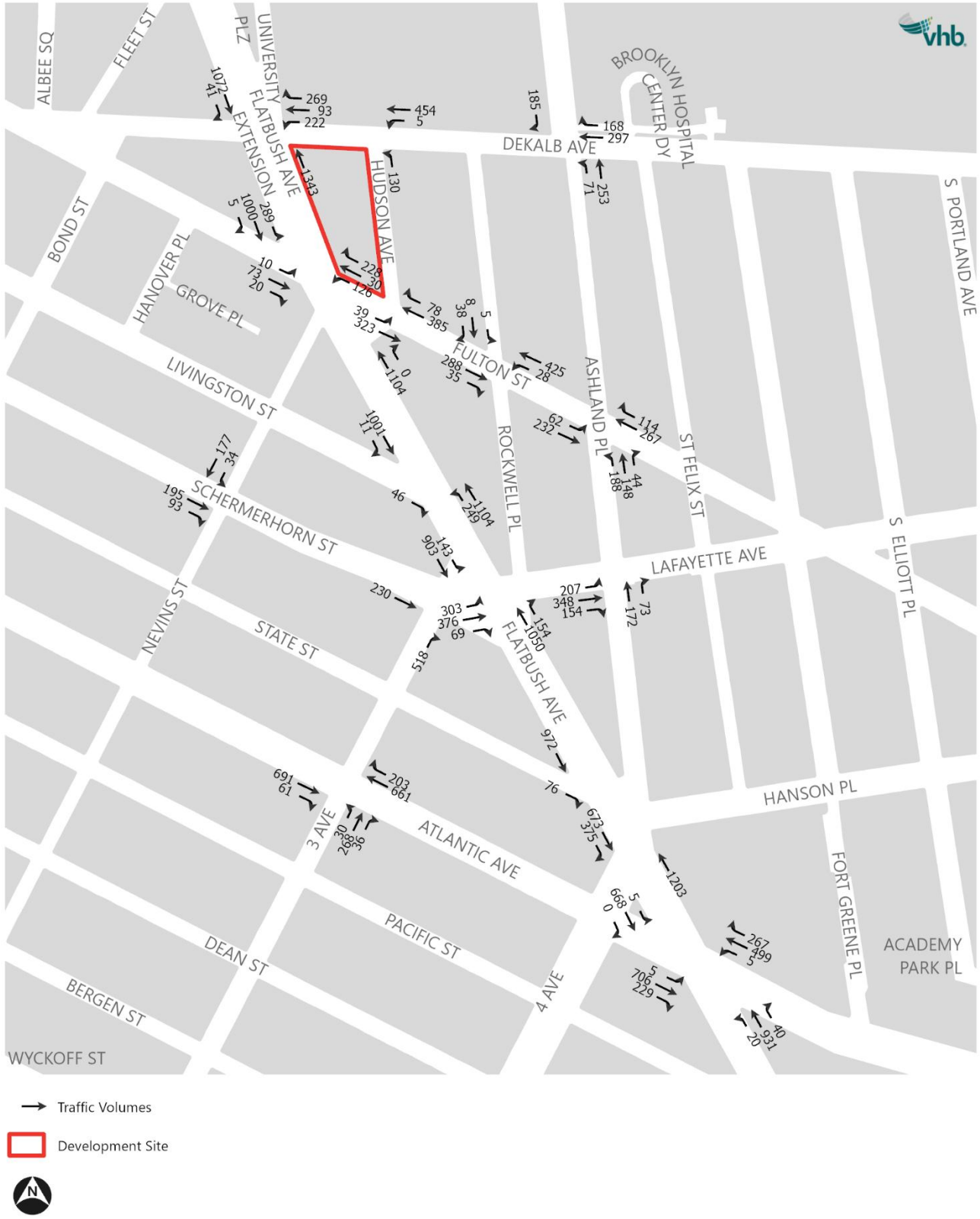


Figure 10-31 No-Action Condition Traffic Volumes – Weekday PM Peak Hour (North Study Area)

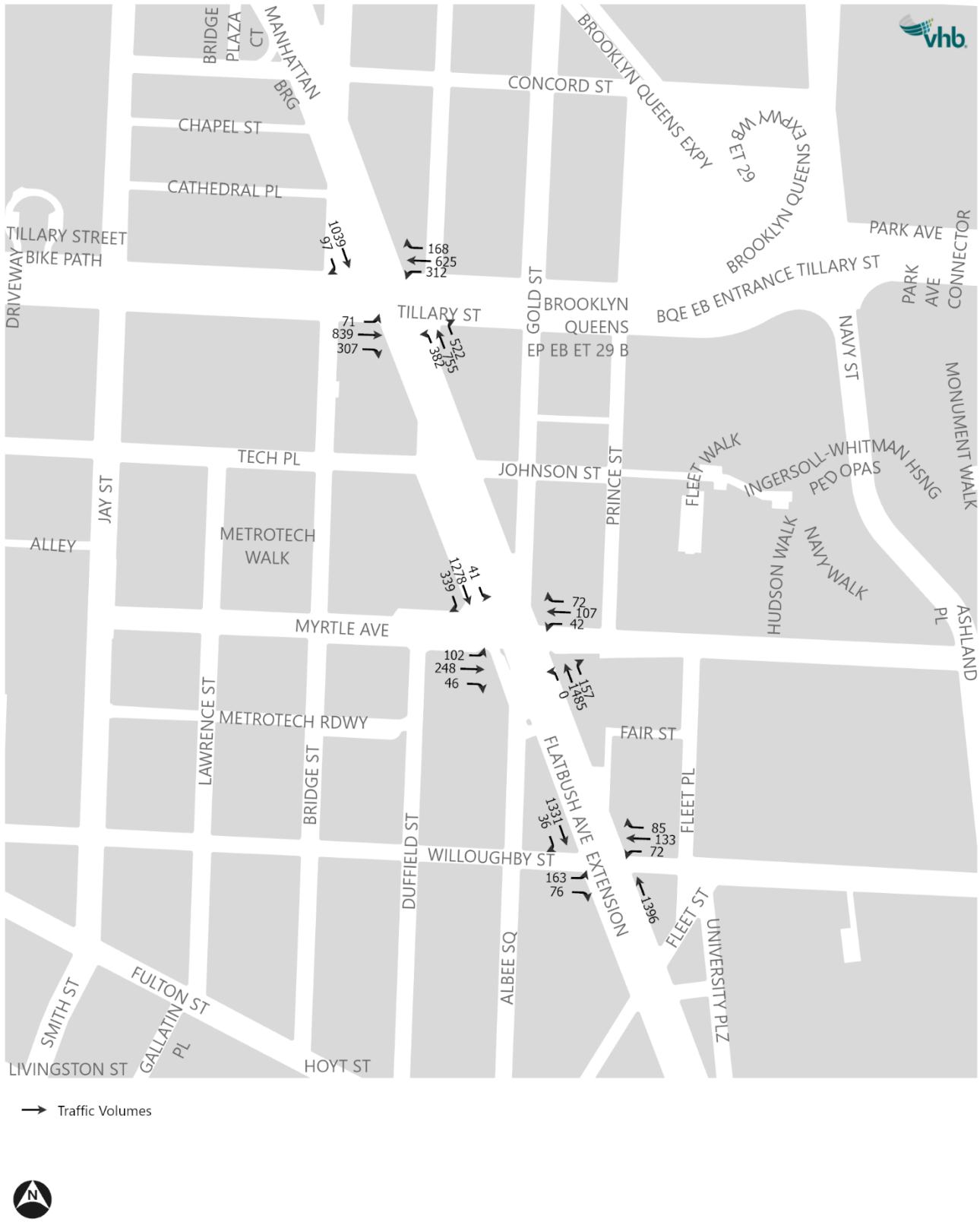


Figure 10-32 No-Action Condition Traffic Volumes – Weekday PM Peak Hour (South Study Area)

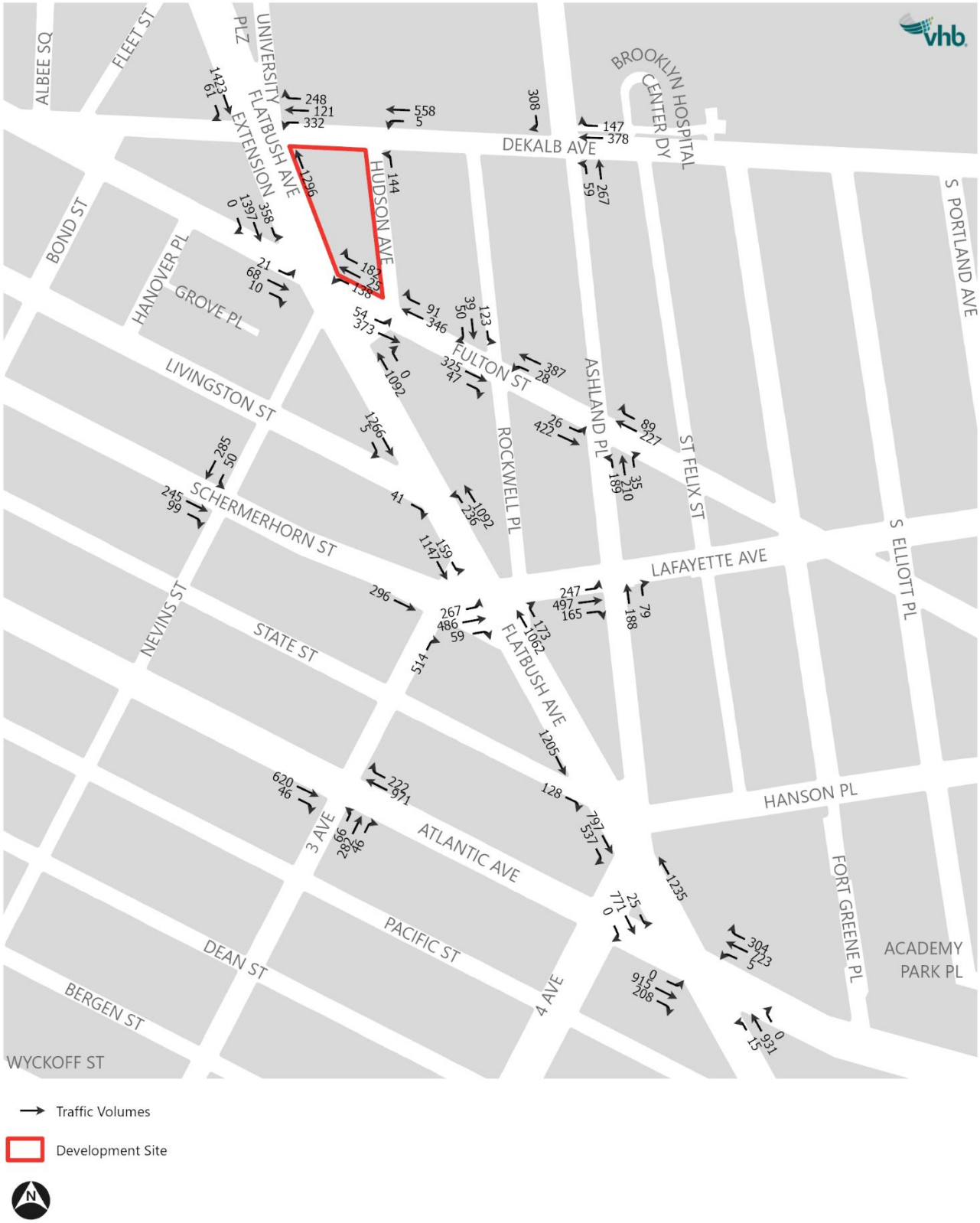
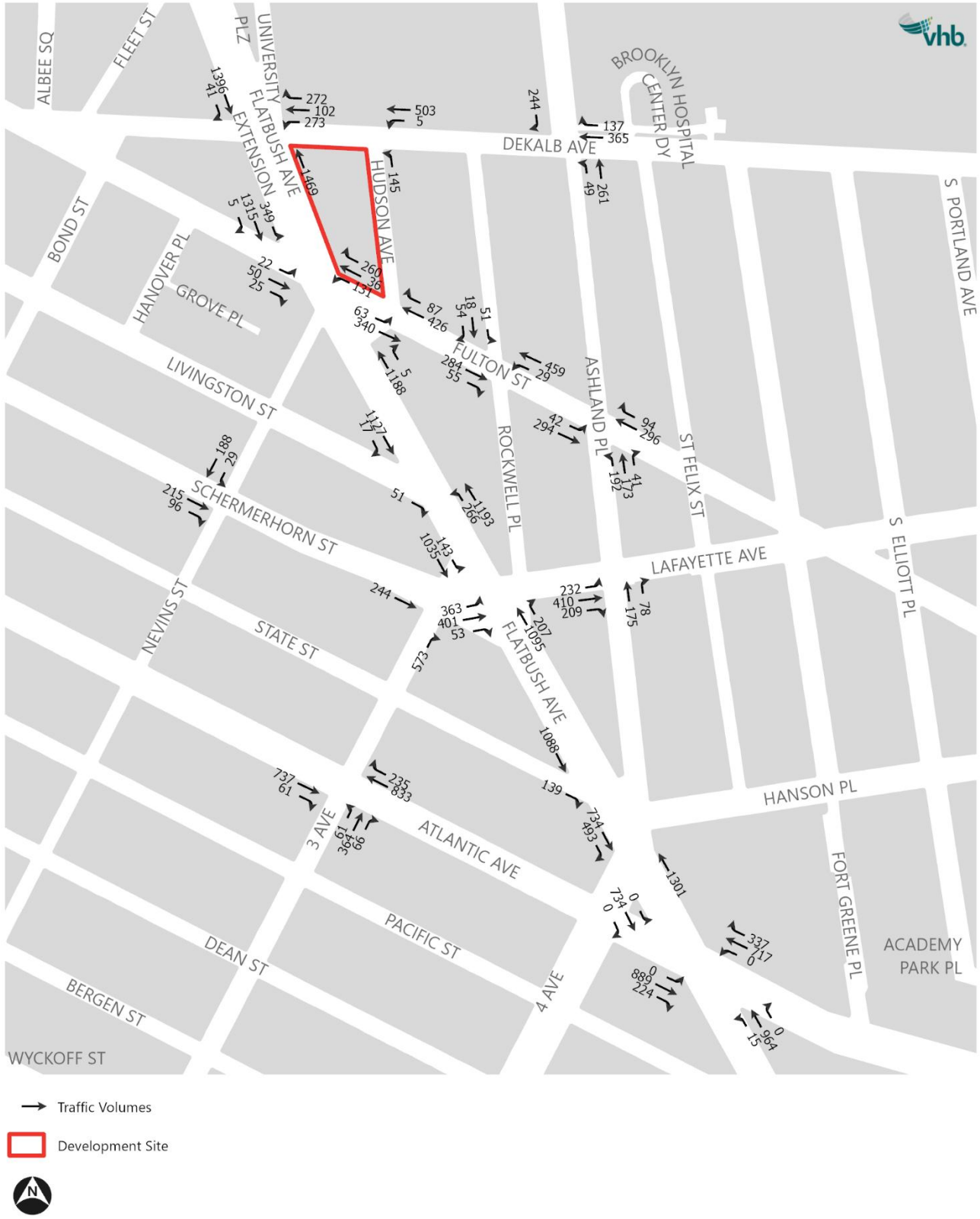


Figure 10-33 No-Action Condition Traffic Volumes – Saturday Peak Hour (North Study Area)



Figure 10-34 No-Action Condition Traffic Volumes – Saturday Peak Hour (South Study Area)



Roadway Improvements

NYC DOT is currently in the process of developing the Flatbush Avenue Bus Priority plan that would implement bus lanes along Flatbush Avenue between Livingston Street to the north and Grand Army Plaza to the south, portions of which fall within the traffic study area for the Proposed Project. As currently proposed, the plan would convert two Flatbush Avenue travel lanes to center-running bus lanes with the goals of improving bus speeds, reliability, and safety along the corridor; the plan would also implement concrete bus boarding islands and would extend the curb at selected locations to provide additional pedestrian spaces.

NYC DOT is also in preliminary planning stage for the DeKalb-Lafayette Avenues Bus and Safety Improvements project to improve bus service and street safety along the DeKalb Avenue and Lafayette Avenue corridors between Flatbush Avenue Extension and Broadway. Portions of the DeKalb Avenue corridor fall within the traffic study area for the Proposed Project. As preliminarily indicated, NYC DOT is exploring the feasibility of implementing bus priority measures, which might include curbside bus lanes similar to those that were temporarily implemented along DeKalb Avenue in the summer of 2024, and other improvements focused on improving safety for pedestrians and bicyclists.

If implemented, these preliminary plans have the potential to change future conditions, including travel patterns such as vehicle routing and mode choice, and may result in additional significant adverse impacts at traffic analysis locations due to the reduction in roadway capacity for general vehicle traffic. These changes could affect intersections along Flatbush Avenue between Livingston Street and Atlantic Avenue, DeKalb Avenue between Flatbush Avenue Extension and Ashland Place, and nearby upstream or downstream intersections.

At the time of the publication of the DEIS, these two plans remain in development. As such, for the purposes of the traffic analysis, the DEIS uses the existing roadway configuration (e.g., number of travel lanes, parking lanes, etc.) and signal timing plans on the Flatbush Avenue and DeKalb Avenue corridors to model the future conditions by the Proposed Project's analysis year.

The proposed Flatbush Avenue Bus Priority project and DeKalb-Lafayette Avenues Bus and Safety Improvements project would be implemented at NYC DOT's discretion. Once the design of the aforementioned projects is complete, NYC DOT would conduct post-implementation monitoring studies to assess traffic conditions, which would include, but is not limited to: monitoring vehicle speeds and traffic volumes for a defined period of time. Based on the findings of these studies, NYC DOT may refine components of the project to optimize roadway conditions.

Levels of Service

Based on the traffic volume increases and traffic operations changes mentioned above, the 2032 No-Action traffic levels of service were determined for the 19 analysis locations. **Table 10-29** and **Table 10-30** provide an overview of the levels of service that are projected to characterize the No-Action "overall" intersection conditions and individual traffic movements, respectively, during the AM, midday, and PM peak hours. Detailed traffic levels of service are provided in **Table 10-31**.

Table 10-29 Year 2032 No-Action Traffic Level of Service Summary – Overall Intersections

	Existing				No-Action			
	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour
Intersections at Overall LOS A/B/C	11	14	17	15	9	10	10	9
Intersections at Overall LOS D	6	3	1	3	3	6	5	5
Intersections at Overall LOS E	1	2	1	1	5	2	3	2
Intersections at Overall LOS F	1	0	0	0	2	1	1	3

Note: Includes 19 signalized intersections

Table 10-30 Year 2032 No-Action Traffic Level of Service Summary – Traffic Movements

	Existing				No-Action			
	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour
Traffic Movements at LOS A/B/C	40	50	45	48	39	45	40	38
Traffic Movements at LOS D	23	13	14	15	19	15	17	15
Traffic Movements at LOS E	5	6	13	7	8	9	7	8
Traffic Movements at LOS F	10	9	6	8	15	12	17	17
Number of Individual Traffic Movements	81	81	81	78	81	81	81	78

Note: Number of movements may vary between peak hours due to turn prohibitions, parking regulations, and the presence of de facto left-turn movements.

Table 10-31 2032 No-Action Traffic Level of Service

Intersection & Approach		AM Peak Hour				Midday Peak Hour				PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Flatbush Avenue Extension and Tillary Street																	
Flatbush Avenue Extension	NB	L	1.11	102.4	F	L	1.07	103.9	F	L	1.06	92.1	F	L	1.09	103.8	F
	NB	T	0.94	49.0	D	T	0.73	34.8	C	T	0.61	42.4	D	T	0.63	34.6	C
	NB	R	0.57	4.0	A	R	0.49	1.1	A	R	0.49	1.6	A	R	0.50	1.7	A
	SB	T	0.70	42.3	D	T	0.72	42.9	D	T	0.94	57.0	E	T	0.65	40.6	D
	SB	R	0.19	19.2	B	R	0.24	19.7	B	R	0.24	19.9	B	R	0.18	18.8	B
Tillary Street	EB	L	0.64	66.0	E	L	0.53	59.3	E	L	0.41	53.6	D	L	0.55	59.0	E
	EB	T	0.89	55.2	E	T	0.96	65.7	E	T	1.03	80.7	F	T	0.93	59.3	E
	EB	R	0.83	49.8	D	R	0.58	31.8	C	R	0.79	44.1	D	R	0.70	37.0	D
	WB	L	1.14	134.7	F	L	0.90	78.1	E	L	0.93	81.4	F	L	1.13	127.2	F
	WB	T	0.88	55.2	E	T	0.87	53.5	D	T	0.91	57.3	E	T	0.87	52.9	D
	WB	R	1.05	109.0	F	R	0.97	92.6	F	R	0.62	48.2	D	R	0.94	80.6	F
Overall Intersection		**-**	**-**	**58.8**	**E**	**-**	**-**	**51.1**	**D**	**-**	**-**	**55.1**	**E**	**-**	**-**	**54.2**	**D**

Table 10-31 2032 No-Action Traffic Level of Service

Intersection & Approach		AM Peak Hour Mvt	AM V/C	AM Ctrl Delay[1]	AM LOS	Midday Peak Hour Mvt	Midday V/C	Midday Ctrl Delay[1]	Midday LOS	PM Peak Hour Mvt	PM V/C	PM Ctrl Delay[1]	PM LOS	Saturday Peak Hour Mvt	Saturday V/C	Saturday Ctrl Delay[1]	Saturday LOS
Flatbush Avenue Extension and Myrtle Avenue																	
Flatbush Avenue Extension	NB	TR	1.16	89.8	F	TR	0.94	29.2	C	TR	0.90	35.3	D	TR	1.07	62.0	E
	SB	L	0.30	55.8	E	L	0.32	51.6	D	L	0.54	75.9	E	L	0.24	47.5	D
	SB	TR	0.73	16.3	B	TR	0.61	20.0	B	TR	0.76	10.3	B	TR	0.66	18.7	B
Myrtle Avenue	EB	L	1.09	182.3	F	L	1.05	133.7	F	L	0.86	88.6	F	L	0.61	64.7	E
	EB	TR	0.60	48.0	D	TR	0.82	62.7	E	TR	1.04	103.6	F	TR	0.75	56.2	E
	WB	L	0.44	50.6	D	L	0.39	50.0	D	L	0.68	82.9	F	L	0.24	41.7	D
	WB	TR	1.06	108.2	F	TR	1.05	111.4	F	TR	0.70	54.0	D	TR	0.93	80.7	F
Overall Intersection		**-**	**-**	**64.2**	**E**	**-**	**-**	**39.2**	**D**	**-**	**-**	**34.1**	**C**	**-**	**-**	**46.1**	**D**
Flatbush Avenue Extension and Willoughby Street																	
Flatbush Avenue Extension	NB	T	0.95	52.0	D	T	0.86	16.6	B	T	0.74	17.0	B	T	0.85	23.6	C
	SB	TR	0.66	28.4	C	TR	0.60	29.3	C	TR	0.75	10.6	B	TR	0.74	31.0	C
Willoughby Street	EB	L	0.79	61.3	E	L	0.60	42.8	D	L	0.82	63.5	E	L	0.62	42.4	D
	EB	R	0.16	29.0	C	R	0.21	28.5	C	R	0.24	30.7	C	R	0.36	31.9	C
	WB	LTR	0.73	45.7	D	LTR	0.65	39.9	D	LTR	0.70	43.3	D	LTR	0.59	37.6	D
Overall Intersection		**-**	**-**	**43.7**	**D**	**-**	**-**	**24.8**	**C**	**-**	**-**	**19.7**	**B**	**-**	**-**	**28.7**	**C**

Table 10-31 2032 No-Action Traffic Level of Service

Intersection & Approach		AM Peak Hour				Midday Peak Hour				PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Flatbush Avenue Extension and DeKalb Avenue																	
Flatbush Avenue Extension	NB	T	0.99	64.3	E	T	0.80	11.7	B	T	0.72	47.0	D	T	0.78	10.3	B
	SB	TR	0.75	45.6	D	TR	0.63	3.5	A	TR	0.79	5.4	A	TR	0.77	8.8	A
DeKalb Avenue	WB	LT	0.94	58.6	E	LT	1.00	78.9	E	LT	1.43	232.8	F	LT	1.20	141.3	F
	WB	R	1.27	173.8	F	R	1.25	168.9	F	R	1.27	178.0	F	R	1.37	216.5	F
Overall Intersection		**-**	**-**	**68.2**	**E**	**-**	**-**	**30.0**	**C**	**-**	**-**	**66.3**	**E**	**-**	**-**	**41.2**	**D**
Flatbush Avenue Extension and Fulton Street																	
Flatbush Avenue Extension	NB	T	0.89	15.7	B	T	0.85	14.4	B	T	0.83	12.7	B	T	0.88	61.0	E
	SB	L	1.30	200.9	F	L	1.24	175.3	F	L	1.34	204.1	F	L	1.35	216.1	F
	SB	T	0.54	16.5	B	T	0.48	21.5	C	T	0.59	7.7	A	T	0.58	22.4	C
Fulton Street	EB	LTR	0.46	44.7	D	LTR	0.46	42.7	D	LTR	0.43	44.3	D	LTR	0.46	52.1	D
	WB	LT	0.82	34.1	C	LT	1.05	74.9	E	LT	1.04	82.1	F	LT	1.06	80.7	F
	WB	R	0.91	35.5	D	R	0.54	6.0	A	R	0.40	7.8	A	R	0.65	16.9	B
Overall Intersection		**-**	**-**	**34.9**	**C**	**-**	**-**	**37.3**	**D**	**-**	**-**	**36.4**	**D**	**-**	**-**	**58.7**	**E**

Table 10-31 2032 No-Action Traffic Level of Service

Intersection & Approach		AM Peak Hour				Midday Peak Hour				PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Flatbush Avenue and Livingston Street																	
Flatbush Avenue	NB	L	0.70	43.9	D	L	0.43	23.0	C	L	0.50	33.2	C	L	0.50	31.7	C
	NB	T	0.69	28.9	C	T	0.60	6.5	A	T	0.65	9.5	A	T	0.62	7.5	A
	SB	T	0.56	3.6	A	T	0.61	14.3	B	T	0.68	5.4	A	T	0.60	12.3	B
Livingston Street	EB	R	0.15	23.4	C	R	0.14	22.5	C	R	0.13	22.3	C	R	0.17	23.1	C
Overall Intersection		-	-	**22.2**	**C**	-	-	**11.9**	**B**	-	-	**10.2**	**B**	**-**	**-**	**12.6**	**B**
Flatbush Avenue and Lafayette Avenue																	
Flatbush Avenue	NB	TR	1.01	74.9	E	TR	0.80	35.1	D	TR	0.81	24.4	C	TR	0.90	73.3	E
	SB	L	0.77	114.9	F	L	0.69	95.3	F	L	0.70	106.6	F	L	0.73	49.9	D
	SB	T	0.46	5.9	A	T	0.48	2.5	A	T	0.57	2.9	A	T	0.50	3.1	A
Schermerhorn Street	EB	L	1.24	160.2	F	L	1.17	125.3	F	L	1.07	102.8	F	L	1.19	128.3	F
	EB	TR	0.57	82.1	F	TR	0.67	74.7	E	TR	0.74	80.9	F	TR	0.61	73.4	E
Overall Intersection		-	**-**	**68.3**	**E**	-	**-**	**44.3**	**D**	-	**-**	**36.6**	**D**	**-**	**-**	**56.4**	**E**
Flatbush Avenue and State Street																	
Flatbush Avenue	NB	T	0.83	5.9	A	T	0.68	3.3	A	T	0.62	2.6	A	T	0.69	2.9	A
	SB	T	0.74	36.1	D	T	0.77	29.8	C	T	0.86	28.6	C	T	0.72	28.1	C
State Street	EB	R	0.18	23.4	C	R	0.19	23.5	C	R	0.29	25.2	C	R	0.31	26.3	C
Overall Intersection		-	-	**17.6**	**B**	-	-	**15.7**	**B**	-	-	**16.3**	**B**	**-**	**-**	**14.8**	**B**

Table 10-31 2032 No-Action Traffic Level of Service

Intersection & Approach		AM Peak Hour Mvt	AM V/C	AM Ctrl Delay[1]	AM LOS	Midday Peak Hour Mvt	Midday V/C	Midday Ctrl Delay[1]	Midday LOS	PM Peak Hour Mvt	PM V/C	PM Ctrl Delay[1]	PM LOS	Saturday Peak Hour Mvt	Saturday V/C	Saturday Ctrl Delay[1]	Saturday LOS
Flatbush Avenue and 4th Avenue																	
Flatbush Avenue	NB	T	0.77	12.0	B	T	0.66	8.9	A	T	0.65	9.1	A	T	0.68	10.6	B
	SB	TR	0.65	7.0	A	TR	0.70	8.4	A	TR	0.81	22.9	C	TR	0.75	15.6	B
	SB	R	0.69	15.0	B	R	0.78	28.9	C	R	0.97	79.5	E	R	0.91	81.8	F
Overall Intersection		-	**-**	**10.9**	**B**	-	**-**	**11.6**	**B**	-	**-**	**25.1**	**C**	**-**	**-**	**22.9**	**C**
Flatbush Avenue and Atlantic Avenue																	
Flatbush Avenue	NB	LT	0.88	37.6	D	LT	0.75	30.3	C	LT	0.66	27.2	C	LT	0.64	26.6	C
	SB	T	0.65	7.4	A	T	0.66	7.2	A	T	0.81	11.6	B	T	0.58	7.4	A
Atlantic Avenue	EB	T	0.68	29.7	C	T	0.72	31.0	C	T	0.79	33.8	C	T	0.76	32.3	C
	EB	R	0.56	40.8	D	R	0.77	52.2	D	R	0.81	57.9	E	R	0.60	41.4	D
	WB	T	0.71	30.6	C	T	0.48	24.9	C	T	0.67	29.2	C	T	0.60	27.3	C
	WB	R	1.14	129.9	F	R	1.14	133.0	F	R	1.12	126.1	F	R	1.14	131.7	F
Overall Intersection		-	**-**	**38.3**	**D**	-	**-**	**35.0**	**D**	-	**-**	**35.4**	**D**	**-**	**-**	**34.6**	**C**
DeKalb Avenue and Hudson Avenue																	
Hudson Avenue	NB	L	0.24	24.0	C	L	0.25	27.6	C	L	0.28	27.5	C	L	0.29	28.1	C
DeKalb Avenue	WB	LT	0.50	31.4	C	LT	0.41	43.0	D	LT	0.50	11.5	B	LT	0.46	39.5	D
Overall Intersection		-	**-**	**25.4**	**C**	-	**-**	**31.4**	**C**	-	**-**	**24.0**	**C**	**-**	**-**	**30.7**	**C**

Table 10-31 2032 No-Action Traffic Level of Service

Intersection & Approach		AM Peak Hour				Midday Peak Hour				PM Peak Hour				Saturday Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Fulton Street and Hudson Avenue																	
Fulton Street	EB	LT	0.65	35.0	C	LT	0.61	20.5	C	LT	0.73	54.3	D	LT	0.91	89.3	F
	WB	T	1.13	123.0	F	T	0.97	116.2	F	T	0.74	101.6	F	TR	1.66	341.0	F
		R	0.27	33.3	C	R	0.43	38.5	D	R	0.53	43.4	D	-	-	-	-
Overall Intersection		-	**-**	**84.5**	**F**	-	**-**	**69.0**	**E**	-	**-**	**71.2**	**E**	**-**	**-**	**229.9**	**F**
Fulton Street and Rockwell Place																	
Rockwell Place	SB	LTR	0.21	21.3	C	LTR	0.25	23.3	C	LTR	0.63	32.0	C	LTR	0.37	24.1	C
Fulton Street	EB	T	0.42	17.1	B	T	0.44	18.0	B	T	0.47	18.9	B	TR	0.64	26.0	C
	EB	R	0.17	13.0	B	R	0.11	11.9	B	R	0.16	12.6	B	-	-	-	-
	WB	LT	0.91	30.9	C	LT	0.75	23.4	C	LT	0.65	17.7	B	LT	0.88	52.0	D
Overall Intersection		-	**-**	**25.6**	**C**	-	**-**	**21.0**	**C**	-	**-**	**21.1**	**C**	**-**	**-**	**39.2**	**D**
DeKalb Avenue and Ashland Place																	
Ashland Place	NB	LT	1.14	110.4	F	LT	0.83	35.6	D	LT	0.82	34.7	C	LT	0.74	28.1	C
	SB	R	0.58	22.7	C	R	0.50	19.8	B	R	0.80	35.2	D	R	0.71	28.1	C
DeKalb Avenue	WB	TR	0.95	47.3	D	TR	0.68	22.1	C	TR	0.68	21.8	C	TR	0.64	20.6	C
Overall Intersection		-	**-**	**67.3**	**E**	-	**-**	**26.5**	**C**	-	**-**	**29.2**	**C**	**-**	**-**	**24.7**	**C**

Table 10-31 2032 No-Action Traffic Level of Service

Intersection & Approach		AM Peak Hour Mvt	AM V/C	AM Ctrl Delay[1]	AM LOS	Midday Peak Hour Mvt	Midday V/C	Midday Ctrl Delay[1]	Midday LOS	PM Peak Hour Mvt	PM V/C	PM Ctrl Delay[1]	PM LOS	Saturday Peak Hour Mvt	Saturday V/C	Saturday Ctrl Delay[1]	Saturday LOS
Fulton Street and Ashland Place																	
Ashland Place	NB	L	0.50	31.4	C	L	0.62	35.1	D	L	0.64	37.0	D	L	0.56	32.5	C
	NB	TR	0.81	44.4	D	TR	0.49	30.0	C	TR	0.66	35.2	D	TR	0.53	30.7	C
Fulton Street	EB	LT	0.55	13.3	B	LT	0.67	16.5	B	LT	0.74	22.8	C	LT	0.80	24.5	C
	WB	T	0.67	27.9	C	T	0.51	22.3	C	T	0.35	15.5	B	TR	0.85	86.0	F
	WB	R	0.43	18.4	B	R	0.31	17.5	B	R	0.28	15.4	B	-	-	-	-
Overall Intersection		-	**-**	**28.5**	**C**	-	**-**	**23.8**	**C**	-	**-**	**25.9**	**C**	**-**	**-**	**48.8**	**D**
Lafayette Avenue and Ashland Place																	
Ashland Place	NB	TR	0.60	41.9	D	TR	0.81	59.2	E	TR	0.94	78.6	E	TR	0.75	53.6	D
Lafayette Avenue	EB	LTR	0.71	17.1	B	LTR	0.66	75.8	E	LTR	0.80	20.4	C	LTR	0.79	91.0	F
Overall Intersection		-	**-**	**23.0**	**C**	-	**-**	**71.5**	**E**	-	**-**	**34.8**	**C**	**-**	**-**	**82.6**	**F**
Schermerhorn Street and 3rd Avenue																	
3rd Avenue	NB	R	0.96	116.5	F	R	1.00	113.9	F	R	0.93	111.0	F	R	0.93	107.4	F
Schermerhorn Street	EB	T	0.49	34.6	C	T	0.62	82.0	F	T	0.64	96.2	F	T	0.69	93.9	F
Overall Intersection		-	**-**	**88.5**	**F**	-	**-**	**104.4**	**F**	-	**-**	**105.6**	**F**	**-**	**-**	**103.0**	**F**

Table 10-31 2032 No-Action Traffic Level of Service

		AM Peak Hour				Midday Peak Hour				PM Peak Hour				Saturday Peak Hour			
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**
Atlantic Avenue and 3rd Avenue																	
3rd Avenue	NB	LTR	0.58	38.8	D	LTR	0.56	42.5	D	LTR	0.73	46.6	D	LTR	0.81	52.0	D
Atlantic Avenue	EB	TR	0.61	28.4	C	TR	0.69	27.1	C	TR	0.64	27.4	C	TR	0.66	26.1	C
	WB	T	0.91	44.3	D	T	0.62	24.9	C	T	0.87	38.2	D	T	0.69	26.7	C
	WB	R	0.54	30.5	C	R	0.59	28.6	C	R	0.67	34.7	C	R	0.54	26.4	C
Overall Intersection		-	**-**	**37.5**	**D**	-	**-**	**28.9**	**C**	-	**-**	**36.2**	**D**	**-**	**-**	**32.0**	**C**
Nevins Street and Schermerhorn Street																	
Nevins Street	SB	LT	0.61	33.3	C	LT	0.80	50.0	D	LT	0.73	34.2	C	LT	0.70	39.7	D
Schermerhorn Street	EB	TR	0.63	27.4	C	TR	0.61	23.2	C	TR	0.89	47.1	D	TR	0.73	29.1	C
Overall Intersection		-	**-**	**29.9**	**C**	-	**-**	**35.0**	**D**	-	**-**	**41.2**	**D**	**-**	**-**	**33.3**	**C**

Note: Overall intersection v/c ratio is the critical lane groups' v/c ratio.
[1] Control delay is measured in seconds per vehicle.

The summary overview of 2032 No-Action condition indicates that:

- In the weekday AM peak hour, seven intersections would operate at LOS E or LOS F compared to two intersections in the existing conditions. Twenty-three individual traffic movements out of 81 total movements analyzed would operate at unacceptable LOS E or LOS F compared to 15 movements in the existing conditions.
- In the weekday midday peak hour, three intersections would operate at LOS E or LOS F compared to two intersections in the existing conditions. Twenty-one individual traffic movements would operate at unacceptable LOS E or LOS F compared to 15 movements in the existing conditions.
- In the weekday PM peak hour, four intersections would operate at LOS E or LOS F compared to one intersection in the existing conditions. Twenty-four individual traffic movements would operate at unacceptable LOS E or LOS F compared to 19 movements in the existing conditions.
- In the Saturday peak hour, five intersections would operate at LOS E or LOS F compared to one intersection in the existing conditions. Twenty-five individual traffic movements would operate at unacceptable LOS E or LOS F compared to 15 movements in the existing conditions.

Traffic movements that would operate at unacceptable levels of service under the No-Action condition are listed below.

- Flatbush Avenue Extension and Tillary Street
  - Northbound Flatbush Avenue Extension left-turn movement (AM, midday, PM, and Saturday)
  - Southbound Flatbush Avenue Extension through movement (PM)
  - Eastbound Tillary Street left-turn movement (AM, midday, and Saturday)
  - Eastbound Tillary Street through movement (AM, midday, PM, and Saturday)
  - Westbound Tillary Street left-turn movement (AM, midday, PM, and Saturday)
  - Westbound Tillary Street through movement (AM and PM)
  - Westbound Tillary Street right-turn movement (AM, midday, and Saturday)
- Flatbush Avenue Extension and Myrtle Avenue
  - Northbound Flatbush Avenue Extension shared through-right movement (AM and Saturday)
  - Southbound Flatbush Avenue Extension left-turn movement (AM and PM)
  - Eastbound Myrtle Avenue left-turn movement (AM, midday, PM, and Saturday)
  - Eastbound Myrtle Avenue shared through-right movement (midday, PM, and Saturday)
  - Westbound Myrtle Avenue left-turn movement (PM)
  - Westbound Myrtle Avenue shared through-right movement (AM, midday, and Saturday)
- Flatbush Avenue Extension and Willoughby Street
  - Eastbound Willoughby Street left-turn movement (AM and PM)
- Flatbush Avenue Extension and DeKalb Avenue
  - Northbound Flatbush Avenue Extension through movement (AM)
  - Westbound DeKalb Avenue shared left-through movement (AM, midday, PM, and Saturday)
  - Westbound DeKalb Avenue right-turn movement (AM, midday, PM, and Saturday)
- Flatbush Avenue Extension and Fulton Street

- Northbound Flatbush Avenue Extension through movement (Saturday)
- Southbound Flatbush Avenue Extension left-turn movement (AM, midday, PM, and Saturday)
- Westbound Fulton Street shared left-through movement (midday, PM, and Saturday)

› Flatbush Avenue and Lafayette Avenue
- Northbound Flatbush Avenue shared through-right movement (AM and Saturday)
- Southbound Flatbush Avenue left-turn movement (AM, midday, and PM)
- Eastbound Lafayette Avenue left-turn movement (AM, midday, PM, and Saturday)
- Eastbound Lafayette Avenue shared through-right movement (AM, midday, PM, and Saturday)

› Flatbush Avenue and 4th Avenue
- Southbound Flatbush Avenue right-turn movement (PM and Saturday)

› Flatbush Avenue and Atlantic Avenue
- Eastbound Atlantic Avenue right-turn movement (PM)
- Westbound Atlantic Avenue right-turn movement (AM, midday, PM, and Saturday)

› Fulton Street and Hudson Avenue
- Eastbound Fulton Street shared left-through movement (Saturday)
- Westbound Fulton Street shared through-right movement (AM, midday, PM, and Saturday)

› DeKalb Avenue and Ashland Place
- Northbound Ashland Place shared left-through movement (AM)

› Fulton Street and Ashland Place
- Westbound Fulton Street through movement (Saturday)

› Lafayette Avenue and Ashland Place
- Northbound Ashland Place shared through-right movement (midday and PM)
- Eastbound Lafayette Avenue shared left-through-right movement (midday and Saturday)

› Schermerhorn Street and 3rd Avenue
- Northbound 3rd Avenue right-turn movement (AM, midday, PM, and Saturday)
- Eastbound Lafayette Avenue through movement (midday, PM, and Saturday)

Parking

Between 2024 and 2032, demand for off-street parking is expected to increase due to background growth and the No-Action condition development projects expected to be completed within the study area. The off-street parking supply is expected to remain at similar levels as the existing conditions. The increased parking utilization in the No-Action condition would result in a utilization rate of 62 percent during the weekday midday period, 39 percent during the weekday PM period, 18 percent during the overnight period, and 27 percent during the Saturday early afternoon period.

Subways

Subway Station Elements

Existing subway station volumes were increased based on the background growth rates identified in the *CEQR Technical Manual*. Subway trips generated by background development projects were routed through the study area and added to the No-Action condition subway volumes. The S1A/S1B surface stair would be reopened in the future No-Action condition. It is assumed that during the closure pedestrians used the S2B/M2B and S4B/M8B stairs, as an alternative for station access. These pedestrian volumes were distributed to the S1A/S1B stair based on historical count data provided by NYCT.

Under the No-Action condition, the subway station's south end fare control area would be expected to continue to operate at LOS A during the AM and PM peak hours. **Table 10-32** summarizes the 2032 No-Action condition AM and PM peak hour levels of service at the fare control area.

Table 10-32 No-Action Condition Subway Station Level of Service – Fare Control Areas

Peak Hour	Control Element	Pedestrian Volume (15-min)		Surging Factor	Friction Factor	v/c Ratio	LOS
		In	Out				
AM	DeKalb Avenue South End Fare Control 9 turnstiles	445	464	0.90	0.90	0.23	A
PM	DeKalb Avenue South End Fare Control 9 Turnstiles	397	331	0.90	0.90	0.19	A

Note:
Methodology based on *2021 CEQR Technical Manual* guidelines
Surging factors only apply to exiting volumes. The surge factor for entry volumes is 1.0.

Table 10-33 and **Table 10-34** summarize the subway stair levels of service under the No-Action condition for the AM and PM peak hours, respectively. In the AM peak hour all stairs operate at LOS C or better. In the PM peak hour, all stairs operate at LOS B or better.

Table 10-33 No-Action Condition Subway Station Level of Service – Stairways – AM Peak Hour

Stairway	Effective Width (ft.)	Pedestrian Volume (15-min)		Surging Factor		Friction Factor	v/c Ratio	LOS
		Down	Up	Down	Up			
DeKalb Ave Station – Surface Access Stairs								
S4B/M8B	6.8	126	98	0.90	0.90	0.90	0.27	A
S2B/M2B	6.8	165	226	0.90	0.90	0.90	0.47	B
S1A/S1B	11.8	168	122	0.90	0.90	0.90	0.20	B
DeKalb Ave Station – Northbound Platform Stairs								
P10B/P10A	11.8	135	69	0.90	0.90	0.90	0.14	A
P2	4.5	135	69	0.90	0.90	0.90	0.37	A
P4/P6	4.5	238	262	0.90	0.90	0.90	0.91	C
DeKalb Ave Station - Southbound Platform Stairs								

Table 10-33 No-Action Condition Subway Station Level of Service – Stairways – AM Peak Hour

Stairway	Effective Width (ft.)	Pedestrian Volume (15-min)		Surging Factor		Friction Factor	v/c Ratio	LOS
		Down	Up	Down	Up			
P1	4.5	22	42	0.90	0.90	0.90	0.12	A
P3/P5	4.5	72	114	0.90	0.90	0.90	0.34	A

Table 10-34 No-Action Condition Subway Station Level of Service – Stairways – PM Peak Hour

Stairway	Effective Width (ft.)	Pedestrian Volume (15-min)		Surging Factor		Friction Factor	v/c Ratio	LOS
		Down	Up	Down	Up			
DeKalb Ave Station – Surface Access Stairs								
S4B/M8B	6.8	110	101	0.90	0.90	0.90	0.26	A
S2B/M2B	6.8	133	84	0.90	0.90	0.90	0.26	A
S1A/S1B	11.8	133	130	0.90	0.90	0.90	0.18	A
DeKalb Ave Station – Northbound Platform Stairs								
P10B/P10A	11.8	85	54	0.90	0.90	0.90	0.10	A
P2	4.5	85	54	0.90	0.90	0.90	0.25	A
P4/P6	4.5	148	150	0.90	0.90	0.90	0.55	B
DeKalb Ave Station - Southbound Platform Stairs								
P1	4.5	44	36	0.90	0.90	0.90	0.15	A
P3/P5	4.5	133	104	0.90	0.90	0.90	0.43	A

Pedestrians

The 2032 No-Action condition pedestrian volumes were developed by increasing existing volumes to reflect expected growth in overall travel through and within the study area and incorporating pedestrian volumes from background development projects expected to be completed by 2032.

The No-Action condition pedestrian levels of service were determined for the locations analyzed in the existing conditions. **Table 10-35** provides an overview of the pedestrian levels of service for the peak hours analyzed. Pedestrian volumes and levels of service are provided in **Table 10-36** through **Table 10-38**. The summary of the No-Action condition indicates that all sidewalk and corner elements would operate at acceptable levels of service during all peak hours. One crosswalk (the south crosswalk at the intersection of DeKalb Avenue and Hudson Avenue) would operate at unacceptable LOS D during the weekday AM and PM peak hours. All other crosswalk elements would operate at acceptable levels of service during the analysis peak hours.

Table 10-35 Year 2032 No-Action Pedestrian Levels of Service Summary

	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour
Sidewalk Elements				
Sidewalks at LOS A/B/C and Acceptable LOS D	4	4	4	4
Sidewalks at Unacceptable LOS D	0	0	0	0
Sidewalks at LOS E	0	0	0	0
Sidewalks at LOS F	0	0	0	0
Crosswalk Elements				
Crosswalks at LOS A/B/C and Acceptable LOS D	3	4	3	4
Crosswalks at Unacceptable LOS D	1	0	1	0
Crosswalks at LOS E	0	0	0	0
Crosswalks at LOS F	0	0	0	0
Corner Elements				
Corners at LOS A/B/C and Acceptable LOS D	5	5	5	5
Corners at Unacceptable LOS D	0	0	0	0
Corners at LOS E	0	0	0	0
Corners at LOS F	0	0	0	0

Note: Includes four sidewalk, four crosswalk, and five corner analysis locations

Table 10-36 Year 2032 No-Action Pedestrian Levels of Service – Sidewalks

		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Sidewalk	Effective Width, ft	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS
DeKalb Avenue, between Flatbush Avenue Extension and Hudson Avenue (south side)	17.5	2,070	113.0	B	976	263.8	B	1,816	136.5	B	1,232	194.4	B
Flatbush Avenue Extension, between DeKalb Avenue and Fulton Street (east side)	18.0	1,099	239.3	B	1,077	252.7	B	1,498	177.4	B	1,486	184.1	B
Flatbush Avenue Extension, between Fulton Street and Nevins Street (west side)	10.0	983	144.3	B	1,066	115.6	B	1,420	89.8	C	1,635	90.9	B
Flatbush Avenue Extension, between Fulton Street and Nevins Street subway entrance (east side)	11.5	1,442	113.3	B	1,045	164.7	B	1,525	109.5	B	1,406	113.5	B

Table 10-37 Year 2032 No-Action Pedestrian Levels of Service – Crosswalks

		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Intersection	Crosswalk	Volume, Ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Flatbush Avenue Extension at DeKalb Avenue	East	733	77.0	A	638	119.9	A	943	76.6	A	890	72.2	A
DeKalb Avenue at Hudson Avenue	South	1,866	17.1	D	885	49.1	B	1,656	19.9	D	1,185	25.3	C
Flatbush Avenue Extension at Fulton Street	North	467	36.9	C	651	28.1	C	728	27.7	C	779	26.1	C
	East	918	39.5	C	817	37.0	C	1,123	28.6	C	1,020	28.8	C

Table 10-38 Year 2032 No-Action Pedestrian Levels of Service – Corners

		Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
Intersection	Corner	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS	Volume, ped/hr	Avg Ped Space, SF/P	LOS
Flatbush Avenue Extension at DeKalb Avenue	Southeast	90	64.7	A	54	87.6	A	67	53.5	B	90	51.9	B
DeKalb Avenue at Hudson Avenue	Southwest	70	46.5	B	76	117.2	A	77	61.2	A	90	77.7	A
Flatbush Avenue Extension at Fulton Street	Northeast	490	207.0	A	496	188.8	A	655	162.5	A	565	163.9	A
	Southeast	0	91.6	A	0	89.5	A	0	71.6	A	0	70.0	A
	Southwest	387	108.8	A	586	94.0	A	662	77.8	A	106	98.8	A

With Action Conditions

The Proposed Actions would facilitate the redevelopment of the existing building on the Development Site, which currently consists of office, ground-floor retail and a parking garage, to provide for a mixed-use building consisting of residential, office, retail, and/or community facility uses, as well as a publicly accessible open space area at the southern end of the Development Site block. The Proposed Actions would introduce 1,263 residential DUs and 217,500 gsf of non-residential space, including 129,000 gsf of retail space and 88,500 gsf of office and/or community facility space that may be dedicated for future city use on the third and fourth floors. As discussed above, for conservative analysis purposes, of the 88,500 gsf of commercial office/community facility space, it is assumed that approximately 84,500 gsf would be reserved for office space and 4,000 gsf would be reserved for medical office space.

As part of the Proposed Actions, Hudson Avenue would be narrowed to at least 21 feet in width and converted to a one-way northbound roadway. Along Flatbush Avenue Extension, the east sidewalk section between DeKalb Avenue and Fulton Street would be extended to provide 18 feet of sidewalk space; the parking lane would be displaced.

Traffic

Traffic Volumes

Overall, the Proposed Actions would generate a total of 84 vph (12 "ins" and 72 "outs") in the AM peak hour, 104 vph (53 "in" and 51 "outs") in the midday peak hour, 143 vph (89 “in” and 54 “outs”) in the PM peak hour, and 173 vph (91 "ins" and 82 "outs") in the Saturday peak hour. These vehicle trips were distributed as described in the **Level 2 Screening Assessment**. The With-Action traffic volumes for the AM, midday, PM, and Saturday peak hours are shown in **Figure 10-35** through **Figure 10-42**.

Figure 10-35 With-Action Condition Traffic Volumes – Weekday AM Peak Hour (North Study Area)



Figure 10-36 With-Action Condition Traffic Volumes – Weekday AM Peak Hour (South Study Area)

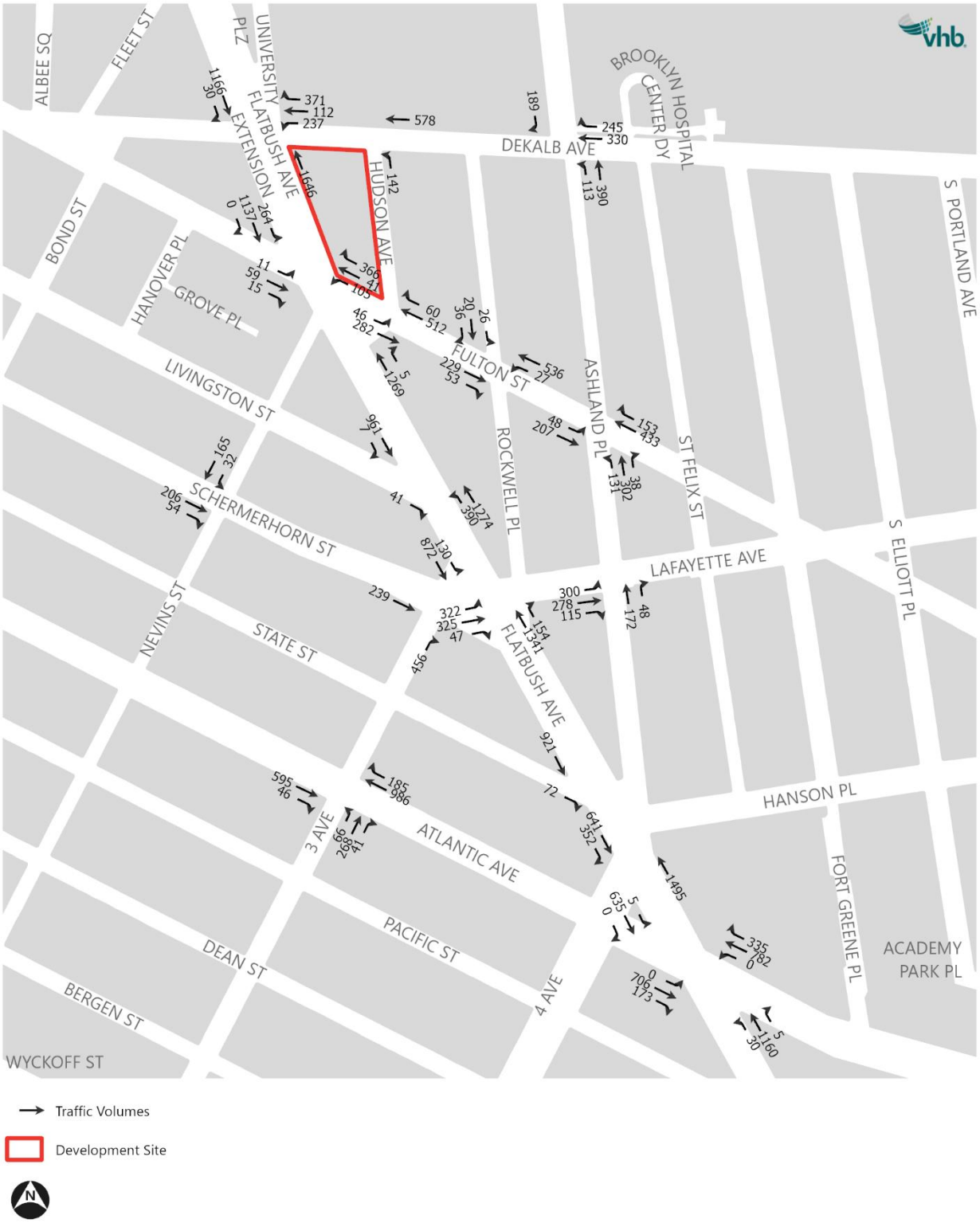


Figure 10-37 With-Action Condition Traffic Volumes – Weekday Midday Peak Hour (North Study Area)



Figure 10-38 With-Action Condition Traffic Volumes – Weekday Midday Peak Hour (South Study Area)

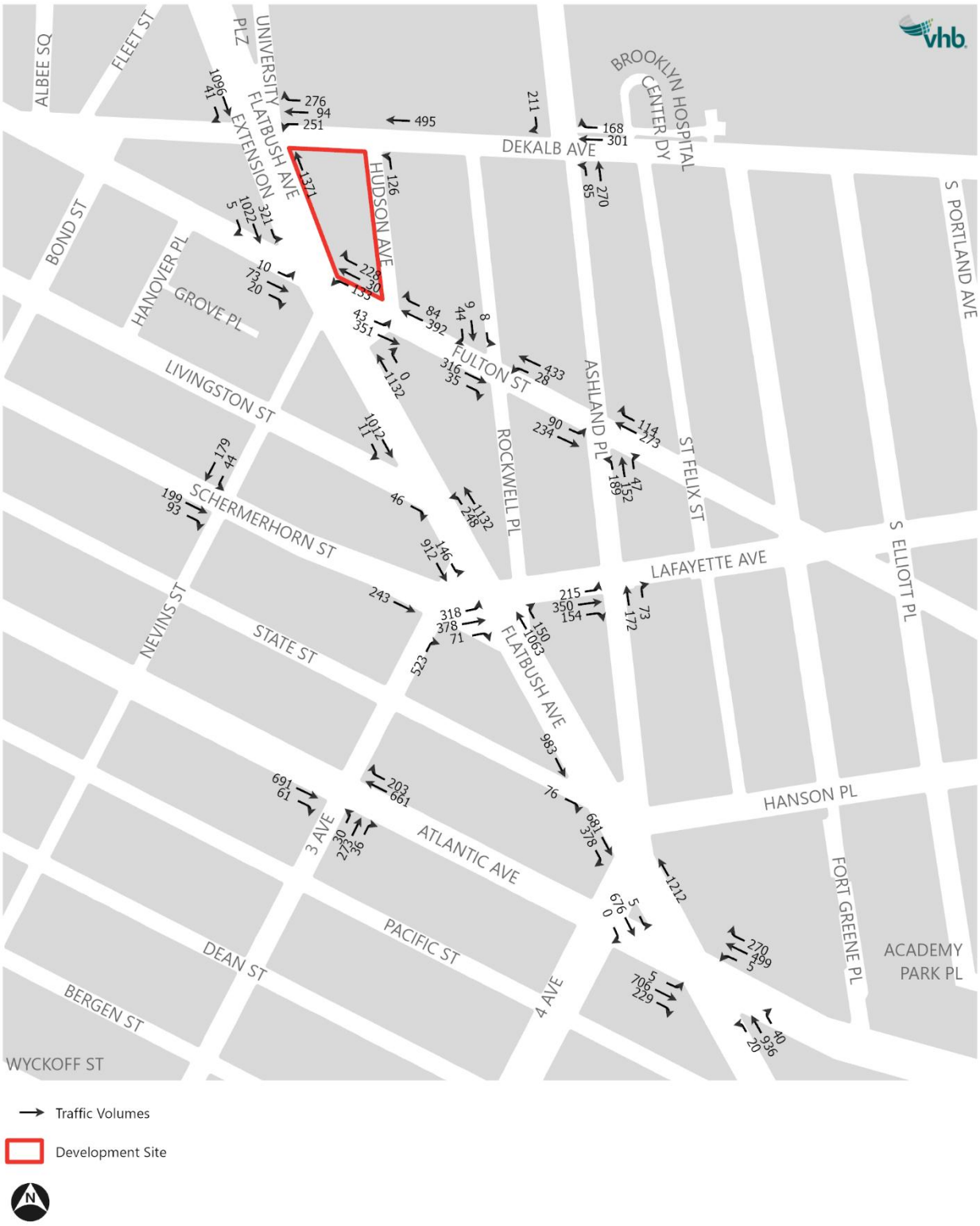


Figure 10-39 With-Action Condition Traffic Volumes – Weekday PM Peak Hour (North Study Area)

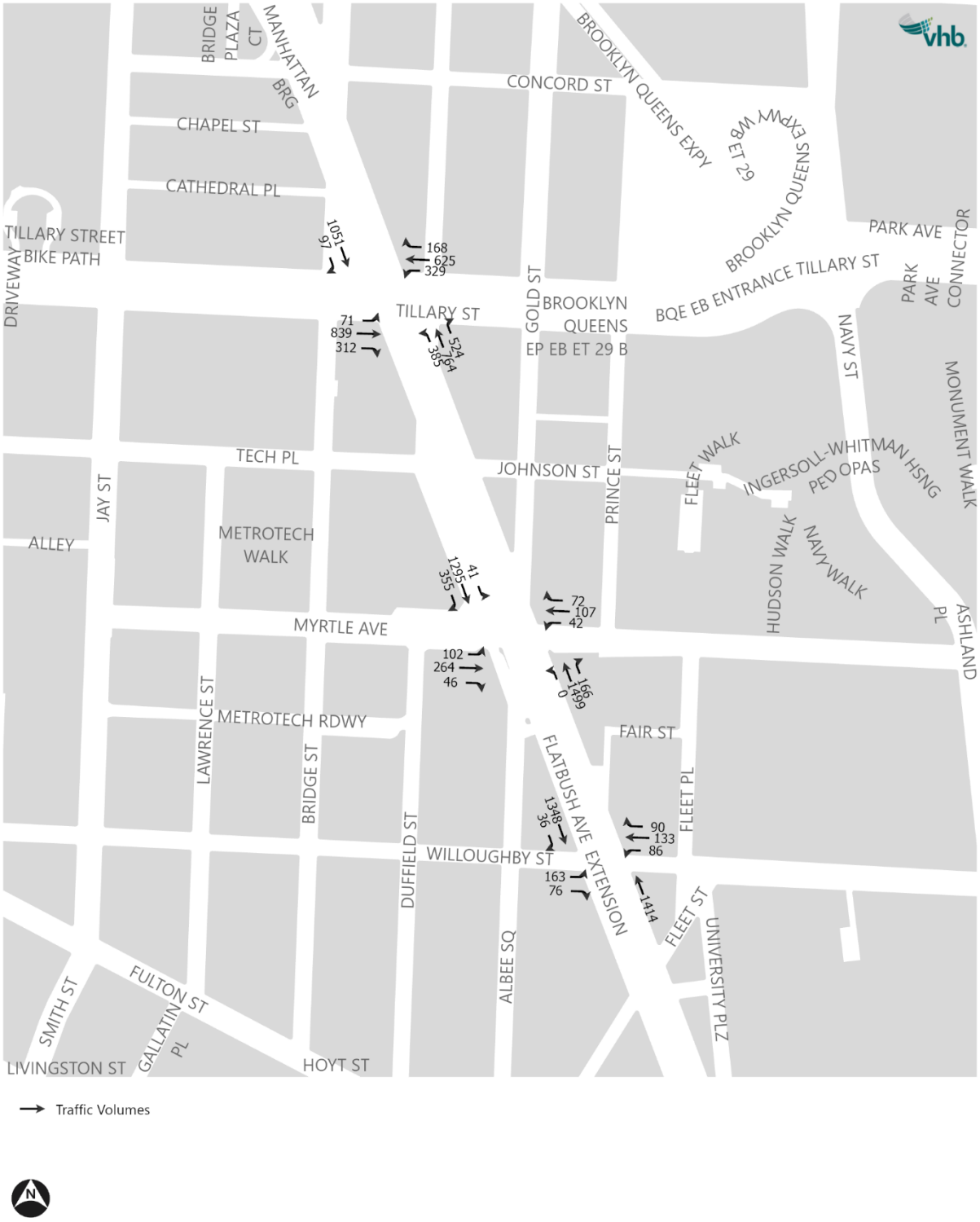


Figure 10-40 With-Action Condition Traffic Volumes – Weekday PM Peak Hour (South Study Area)

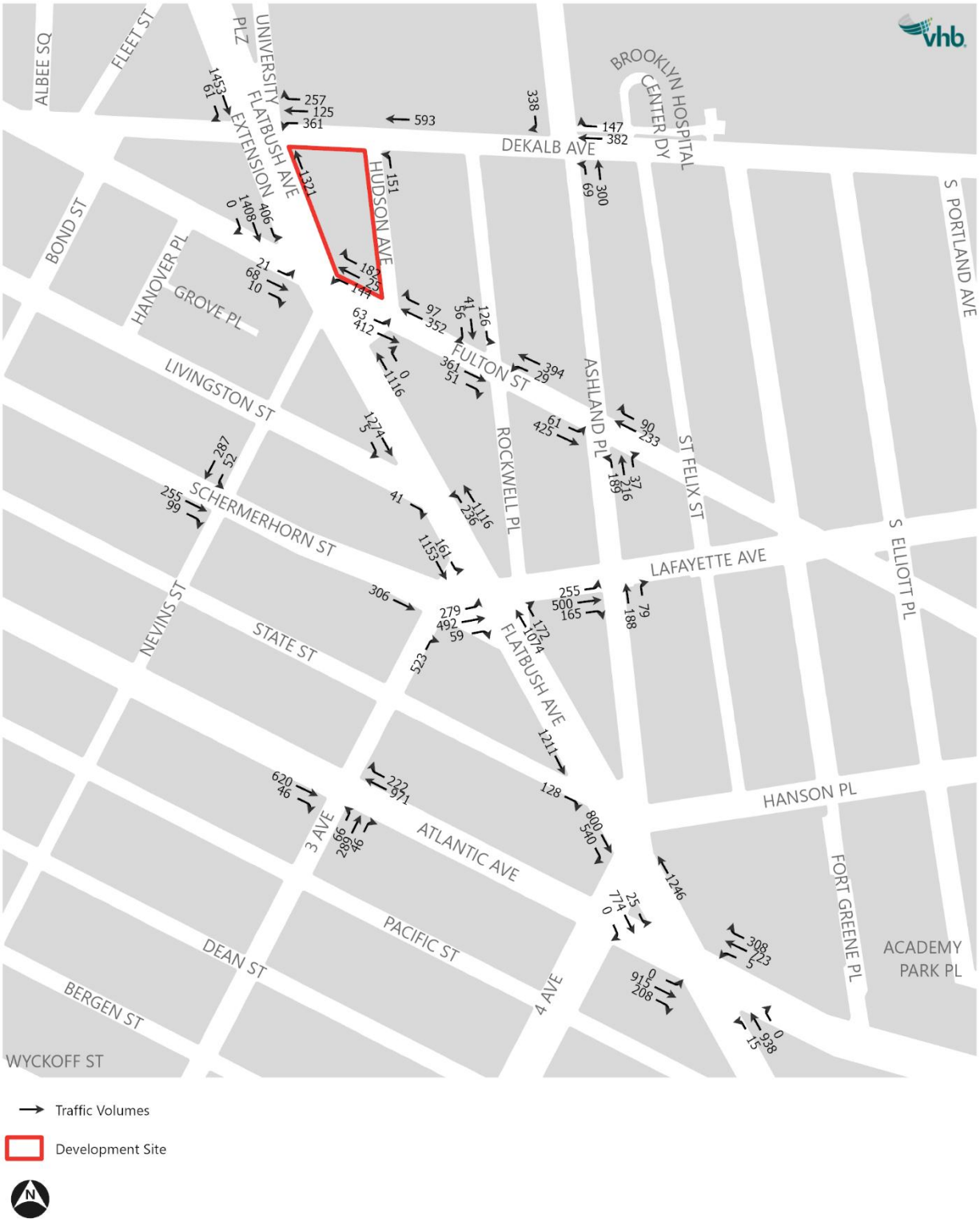
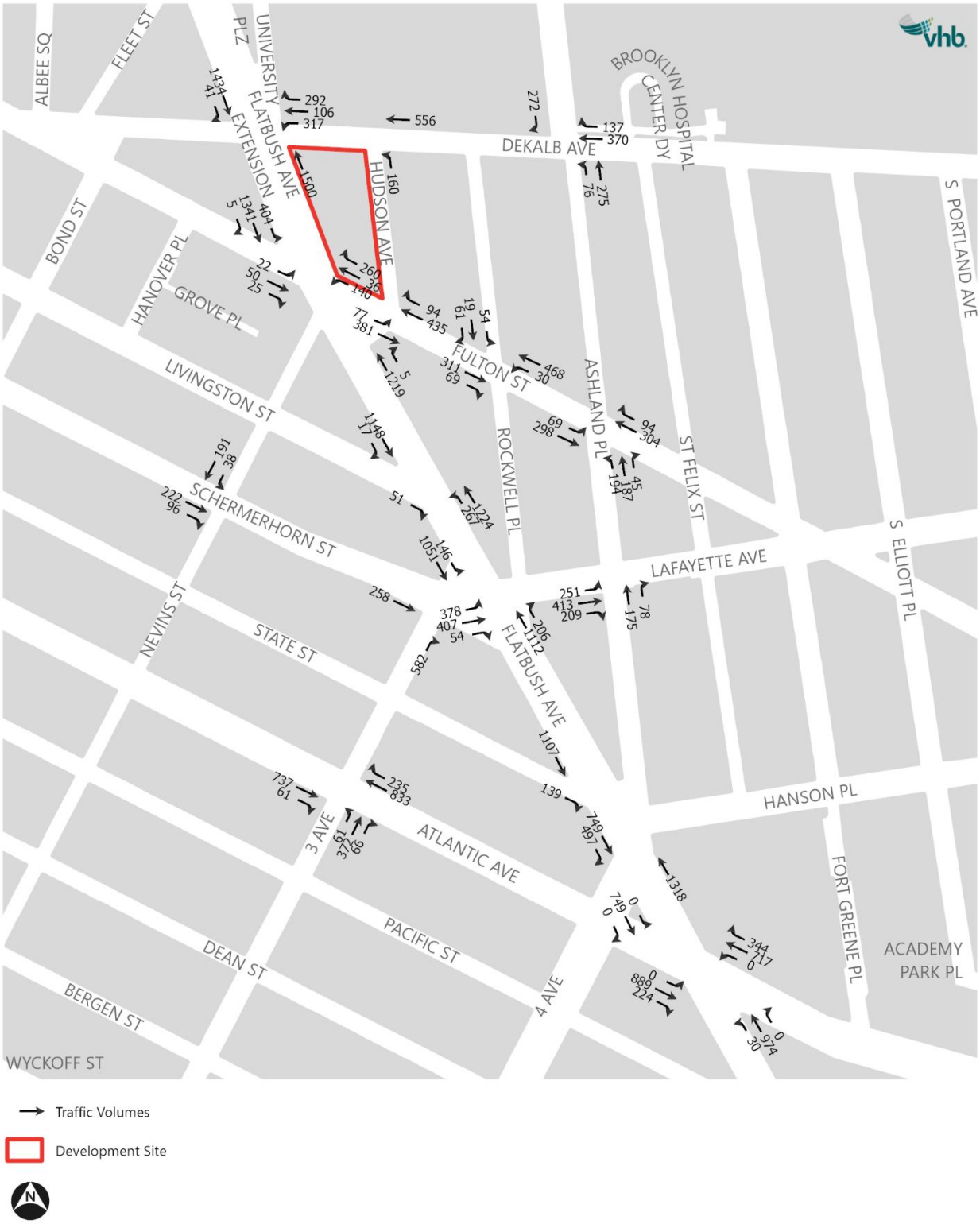


Figure 10-41 With-Action Condition Traffic Volumes – Saturday Peak Hour (North Study Area)



Figure 10-42 With-Action Condition Traffic Volumes – Saturday Peak Hour (South Study Area)



Levels of Service

Based on the traffic volume increments illustrated above, the 2032 With-Action condition traffic levels of service were determined for the 19 analysis locations. **Table 10-39** and **Table 10-40** provide an overview of the levels of service that characterize 2032 With-Action "overall" intersection conditions and individual traffic movements during the weekday AM, midday, PM, and Saturday peak hours, respectively. Detailed traffic levels of service comparing the No-Action and With-Action conditions during each peak hour are provided in **Table 10-41** through **Table 10-44**.

Table 10-39 Year 2032 With-Action Traffic Level of Service Summary – Overall Intersections

	No-Action				With-Action			
	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour
Intersections at Overall LOS A/B/C	9	10	10	9	8	10	8	6
Intersections at Overall LOS D	3	6	5	5	3	6	7	5
Intersections at Overall LOS E	5	2	3	2	6	2	2	5
Intersections at Overall LOS F	2	1	1	3	2	1	2	3
Number of significantly impacted intersections	-	-	-	-	7	6	6	10

Note: Includes 19 signalized intersections

Table 10-40 Year 2032 With-Action Traffic Level of Service Summary – Traffic Movements

	No-Action				With-Action			
	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour
Traffic Movements at LOS A/B/C	39	45	40	38	36	44	39	35
Traffic Movements at LOS D	19	15	17	15	21	15	17	14
Traffic Movements at LOS E	8	9	7	8	7	7	7	11
Traffic Movements at LOS F	15	12	17	17	17	15	18	18
Number of significantly impacted movements	-	-	-	-	8	8	9	16
Number of Individual Traffic Movements	81	81	81	78	81	81	81	78

Note: Number of movements may vary between peak hours due to turn prohibitions, parking regulations, and the presence of de facto left-turn movements.

Table 10-41 No-Action vs. With-Action Traffic Level of Service – Weekday AM Peak Hour

Intersection & Approach		2032 No-Action				2032 With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Flatbush Avenue Extension and Tillary Street									
Flatbush Avenue Extension	NB	L	1.11	102.4	F	L	1.12	108.6	F
	NB	T	0.94	49.0	D	T	0.95	49.5	D
	NB	R	0.57	4.0	A	R	0.57	4.3	A
	SB	T	0.7	42.3	D	T	0.70	42.4	D
	SB	R	0.19	19.2	B	R	0.19	19.2	B
Tillary Street	EB	L	0.64	66.0	E	L	0.64	66.0	E
	EB	T	0.89	55.2	E	T	0.89	55.2	E
	EB	R	0.83	49.8	D	R	0.84	51.0	D
	WB	L	1.14	134.7	F	L	1.15	136.3	F
	WB	T	0.88	55.2	E	T	0.88	55.2	E
	WB	R	1.05	109.0	F	R	1.05	109.0	F
Overall Intersection		**-**	**-**	**58.8**	**E**	**-**	**-**	**59.6**	**E**
Flatbush Avenue Extension and Myrtle Avenue									
Flatbush Avenue Extension	NB	TR	1.16	89.8	F	TR	1.19	105.3	F
	SB	L	0.30	55.8	E	L	0.30	56.3	E
	SB	TR	0.73	16.3	B	TR	0.73	16.3	B
Myrtle Avenue	EB	L	1.09	182.3	F	L	1.09	182.3	F
	EB	TR	0.60	48.0	D	TR	0.60	48.0	D
	WB	L	0.44	50.6	D	L	0.44	50.6	D
	WB	TR	1.06	108.2	F	TR	1.06	108.2	F
Overall Intersection		**-**	**-**	**64.2**	**E**	**-**	**-**	**72.1**	**E**
Flatbush Avenue Extension and Willoughby Street									
Flatbush Avenue Extension	NB	T	0.95	52.0	D	T	0.97	51.7	D
	SB	TR	0.66	28.4	C	TR	0.66	28.4	C
Willoughby Street	EB	L	0.79	61.3	E	L	0.79	61.8	E
	EB	R	0.16	29.0	C	R	0.16	29.0	C
	WB	LTR	0.73	45.7	D	LTR	0.74	46.6	D
Overall Intersection		**-**	**-**	**43.7**	**D**	**-**	**-**	**43.7**	**D**

Table 10-41 No-Action vs. With-Action Traffic Level of Service – Weekday AM Peak Hour

Intersection & Approach		2032 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2032 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
Flatbush Avenue Extension and DeKalb Avenue									
Flatbush Avenue Extension	NB	T	0.99	64.3	E	T	0.94	62.3	E
	SB	TR	0.75	45.6	D	TR	0.76	45.3	D
DeKalb Avenue	WB	LT	0.94	58.6	E	LT	1.04	85.2	F
	WB	R	1.27	173.8	F	R	1.48	258.7	F
Overall Intersection		**-**	**-**	**68.2**	**E**	**-**	**-**	**80.4**	**F**
Flatbush Avenue Extension and Fulton Street									
Flatbush Avenue Extension	NB	T	0.89	15.7	B	T	0.90	52.7	D
	SB	L	1.30	200.9	F	L	1.44	260.0	F
	SB	T	0.54	16.5	B	T	0.54	16.5	B
Fulton Street	EB	LTR	0.46	44.7	D	LTR	0.46	51.7	D
	WB	LT	0.82	34.1	C	LT	0.85	37.1	D
	WB	R	0.91	35.5	D	R	0.92	40.3	D
Overall Intersection		**-**	**-**	**34.9**	**C**	**-**	**-**	**56.6**	**E**
Flatbush Avenue and Livingston Street									
Flatbush Avenue	NB	L	0.70	43.9	D	L	0.70	41.0	D
	NB	T	0.69	28.9	C	T	0.69	29.6	C
	SB	T	0.56	3.6	A	T	0.56	3.7	A
Livingston Street	EB	R	0.15	23.4	C	R	0.15	23.4	C
Overall Intersection		**-**	**-**	**22.2**	**C**	**-**	**-**	**22.1**	**C**
Flatbush Avenue and Lafayette Avenue									
Flatbush Avenue	NB	TR	1.01	74.9	E	TR	1.00	72.0	E
	SB	L	0.77	114.9	F	L	0.77	115.1	F
	SB	T	0.46	5.9	A	T	0.46	5.8	A
Lafayette Avenue	EB	L	1.24	160.2	F	L	1.26	167.6	F
	EB	TR	0.57	82.1	F	TR	0.57	82.0	F
Overall Intersection		**-**	**-**	**68.3**	**E**	**-**	**-**	**67.8**	**E**

Table 10-41 No-Action vs. With-Action Traffic Level of Service – Weekday AM Peak Hour

Intersection & Approach		2032 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2032 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
Flatbush Avenue and State Street									
Flatbush Avenue	NB	T	0.83	5.9	A	T	0.82	5.9	A
	SB	T	0.74	36.1	D	T	0.74	36.5	D
State Street	EB	R	0.18	23.4	C	R	0.18	23.4	C
Overall Intersection		**-**	**-**	**17.6**	**B**	**-**	**-**	**17.8**	**B**
Flatbush Avenue and 4th Avenue									
Flatbush Avenue	NB	T	0.77	12.0	B	T	0.77	11.9	B
	SB	TR	0.65	7.0	A	TR	0.65	7.0	A
	SB	R	0.69	15.0	B	R	0.69	15.4	B
Overall Intersection		**-**	**-**	**10.9**	**B**	**-**	**-**	**10.9**	**B**
Flatbush Avenue and Atlantic Avenue									
Flatbush Avenue	NB	LT	0.88	37.6	D	LT	0.88	37.6	D
	SB	T	0.65	7.4	A	T	0.65	7.4	A
Atlantic Avenue	EB	T	0.68	29.7	C	T	0.68	29.7	C
	EB	R	0.56	40.8	D	R	0.56	40.8	D
	WB	T	0.71	30.6	C	T	0.71	30.6	C
	WB	R	1.14	129.9	F	R	1.13	124.3	F
Overall Intersection		**-**	**-**	**38.3**	**D**	**-**	**-**	**37.7**	**D**
DeKalb Avenue and Hudson Avenue									
Hudson Avenue	NB	L	0.24	24.0	C	L	0.31	24.8	C
DeKalb Avenue	WB	LT	0.50	31.4	C	T	0.51	32.6	C
Overall Intersection		**-**	**-**	**25.4**	**C**	**-**	**-**	**26.5**	**C**
Fulton Street and Hudson Avenue									
Fulton Street	EB	LT	0.65	35.0	C	LT	0.80	85.3	F
	WB	T	1.13	123.0	F	T	1.14	125.9	F
	WB	R	0.27	33.3	C	R	0.32	34.7	C
Overall Intersection		**-**	**-**	**84.5**	**F**	**-**	**-**	**103.5**	**F**

Table 10-41 No-Action vs. With-Action Traffic Level of Service – Weekday AM Peak Hour

Intersection & Approach		2032 No-Action				2032 With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Fulton Street and Rockwell Place									
Rockwell Place	SB	LTR	0.21	21.3	C	LTR	0.23	21.6	C
Fulton Street	EB	T	0.42	17.1	B	T	0.43	17.4	B
	EB	R	0.17	13.0	B	R	0.19	13.4	B
	WB	LT	0.91	30.9	C	LT	0.90	28.8	C
Overall Intersection		**-**	**-**	**25.6**	**C**	**-**	**-**	**24.3**	**C**
DeKalb Avenue and Ashland Place									
Ashland Place	NB	LT	1.14	110.4	F	LT	1.19	127.6	F
	SB	R	0.58	22.7	C	R	0.60	23.2	C
DeKalb Avenue	WB	TR	0.95	47.3	D	TR	0.95	47.3	D
Overall Intersection		**-**	**-**	**67.3**	**E**	**-**	**-**	**74.4**	**E**
Fulton Street and Ashland Place									
Ashland Place	NB	L	0.50	31.4	C	L	0.48	31.0	C
	NB	TR	0.81	44.4	D	TR	0.84	47.1	D
Fulton Street	EB	LT	0.55	13.3	B	LT	0.59	14.5	B
	WB	T	0.67	27.9	C	T	0.67	27.6	C
	WB	R	0.43	18.4	B	R	0.43	18.3	B
Overall Intersection		**-**	**-**	**28.5**	**C**	**-**	**-**	**29.4**	**C**
Lafayette Avenue and Ashland Place									
Ashland Place	NB	TR	0.60	41.9	D	TR	0.60	41.9	D
Lafayette Avenue	EB	LTR	0.71	17.1	B	LTR	0.72	17.3	B
Overall Intersection		**-**	**-**	**23.0**	**C**	**-**	**-**	**23.1**	**C**
Schermerhorn Street and 3rd Avenue									
3rd Avenue	NB	R	0.96	116.5	F	R	0.97	116.9	F
Schermerhorn Street	EB	T	0.49	34.6	C	T	0.49	34.6	C
Overall Intersection		**-**	**-**	**88.5**	**F**	**-**	**-**	**88.8**	**F**

Table 10-41 No-Action vs. With-Action Traffic Level of Service – Weekday AM Peak Hour

Intersection & Approach		2032 No-Action				2032 With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Atlantic Avenue and 3rd Avenue									
3rd Avenue	NB	LTR	0.58	38.8	D	LTR	0.58	38.9	D
Atlantic Avenue	EB	TR	0.61	28.4	C	TR	0.61	28.4	C
	WB	T	0.91	44.3	D	T	0.91	44.3	D
	WB	R	0.54	30.5	C	R	0.54	30.5	C
Overall Intersection		**-**	**-**	**37.5**	**D**	**-**	**-**	**37.5**	**D**
Nevins Street and Schermerhorn Street									
Nevins Street	SB	LT	0.61	33.3	C	LT	0.62	33.5	C
Schermerhorn Street	EB	TR	0.63	27.4	C	TR	0.64	27.6	C
Overall Intersection		**-**	**-**	**29.9**	**C**	**-**	**-**	**30.1**	**C**

Note: Overall intersection v/c ratio is the critical lane groups' v/c ratio.
[1] Control delay is measured in seconds per vehicle.
Denotes a significantly impacted movement

Table 10-42 No-Action vs. With-Action Traffic Level of Service – Weekday Midday Peak Hour

		2032 No-Action				2032 With-Action			
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**
Flatbush Avenue Extension and Tillary Street									
Flatbush Avenue Extension	NB	L	1.07	103.9	F	L	1.07	104.4	F
	NB	T	0.73	34.8	C	T	0.74	35.1	D
	NB	R	0.49	1.1	A	R	0.49	1.1	A
	SB	T	0.72	42.9	D	T	0.73	43.1	D
	SB	R	0.24	19.7	B	R	0.24	19.7	B
Tillary Street	EB	L	0.53	59.3	E	L	0.53	59.3	E
	EB	T	0.96	65.7	E	T	0.96	65.7	E
	EB	R	0.58	31.8	C	R	0.59	32.0	C
	WB	L	0.90	78.1	E	L	0.91	79.7	E
	WB	T	0.87	53.5	D	T	0.87	53.5	D
	WB	R	0.97	92.6	F	R	0.97	92.6	F
Overall Intersection		**-**	**-**	**51.1**	**D**	**-**	**-**	**51.3**	**D**
Flatbush Avenue Extension and Myrtle Avenue									
Flatbush Avenue Extension	NB	TR	0.94	29.2	C	TR	0.95	31.3	C
	SB	L	0.32	51.6	D	L	0.32	51.4	D
	SB	TR	0.61	20.0	B	TR	0.62	20.4	C
Myrtle Avenue	EB	L	1.05	133.7	F	L	1.05	133.7	F
	EB	TR	0.82	62.7	E	TR	0.83	63.6	E
	WB	L	0.39	50.0	D	L	0.39	50.6	D
	WB	TR	1.05	111.4	F	TR	1.05	111.4	F
Overall Intersection		**-**	**-**	**39.2**	**D**	**-**	**-**	**40.2**	**D**
Flatbush Avenue Extension and Willoughby Street									
Flatbush Avenue Extension	NB	T	0.86	16.6	B	T	0.87	17.7	B
	SB	TR	0.60	29.3	C	TR	0.60	29.1	C
Willoughby Street	EB	L	0.60	42.8	D	L	0.61	43.3	D
	EB	R	0.21	28.5	C	R	0.21	28.5	C
	WB	LTR	0.65	39.9	D	LTR	0.69	41.9	D
Overall Intersection		**-**	**-**	**24.8**	**C**	**-**	**-**	**25.5**	**C**

Table 10-42 No-Action vs. With-Action Traffic Level of Service – Weekday Midday Peak Hour

		2032 No-Action				2032 With-Action			
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**
Flatbush Avenue Extension and DeKalb Avenue									
Flatbush Avenue Extension	NB	T	0.80	11.7	B	T	0.77	10.2	B
	SB	TR	0.63	3.5	A	TR	0.65	3.6	A
DeKalb Avenue	WB	LT	1.00	78.9	E	LT	1.13	116.5	F
	WB	R	1.25	168.9	F	R	1.30	189.5	F
Overall Intersection		**-**	**-**	**30.0**	**C**	**-**	**-**	**35.8**	**D**
Flatbush Avenue Extension and Fulton Street									
Flatbush Avenue Extension	NB	T	0.85	14.4	B	T	0.87	15.0	B
	SB	L	1.24	175.3	F	L	1.38	228.1	F
	SB	T	0.48	21.5	C	T	0.49	21.0	C
Fulton Street	EB	LTR	0.46	42.7	D	LTR	0.46	42.8	D
	WB	LT	1.05	74.9	E	LT	1.11	90.5	F
	WB	R	0.54	6.0	A	R	0.55	6.4	A
Overall Intersection		**-**	**-**	**37.3**	**D**	**-**	**-**	**45.4**	**D**
Flatbush Avenue and Livingston Street									
Flatbush Avenue	NB	L	0.43	23.0	C	L	0.43	22.8	C
	NB	T	0.60	6.5	A	T	0.61	6.8	A
	SB	T	0.61	14.3	B	T	0.61	14.4	B
Livingston Street	EB	R	0.14	22.5	C	R	0.14	22.5	C
Overall Intersection		**-**	**-**	**11.9**	**B**	**-**	**-**	**12.0**	**B**
Flatbush Avenue and Lafayette Avenue									
Flatbush Avenue	NB	TR	0.80	35.1	D	TR	0.81	38.9	D
	SB	L	0.69	95.3	F	L	0.71	96.5	F
	SB	T	0.48	2.5	A	T	0.48	2.5	A
Lafayette Avenue	EB	L	1.17	125.3	F	L	1.23	146.8	F
	EB	TR	0.67	74.7	E	TR	0.67	75.1	E
Overall Intersection		**-**	**-**	**44.3**	**D**	**-**	**-**	**48.5**	**D**

Table 10-42 No-Action vs. With-Action Traffic Level of Service – Weekday Midday Peak Hour

		2032 No-Action				2032 With-Action			
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**
Flatbush Avenue and State Street									
Flatbush Avenue	NB	T	0.68	3.3	A	T	0.69	3.4	A
	SB	T	0.77	29.8	C	T	0.78	30.4	C
State Street	EB	R	0.19	23.5	C	R	0.19	23.5	C
Overall Intersection		**-**	**-**	**15.7**	**B**	**-**	**-**	**16.0**	**B**
Flatbush Avenue and 4th Avenue									
Flatbush Avenue	NB	T	0.66	8.9	A	T	0.67	9.0	A
	SB	TR	0.70	8.4	A	TR	0.71	8.7	A
	SB	R	0.78	28.9	C	R	0.79	30.4	C
Overall Intersection		**-**	**-**	**11.6**	**B**	**-**	**-**	**12.0**	**B**
Flatbush Avenue and Atlantic Avenue									
Flatbush Avenue	NB	LT	0.75	30.3	C	LT	0.76	30.4	C
	SB	T	0.66	7.2	A	T	0.67	7.4	A
Atlantic Avenue	EB	T	0.72	31.0	C	T	0.72	31.0	C
	EB	R	0.77	52.2	D	R	0.77	52.2	D
	WB	T	0.48	24.9	C	T	0.48	24.9	C
	WB	R	1.14	133.0	F	R	1.15	136.5	F
Overall Intersection		**-**	**-**	**35.0**	**D**	**-**	**-**	**35.4**	**D**
DeKalb Avenue and Hudson Avenue									
Hudson Avenue	NB	L	0.25	27.6	C	L	0.25	28.6	C
DeKalb Avenue	WB	LT	0.41	43.0	D	T	0.44	44.9	D
Overall Intersection		**-**	**-**	**31.4**	**C**	**-**	**-**	**32.3**	**C**
Fulton Street and Hudson Avenue									
Fulton Street	EB	LT	0.61	20.5	C	LT	0.69	32.0	C
	WB	T	0.97	116.2	F	T	0.99	117.0	F
	WB	R	0.43	38.5	D	R	0.46	39.5	D
Overall Intersection		**-**	**-**	**69.0**	**E**	**-**	**-**	**72.9**	**E**

Table 10-42 No-Action vs. With-Action Traffic Level of Service – Weekday Midday Peak Hour

		2032 No-Action				2032 With-Action			
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**
Fulton Street and Rockwell Place									
Rockwell Place	SB	LTR	0.25	23.3	C	LTR	0.29	24.2	C
Fulton Street	EB	T	0.44	18.0	B	T	0.49	19.4	B
	EB	R	0.11	11.9	B	R	0.11	11.9	B
	WB	LT	0.75	23.4	C	LT	0.76	23.9	C
Overall Intersection		**-**	**-**	**21.0**	**C**	**-**	**-**	**21.8**	**C**
DeKalb Avenue and Ashland Place									
Ashland Place	NB	LT	0.83	35.6	D	LT	0.91	46.5	D
	SB	R	0.50	19.8	B	R	0.57	21.7	C
DeKalb Avenue	WB	TR	0.68	22.1	C	TR	0.68	22.2	C
Overall Intersection		**-**	**-**	**26.5**	**C**	**-**	**-**	**31.1**	**C**
Fulton Street and Ashland Place									
Ashland Place	NB	L	0.62	35.1	D	L	0.62	35.2	D
	NB	TR	0.49	30.0	C	TR	0.52	30.7	C
Fulton Street	EB	LT	0.67	16.5	B	LT	0.84	29.5	C
	WB	T	0.51	22.3	C	T	0.52	22.8	C
	WB	R	0.31	17.5	B	R	0.31	17.5	B
Overall Intersection		**-**	**-**	**23.8**	**C**	**-**	**-**	**27.8**	**C**
Lafayette Avenue and Ashland Place									
Ashland Place	NB	TR	0.81	59.2	E	TR	0.81	59.2	E
Lafayette Avenue	EB	LTR	0.66	75.8	E	LTR	0.67	80.4	F
Overall Intersection		**-**	**-**	**71.5**	**E**	**-**	**-**	**75.0**	**E**
Schermerhorn Street and 3rd Avenue									
3rd Avenue	NB	R	1.00	113.9	F	R	1.01	113.9	F
Schermerhorn Street	EB	T	0.62	82.0	F	T	0.66	102.6	F
Overall Intersection		**-**	**-**	**104.4**	**F**	**-**	**-**	**110.4**	**F**

Table 10-42 No-Action vs. With-Action Traffic Level of Service – Weekday Midday Peak Hour

		2032 No-Action				2032 With-Action			
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**
Atlantic Avenue and 3rd Avenue									
3rd Avenue	NB	LTR	0.56	42.5	D	LTR	0.57	42.7	D
Atlantic Avenue	EB	TR	0.69	27.1	C	TR	0.69	27.1	C
	WB	T	0.62	24.9	C	T	0.62	24.9	C
	WB	R	0.59	28.6	C	R	0.59	28.6	C
Overall Intersection		**-**	**-**	**28.9**	**C**	**-**	**-**	**29.0**	**C**
Nevins Street and Schermerhorn Street									
Nevins Street	SB	LT	0.80	50.0	D	LT	0.86	56.7	E
Schermerhorn Street	EB	TR	0.61	23.2	C	TR	0.62	23.5	C
Overall Intersection		**-**	**-**	**35.0**	**D**	**-**	**-**	**38.5**	**D**

Note: Overall intersection v/c ratio is the critical lane groups' v/c ratio.
[1] Control delay is measured in seconds per vehicle.
Denotes a significantly impacted movement

Table 10-43 No-Action vs. With-Action Traffic Level of Service – Weekday PM Peak Hour

		2032 No-Action				2032 With-Action			
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**
Flatbush Avenue Extension and Tillary Street									
Flatbush Avenue Extension	NB	L	1.06	92.1	F	L	1.07	94.3	F
	NB	T	0.61	42.4	D	T	0.61	42.6	D
	NB	R	0.49	1.6	A	R	0.49	1.5	A
	SB	T	0.94	57.0	E	T	0.95	58.6	E
	SB	R	0.24	19.9	B	R	0.24	19.9	B
Tillary Street	EB	L	0.41	53.6	D	L	0.41	53.6	D
	EB	T	1.03	80.7	F	T	1.03	80.7	F
	EB	R	0.79	44.1	D	R	0.80	45.4	D
	WB	L	0.93	81.4	F	L	0.98	91.7	F
	WB	T	0.91	57.3	E	T	0.91	57.3	E
	WB	R	0.62	48.2	D	R	0.62	48.2	D
Overall Intersection		**-**	**-**	**55.1**	**E**	**-**	**-**	**56.4**	**E**
Flatbush Avenue Extension and Myrtle Avenue									
Flatbush Avenue Extension	NB	TR	0.90	35.3	D	TR	0.92	37.7	D
	SB	L	0.54	75.9	E	L	0.54	75.7	E
	SB	TR	0.76	10.3	B	TR	0.78	10.8	B
Myrtle Avenue	EB	L	0.86	88.6	F	L	0.86	88.6	F
	EB	TR	1.04	103.6	F	TR	1.10	119.0	F
	WB	L	0.68	82.9	F	L	0.78	104.7	F
	WB	TR	0.70	54.0	D	TR	0.70	54.0	D
Overall Intersection		**-**	**-**	**34.1**	**C**	**-**	**-**	**37.0**	**D**
Flatbush Avenue Extension and Willoughby Street									
Flatbush Avenue Extension	NB	T	0.74	17.0	B	T	0.75	16.9	B
	SB	TR	0.75	10.6	B	TR	0.76	10.7	B
Willoughby Street	EB	L	0.82	63.5	E	L	0.83	65.1	E
	EB	R	0.24	30.7	C	R	0.24	30.7	C
	WB	LTR	0.70	43.3	D	LTR	0.75	46.7	D
Overall Intersection		**-**	**-**	**19.7**	**B**	**-**	**-**	**20.2**	**C**

Table 10-43 No-Action vs. With-Action Traffic Level of Service – Weekday PM Peak Hour

		2032 No-Action				2032 With-Action			
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**
Flatbush Avenue Extension and DeKalb Avenue									
Flatbush Avenue Extension	NB	T	0.72	47.0	D	T	0.70	45.9	D
	SB	TR	0.79	5.4	A	TR	0.80	5.7	A
DeKalb Avenue	WB	LT	1.43	232.8	F	LT	1.58	296.1	F
	WB	R	1.27	178.0	F	R	1.34	205.3	F
Overall Intersection		**-**	**-**	**66.3**	**E**	**-**	**-**	**78.8**	**E**
Flatbush Avenue Extension and Fulton Street									
Flatbush Avenue Extension	NB	T	0.83	12.7	B	T	0.84	13.2	B
	SB	L	1.34	204.1	F	L	1.52	279.9	F
	SB	T	0.59	7.7	A	T	0.59	8.1	A
Fulton Street	EB	LTR	0.43	44.3	D	LTR	0.43	45.8	D
	WB	LT	1.04	82.1	F	LT	1.10	102.4	F
	WB	R	0.40	7.8	A	R	0.41	8.0	A
Overall Intersection		**-**	**-**	**36.4**	**D**	**-**	**-**	**49.4**	**D**
Flatbush Avenue and Livingston Street									
Flatbush Avenue	NB	L	0.50	33.2	C	L	0.50	33.8	C
	NB	T	0.65	9.5	A	T	0.67	9.7	A
	SB	T	0.68	5.4	A	T	0.68	5.6	A
Livingston Street	EB	R	0.13	22.3	C	R	0.13	22.3	C
Overall Intersection		**-**	**-**	**10.2**	**B**	**-**	**-**	**10.4**	**B**
Flatbush Avenue and Lafayette Avenue									
Flatbush Avenue	NB	TR	0.81	24.4	C	TR	0.82	24.6	C
	SB	L	0.70	106.6	F	L	0.72	107.7	F
	SB	T	0.57	2.9	A	T	0.58	2.9	A
Lafayette Avenue	EB	L	1.07	102.8	F	L	1.11	106.2	F
	EB	TR	0.74	80.9	F	TR	0.75	81.0	F
Overall Intersection		**-**	**-**	**36.6**	**D**	**-**	**-**	**37.3**	**D**

Table 10-43 No-Action vs. With-Action Traffic Level of Service – Weekday PM Peak Hour

		2032 No-Action				2032 With-Action			
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**
Flatbush Avenue and State Street									
Flatbush Avenue	NB	T	0.62	2.6	A	T	0.63	2.6	A
	SB	T	0.86	28.6	C	T	0.86	29.0	C
State Street	EB	R	0.29	25.2	C	R	0.29	25.2	C
Overall Intersection		**-**	**-**	**16.3**	**B**	**-**	**-**	**16.4**	**B**
Flatbush Avenue and 4th Avenue									
Flatbush Avenue	NB	T	0.65	9.1	A	T	0.66	9.2	A
	SB	TR	0.81	22.9	C	TR	0.82	24.1	C
	SB	R	0.97	79.5	E	R	0.97	79.8	E
Overall Intersection		**-**	**-**	**25.1**	**C**	**-**	**-**	**25.6**	**C**
Flatbush Avenue and Atlantic Avenue									
Flatbush Avenue	NB	LT	0.66	27.2	C	LT	0.66	27.3	C
	SB	T	0.81	11.6	B	T	0.81	11.8	B
Atlantic Avenue	EB	T	0.79	33.8	C	T	0.79	33.8	C
	EB	R	0.81	57.9	E	R	0.81	57.9	E
	WB	T	0.67	29.2	C	T	0.67	29.2	C
	WB	R	1.12	126.1	F	R	1.14	131.4	F
Overall Intersection		**-**	**-**	**35.4**	**D**	**-**	**-**	**36.0**	**D**
DeKalb Avenue and Hudson Avenue									
Hudson Avenue	NB	L	0.28	27.5	C	L	0.31	27.4	C
DeKalb Avenue	WB	LT	0.50	11.5	B	T	0.53	11.2	B
Overall Intersection		**-**	**-**	**24.0**	**C**	**-**	**-**	**23.8**	**C**
Fulton Street and Hudson Avenue									
Fulton Street	EB	LT	0.73	54.3	D	LT	0.86	86.0	F
	WB	T	0.74	101.6	F	T	0.76	102.2	F
	WB	R	0.53	43.4	D	R	0.57	45.1	D
Overall Intersection		**-**	**-**	**71.2**	**E**	**-**	**-**	**87.2**	**F**

Table 10-43 No-Action vs. With-Action Traffic Level of Service – Weekday PM Peak Hour

Intersection & Approach		2032 No-Action				2032 With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Fulton Street and Rockwell Place									
Rockwell Place	SB	LTR	0.63	32.0	C	LTR	0.67	33.4	C
Fulton Street	EB	T	0.47	18.9	B	T	0.52	21.1	C
	EB	R	0.16	12.6	B	R	0.17	12.8	B
	WB	LT	0.65	17.7	B	LT	0.66	18.0	B
Overall Intersection		**-**	**-**	**21.1**	**C**	**-**	**-**	**22.2**	**C**
DeKalb Avenue and Ashland Place									
Ashland Place	NB	LT	0.82	34.7	C	LT	0.93	49.2	D
	SB	R	0.80	35.2	D	R	0.88	44.4	D
DeKalb Avenue	WB	TR	0.68	21.8	C	TR	0.69	21.9	C
Overall Intersection		**-**	**-**	**29.2**	**C**	**-**	**-**	**36.6**	**D**
Fulton Street and Ashland Place									
Ashland Place	NB	L	0.64	37.0	D	L	0.64	37.0	D
	NB	TR	0.66	35.2	D	TR	0.68	36.1	D
Fulton Street	EB	LT	0.74	22.8	C	LT	0.87	31.9	C
	WB	T	0.35	15.5	B	T	0.36	15.6	B
	WB	R	0.28	15.4	B	R	0.28	15.4	B
Overall Intersection		**-**	**-**	**25.9**	**C**	**-**	**-**	**29.3**	**C**
Lafayette Avenue and Ashland Place									
Ashland Place	NB	TR	0.94	78.6	E	TR	0.94	78.6	E
Lafayette Avenue	EB	LTR	0.80	20.4	C	LTR	0.81	21.2	C
Overall Intersection		**-**	**-**	**34.8**	**C**	**-**	**-**	**35.3**	**D**
Schermerhorn Street and 3rd Avenue									
3rd Avenue	NB	R	0.93	111.0	F	R	0.95	112.0	F
Schermerhorn Street	EB	T	0.64	96.2	F	T	0.66	96.9	F
Overall Intersection		**-**	**-**	**105.6**	**F**	**-**	**-**	**106.4**	**F**

Table 10-43 No-Action vs. With-Action Traffic Level of Service – Weekday PM Peak Hour

Intersection & Approach		2032 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2032 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
Atlantic Avenue and 3rd Avenue									
3rd Avenue	NB	LTR	0.73	46.6	D	LTR	0.74	47.2	D
Atlantic Avenue	EB	TR	0.64	27.4	C	TR	0.64	27.4	C
	WB	T	0.87	38.2	D	T	0.87	38.2	D
	WB	R	0.67	34.7	C	R	0.67	34.7	C
Overall Intersection		**-**	**-**	**36.2**	**D**	**-**	**-**	**36.4**	**D**
Nevins Street and Schermerhorn Street									
Nevins Street	SB	LT	0.73	34.2	C	LT	0.74	34.7	LT
Schermerhorn Street	EB	TR	0.89	47.1	D	TR	0.91	50.2	TR
Overall Intersection		**-**	**-**	**41.2**	**D**	**-**	**-**	**43.2**	**-**

Note: Overall intersection v/c ratio is the critical lane groups' v/c ratio.
[1] Control delay is measured in seconds per vehicle.
Denotes a significantly impacted movement

Table 10-44 No-Action vs. With-Action Traffic Level of Service – Saturday Peak Hour

		2032 No-Action				2032 With-Action			
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**
Flatbush Avenue Extension and Tillary Street									
Flatbush Avenue Extension	NB	L	1.09	103.8	F	L	1.10	106.9	F
	NB	T	0.63	34.6	C	T	0.64	34.8	C
	NB	R	0.50	1.7	A	R	0.50	1.8	A
	SB	T	0.65	40.6	D	T	0.66	40.8	D
	SB	R	0.18	18.8	B	R	0.18	18.8	B
Tillary Street	EB	L	0.55	59.0	E	L	0.55	59.0	E
	EB	T	0.93	59.3	E	T	0.93	59.3	E
	EB	R	0.70	37.0	D	R	0.70	37.3	D
	WB	L	1.13	127.2	F	L	1.16	137.1	F
	WB	T	0.87	52.9	D	T	0.87	52.9	D
	WB	R	0.94	80.6	F	R	0.94	80.6	F
Overall Intersection		**-**	**-**	**54.2**	**D**	**-**	**-**	**55.5**	**E**
Flatbush Avenue Extension and Myrtle Avenue									
Flatbush Avenue Extension	NB	TR	1.07	62.0	E	TR	1.10	73.2	E
	SB	L	0.24	47.5	D	L	0.24	47.1	D
	SB	TR	0.66	18.7	B	TR	0.67	19.3	B
Myrtle Avenue	EB	L	0.61	64.7	E	L	0.61	64.7	E
	EB	TR	0.75	56.2	E	TR	0.76	56.9	E
	WB	L	0.24	41.7	D	L	0.25	42.0	D
	WB	TR	0.93	80.7	F	TR	0.93	80.7	F
Overall Intersection		**-**	**-**	**46.1**	**D**	**-**	**-**	**51.5**	**D**
Flatbush Avenue Extension and Willoughby Street									
Flatbush Avenue Extension	NB	T	0.85	23.6	C	T	0.87	37.6	D
	SB	TR	0.74	31.0	C	TR	0.75	30.9	C
Willoughby Street	EB	L	0.62	42.4	D	L	0.62	42.7	D
	EB	R	0.36	31.9	C	R	0.36	31.9	C
	WB	LTR	0.59	37.6	D	LTR	0.64	39.3	D
Overall Intersection		**-**	**-**	**28.7**	**C**	**-**	**-**	**35.2**	**D**

Table 10-44 No-Action vs. With-Action Traffic Level of Service – Saturday Peak Hour

		2032 No-Action				2032 With-Action			
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**
Flatbush Avenue Extension and DeKalb Avenue									
Flatbush Avenue Extension	NB	T	0.78	10.3	B	T	0.76	9.3	A
	SB	TR	0.77	8.8	A	TR	0.79	9.6	A
DeKalb Avenue	WB	LT	1.20	141.3	F	LT	1.42	229.1	F
	WB	R	1.37	216.5	F	R	1.51	273.0	F
Overall Intersection		**-**	**-**	**41.2**	**D**	**-**	**-**	**58.2**	**E**
Flatbush Avenue Extension and Fulton Street									
Flatbush Avenue Extension	NB	T	0.88	61.0	E	T	0.90	61.6	E
	SB	L	1.35	216.1	F	L	1.56	304.5	F
	SB	T	0.58	22.4	C	T	0.59	21.9	C
Fulton Street	EB	LTR	0.46	52.1	D	LTR	0.47	70.6	E
	WB	LT	1.06	80.7	F	LT	1.16	105.6	F
	WB	R	0.65	16.9	B	R	0.68	20.8	C
Overall Intersection		**-**	**-**	**58.7**	**E**	**-**	**-**	**73.1**	**E**
Flatbush Avenue and Livingston Street									
Flatbush Avenue	NB	L	0.50	31.7	C	L	0.50	33.3	C
	NB	T	0.62	7.5	A	T	0.63	7.9	A
	SB	T	0.60	12.3	B	T	0.61	12.4	B
Livingston Street	EB	R	0.17	23.1	C	R	0.17	23.1	C
Overall Intersection		**-**	**-**	**12.6**	**B**	**-**	**-**	**12.9**	**B**
Flatbush Avenue and Lafayette Avenue									
Flatbush Avenue	NB	TR	0.90	73.3	E	TR	0.91	74.4	E
	SB	L	0.73	49.9	D	L	0.75	55.7	E
	SB	T	0.50	3.1	A	T	0.51	3.1	A
Lafayette Avenue	EB	L	1.19	128.3	F	L	1.24	148.2	F
	EB	TR	0.61	73.4	E	TR	0.62	73.7	E
Overall Intersection		**-**	**-**	**56.4**	**E**	**-**	**-**	**59.6**	**E**

Table 10-44 No-Action vs. With-Action Traffic Level of Service – Saturday Peak Hour

		2032 No-Action				2032 With-Action			
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**
Flatbush Avenue and State Street									
Flatbush Avenue	NB	T	0.69	2.9	A	T	0.70	2.9	A
	SB	T	0.72	28.1	C	T	0.73	29.0	C
State Street	EB	R	0.31	26.3	C	R	0.31	26.4	C
Overall Intersection		**-**	**-**	**14.8**	**B**	**-**	**-**	**15.2**	**B**
Flatbush Avenue and 4th Avenue									
Flatbush Avenue	NB	T	0.68	10.6	B	T	0.69	10.7	B
	SB	TR	0.75	15.6	B	TR	0.77	16.9	B
	SB	R	0.91	81.8	F	R	0.91	81.9	F
Overall Intersection		**-**	**-**	**22.9**	**C**	**-**	**-**	**23.3**	**C**
Flatbush Avenue and Atlantic Avenue									
Flatbush Avenue	NB	LT	0.64	26.6	C	LT	0.69	28.3	C
	SB	T	0.58	7.4	A	T	0.59	8.0	A
Atlantic Avenue	EB	T	0.76	32.3	C	T	0.76	32.3	C
	EB	R	0.60	41.4	D	R	0.60	41.4	D
	WB	T	0.60	27.3	C	T	0.60	27.3	C
	WB	R	1.14	131.7	F	R	1.17	140.2	F
Overall Intersection		**-**	**-**	**34.6**	**C**	**-**	**-**	**35.9**	**D**
DeKalb Avenue and Hudson Avenue									
Hudson Avenue	NB	L	0.29	28.1	C	L	0.34	29.6	C
DeKalb Avenue	WB	LT	0.46	39.5	D	T	0.50	40.4	D
Overall Intersection		**-**	**-**	**30.7**	**C**	**-**	**-**	**32.1**	**C**
Fulton Street and Hudson Avenue									
Fulton Street	EB	LT	0.91	89.3	F	LT	1.16	116.7	F
	WB	TR	1.66	341.0	F	TR	1.73	372.1	F
Overall Intersection		**-**	**-**	**229.9**	**F**	**-**	**-**	**253.3**	**F**

Table 10-44 No-Action vs. With-Action Traffic Level of Service – Saturday Peak Hour

Intersection & Approach		2032 No-Action Mvt	V/C	Ctrl Delay[1]	LOS	2032 With-Action Mvt	V/C	Ctrl Delay[1]	LOS
Fulton Street and Rockwell Place									
Rockwell Place	SB	LTR	0.37	24.1	C	LTR	0.40	24.8	C
Fulton Street	EB	TR	0.64	26.0	C	TR	0.72	34.5	C
	WB	LT	0.88	52.0	D	LT	0.90	59.1	E
Overall Intersection		**-**	**-**	**39.2**	**D**	**-**	**-**	**45.4**	**D**
DeKalb Avenue and Ashland Place									
Ashland Place	NB	LT	0.74	28.1	C	LT	0.86	38.0	D
	SB	R	0.71	28.1	C	R	0.79	33.9	C
DeKalb Avenue	WB	TR	0.64	20.6	C	TR	0.65	20.7	C
Overall Intersection		**-**	**-**	**24.7**	**C**	**-**	**-**	**29.7**	**C**
Fulton Street and Ashland Place									
Ashland Place	NB	L	0.56	32.5	C	L	0.56	32.8	C
	NB	TR	0.53	30.7	C	TR	0.58	32.1	C
Fulton Street	EB	LT	0.80	24.5	C	LT	1.09	85.1	F
	WB	TR	0.85	86.0	F	TR	0.87	90.9	F
Overall Intersection		**-**	**-**	**48.8**	**D**	**-**	**-**	**68.6**	**E**
Lafayette Avenue and Ashland Place									
Ashland Place	NB	TR	0.75	53.6	D	TR	0.75	53.6	D
Lafayette Avenue	EB	LTR	0.79	91.0	F	LTR	0.81	91.8	F
Overall Intersection		**-**	**-**	**82.6**	**F**	**-**	**-**	**83.4**	**F**
Schermerhorn Street and 3rd Avenue									
3rd Avenue	NB	R	0.93	107.4	F	R	0.94	108.5	F
Schermerhorn Street	EB	T	0.69	93.9	F	T	0.73	107.4	F
Overall Intersection		**-**	**-**	**103.0**	**F**	**-**	**-**	**108.1**	**F**

Table 10-44 No-Action vs. With-Action Traffic Level of Service – Saturday Peak Hour

Intersection & Approach		2032 No-Action				2032 With-Action			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Atlantic Avenue and 3rd Avenue									
3rd Avenue	NB	LTR	0.81	52.0	D	LTR	0.82	52.9	D
Atlantic Avenue	EB	TR	0.66	26.1	C	TR	0.66	26.1	C
	WB	T	0.69	26.7	C	T	0.69	26.7	C
	WB	R	0.54	26.4	C	R	0.54	26.4	C
Overall Intersection		**-**	**-**	**32.0**	**C**	**-**	**-**	**32.3**	**C**
Nevins Street and Schermerhorn Street									
Nevins Street	SB	LT	0.70	39.7	D	LT	0.75	43.5	D
Schermerhorn Street	EB	TR	0.73	29.1	C	TR	0.75	30.1	C
Overall Intersection		**-**	**-**	**33.3**	**C**	**-**	**-**	**35.6**	**D**

Note: Overall intersection v/c ratio is the critical lane groups' v/c ratio.
[1] Control delay is measured in seconds per vehicle.
Denotes a significantly impacted movement

The summary overview of 2032 With-Action condition indicates that:

- In the weekday AM peak hour, eight intersections would operate at LOS E or LOS F compared to seven intersections in the No-Action condition. Twenty-four individual traffic movements out of 81 total movements analyzed would operate at unacceptable LOS E or LOS F compared to 23 movements in the No-Action condition. Significant traffic impacts were identified for seven intersections (eight traffic movements would be significantly impacted).
- In the weekday midday peak hour, three intersections would operate at LOS E or LOS F, similar to the No-Action condition. Twenty-two individual traffic movements would operate at unacceptable LOS E or LOS F compared to 21 movements in the No-Action condition. Significant traffic impacts were identified for six intersections (eight traffic movements would be significantly impacted).
- In the weekday PM peak hour, four intersections would operate at LOS E or LOS F, similar to the No-Action condition. Twenty-five individual traffic movements would operate at unacceptable LOS E or LOS F compared to 24 movements in the No-Action condition. Significant traffic impacts were identified for six intersections (nine traffic movements would be significantly impacted).
- In the Saturday peak hour, eight intersections would operate at LOS E or LOS F compared to five intersections in the No-Action condition. Twenty-nine individual traffic movements would operate at unacceptable LOS E or LOS F compared to 25 movements in the No-Action condition. Significant traffic impacts were identified for ten intersections (16 traffic movements would be significantly impacted).

Traffic movements that operate at unacceptable levels of service under the No-Action condition would continue to do so under the With-Action condition; additional movements that would operate at unacceptable levels of service as a result of the Proposed are listed below.

- Flatbush Avenue Extension and Fulton Street
  - Eastbound Fulton Street shared left-through-right movement (Saturday)
- Flatbush Avenue and Lafayette Avenue
  - Southbound Flatbush Avenue left-turn movement (Saturday)
- Fulton Street and Hudson Avenue
  - Eastbound Fulton Street shared left-through movement (AM and PM)
- Fulton Street and Rockwell Place
  - Westbound Fulton Street shared left-through movement (Saturday)
- Fulton Street and Ashland Place
  - Eastbound Fulton Street shared left-through movement (Saturday)
- Nevins Street and Schermerhorn Street
  - Southbound Nevins Street shared left-through movement (midday)

Of the 19 intersections analyzed, the Proposed Actions would result in significant adverse traffic impacts at seven intersections (at eight traffic movements) during the weekday AM peak hour, six intersections (at eight traffic movements) during the weekday midday peak hour, six intersections (at nine traffic movements) during the weekday PM peak hour, and ten intersections (at 15 traffic movements) during the Saturday peak hour.

The significantly impacted traffic movements are identified below:

- Flatbush Avenue Extension and Tillary Street
  - Northbound Flatbush Avenue Extension left-turn movement (AM)
  - Westbound Tillary Street left-turn movement (PM, Saturday)
- Flatbush Avenue Extension and Myrtle Avenue
  - Northbound Flatbush Avenue Extension shared through-right movement (AM and Saturday)
  - Eastbound Myrtle Avenue shared through-right movement (PM)
  - Westbound Myrtle Avenue left-turn movement (PM)
- Flatbush Avenue Extension and DeKalb Avenue
  - Westbound DeKalb Avenue shared left-through movement (AM, midday, PM, and Saturday)
  - Westbound DeKalb Avenue right-turn movement (AM, midday, PM, and Saturday)
- Flatbush Avenue Extension and Fulton Street
  - Southbound Flatbush Avenue Extension left-turn movement (AM, midday, PM, and Saturday)
  - Eastbound Fulton Street shared left-through-right movement (Saturday)
  - Westbound Fulton Street shared left-through movement (midday, PM, and Saturday)
- Flatbush Avenue and Lafayette Avenue
  - Southbound Flatbush Avenue left turn (Saturday)
  - Eastbound Lafayette Avenue left-turn movement (AM, midday, and Saturday)
- Flatbush Avenue and Atlantic Avenue
  - Westbound Atlantic Avenue right-turn movement (PM, and Saturday)
- Fulton Street and Hudson Avenue

- Eastbound Fulton Street shared left-through movement (AM, PM and Saturday)

› Fulton Street and Rockwell Place
  - Westbound Fulton Street shared left-through movement (Saturday)

› DeKalb Avenue and Ashland Place
  - Northbound Ashland Place shared left-through movement (AM)

› Fulton Street and Ashland Place
  - Eastbound Fulton Street shared left-through movement (Saturday)
  - Westbound Fulton Street shared through-right movement (Saturday)

› Lafayette Avenue and Ashland Place
  - Eastbound Lafayette Avenue shared left-through-right movement (midday)

› Schermerhorn Street and 3rd Avenue
  - Northbound Third Avenue right-turn movement (Saturday)
  - Eastbound Schermerhorn Street through movement (midday and Saturday)

› Nevins Street and Schermerhorn Street
  - Southbound shared left-through movement (midday)

The identification and evaluation of traffic capacity improvements needed to mitigate potential significant adverse traffic impacts created by the Proposed Actions are presented in **Chapter 18, Mitigation**.

Parking

Under the Proposed Actions, the Development Site would not provide on-site parking and the existing 140 on-site parking garage would be displaced. As such, it is anticipated that on-site parking demand would park at the closest nearby parking facilities, and all project-generated auto trips would park off-site and walk to the Development Site. Project-generated auto trips were assigned to six parking garages based on surveyed parking availability and proximity of garages to the Development Site. During the weekday AM, PM and Saturday peak hours, it is assumed that trips associated with the displaced parking garage would instead park at the 80 DeKalb Avenue garage across the street. Therefore, there would be no changes to routes during these peak hours. However, during the weekday midday peak hour, there would not be enough parking available at the 80 DeKalb Avenue garage and other nearby parking facilities would be used by displaced parkers. Approximately 48 percent of the displaced parking trips were assigned to the 80 DeKalb Avenue garage, 46 percent to the 66 Rockwell Place garage and 6 percent to the 97-103 DeKalb Avenue garage.

Under With-Action conditions, peak parking demand of 382 parking spaces would occur Saturday afternoon (between 5 PM and 6 PM). During the weekday, the peak parking demand of 356 spaces would occur during the overnight period (between 2 AM and 4 AM). The weekday and Saturday parking demand is shown in **Table 10-45**.

Table 10-45 Proposed Project Parking Demand by Hour

Hour			Weekday Parking Demand	Saturday Parking Demand
12 AM	-	01 AM	352	345
01 AM	-	02 AM	355	349
02 AM	-	03 AM	**356**	353
03 AM	-	04 AM	**356**	355
04 AM	-	05 AM	355	356
05 AM	-	06 AM	348	354
06 AM	-	07 AM	335	352
07 AM	-	08 AM	307	350
08 AM	-	09 AM	248	349
09 AM	-	10 AM	223	344
10 AM	-	11 AM	219	345
11 AM	-	12 PM	224	366
12 PM	-	01 PM	231	366
01 PM	-	02 PM	234	366
02 PM	-	03 PM	234	375
03 PM	-	04 PM	234	380
04 PM	-	05 PM	242	381
05 PM	-	06 PM	276	**382**
06 PM	-	07 PM	297	380
07 PM	-	08 PM	318	362
08 PM	-	09 PM	329	346
09 PM	-	10 PM	323	334
10 PM	-	11 PM	336	338
11 PM	-	12 AM	345	341

Overall, the 1,968 available off-street parking spaces (after accounting for the reduction of 140 spaces related to the existing on-site parking garage) in the study area would be 74 percent occupied during the weekday midday period, 52 percent occupied during the weekday PM period, 35 percent occupied overnight, and 45 percent occupied during the Saturday afternoon period. **Table 10-46** summarizes the parking supply and demand in the With-Action condition.

Table 10-46 With-Action Parking Demand and Supply

	Peak Period			
	Weekday Midday Period	**Weekday PM Period**	**Overnight Period**	**Saturday Early Afternoon Period**
No-Action Off-Street Parking Supply	2,108 spaces			
Change in Off-Street Parking Supply	-140 spaces			
With-Action Off-Street Parking Supply	1,968 spaces			
No-Action Parking Demand (Percent Occupied)	1,316 spaces (62%)	823 spaces (39%)	376 spaces (18%)	560 spaces (27%)
Proposed Project Parking Demand	234 spaces	276 spaces	356 spaces	382 spaces
With-Action Parking Demand (Percent Occupied)	1,560 spaces (74%)	1,099 spaces (52%)	732 spaces (35%)	942 spaces (45%)
With-Action Condition Off-Street Parking Availability	521 spaces	942 spaces	1,285 spaces	1,089 spaces

Subways

The Proposed Actions would generate 471 subway trips (a reduction of 64 "in" trips and addition of 535 "out" trips) during the AM commuter peak hour and 579 subway trips (452 "in" trips and 127 "out" trips) during the PM commuter peak hour. The majority of project-generated subway trips were assigned to the DeKalb Avenue (50 percent), 30 percent were assigned to the Nevins Street subway station, 15 percent were assigned to the Hoyt–Schermerhorn Streets subway station, and 5 percent were assigned to the Fulton Street subway station. Subway station analysis was conducted for the DeKalb Avenue subway station located below the Development Site.

Subway Station Elements

The projected 15-minute volume increase in subway trips at each subway station element analyzed is shown in **Table 10-47**.

Table 10-47 Project-Generated Subway Trip Increment by Subway Station Element

	Pedestrian Volume Increment (15-min)			
	AM Peak Hour		PM Peak Hour	
Fare Control	**In**	**Out**	**In**	**Out**
DeKalb Ave Station – Surface Access Stairs				
South End Fare Control	84	-10	20	71
	AM Peak Hour		**PM Peak Hour**	
Stairway	**Down**	**Up**	**Down**	**Up**
DeKalb Ave Station – Surface Access Stairs				
S4B/M8B	93	47	68	80
S2B/M2B	-10	-57	-48	-10
S1A/S1B	0	0	0	0
DeKalb Ave Station – Northbound Platform Stairs				
P10B/P10A	20	-2	5	17
P2	20	-2	5	17
P4/P6	47	-6	11	40
DeKalb Ave Station - Southbound Platform Stairs				
P1	5	-1	1	4
P3/P5	12	-1	3	10

Table 10-48 shows the levels of service of the fare control element at the south end of the subway station in the With-Action condition compared to the No-Action condition in the AM and PM peak hours. The fare control area would operate at acceptable levels of service in the With-Action during the AM and PM peak hours similar to the No-Action condition.

Table 10-49 and **Table 10-50** show the levels of service of the stair elements in the With-Action condition compared to the No-Action condition in the AM and PM peak hours. During the AM peak hour, all stairs would operate at LOS C or better and at LOS B or better during the PM peak hour. As the fare control area and all analysis stairs would operate at acceptable levels of service, the Proposed Actions would not result in significant subway station impacts.

Table 10-48 No-Action vs. With-Action Subway Station Level of Service – Fare Control Areas

Peak Hour	Control Element	Pedestrian Volume (15-min) In	Pedestrian Volume (15-min) Out	Surging Factor	Friction Factor	No-Action v/c Ratio	No-Action LOS	With-Action v/c Ratio	With-Action LOS
AM	DeKalb Avenue South End Fare Control 9 turnstiles	529	454	0.90	0.90	0.23	A	0.25	A
PM	DeKalb Avenue South End Fare Control 9 Turnstiles	417	402	0.90	0.90	0.19	A	0.21	A

Note:
Methodology based on *2021 CEQR Technical Manual* guidelines
Surging factors only apply to exiting volumes. The surge factor for entry volumes is 1.0.

Table 10-49 No-Action vs. With-Action Subway Station Level of Service – Stairways – AM Peak Hour

Stairway	Effective Width (ft.)	Pedestrian Volume (15-min) Down	Pedestrian Volume (15-min) Up	Surging Factor Down	Surging Factor Up	Friction Factor	No-Action v/c Ratio	No-Action LOS	With-Action v/c Ratio	With-Action LOS	With-Action WIT
DeKalb Ave Station – Surface Access Stairs											
S4B/M8B	6.8	219	144	0.90	0.90	0.90	0.27	A	0.44	A	-
S2B/M2B	6.8	156	169	0.90	0.90	0.90	0.47	B	0.39	A	-
S1A/S1B	11.8	168	122	0.90	0.90	0.90	0.20	B	0.20	A	-
DeKalb Ave Station – Northbound Platform Stairs											
P10B/P10A	11.8	168	65	0.90	0.90	0.90	0.14	A	0.15	A	-
P2	4.5	168	65	0.90	0.90	0.90	0.37	A	0.41	A	-
P4/P6	4.5	271	258	0.90	0.90	0.90	0.91	C	0.99	C	-
DeKalb Ave Station - Southbound Platform Stairs											
P1	4.5	30	41	0.90	0.90	0.90	0.12	A	0.12	A	-
P3/P5	4.5	80	113	0.90	0.90	0.90	0.34	A	0.36	A	-

Note:
Methodology based on *2021 CEQR Technical Manual* guidelines
* Denotes a significant adverse impact

Table 10-50 No-Action vs. With-Action Subway Station Level of Service – Stairways – PM Peak Hour

Stairway	Effective Width (ft.)	Pedestrian Volume (15-min)		Surging Factor		Friction Factor	No-Action		With-Action		
		Down	Up	Down	Up		v/c Ratio	LOS	v/c Ratio	LOS	WIT
DeKalb Ave Station – Surface Access Stairs											
S4B/M8B	6.8	175	179	0.90	0.90	0.90	0.26	A	0.43	A	-
S2B/M2B	6.8	86	75	0.90	0.90	0.90	0.26	A	0.19	A	-
S1A/S1B	11.8			0.90	0.90	0.90	0.18	A	0.18	A	-
DeKalb Ave Station – Northbound Platform Stairs											
P10B/P10A	11.8	92	82	0.90	0.90	0.90	0.10	A	0.11	A	-
P2	4.5	92	82	0.90	0.90	0.90	0.25	A	0.29	A	-
P4/P6	4.5	155	178	0.90	0.90	0.90	0.55	B	0.64	B	-
DeKalb Ave Station - Southbound Platform Stairs											
P1	4.5	46	43	0.90	0.90	0.90	0.15	A	0.16	A	-
P3/P5	4.5	135	111	0.90	0.90	0.90	0.43	A	0.46	A	-

Note:
Methodology based on *2021 CEQR Technical Manual* guidelines
* Denotes a significant adverse impact

Pedestrians

The project-generated pedestrian volumes were distributed through the pedestrian network and added to the 2032 No-Action condition volumes to develop the 2032 With-Action condition pedestrian volumes. Pedestrian analyses were performed based on these volumes and the With-Action pedestrian levels of service were determined for the analysis locations.

Under With-Action conditions, the existing building arcades would be removed, and the building's footprint would be expanded. The sidewalk along Flatbush Avenue Extension would be approximately 18 feet wide by expanding into the parking lane. The DeKalb Avenue sidewalk would be approximately 15 feet wide and the Hudson Avenue sidewalk to approximately 15 feet wide. The Proposed Actions would also expand the southeast corner towards DeKalb Avenue at the intersection of Flatbush Avenue Extension and DeKalb Avenue.

Table 10-51 provides an overview of the pedestrian levels of service for the peak hours analyzed. Pedestrian volumes and levels of service are provided in **Table 10-52** through **Table 10-54**. The summary of the With-Action condition indicates that:

- All four sidewalk elements analyzed would operate at acceptable levels of service.
- Of the four crosswalk elements analyzed, there would be one significantly impacted crosswalk in the weekday AM and PM peak hours and two significantly impacted crosswalks in the Saturday peak hour. All crosswalk elements analyzed during the weekday midday peak hour would operate at acceptable levels of service.
- All five corner elements analyzed would operate at acceptable levels of service.

Mitigation measures that could be implemented to mitigate the identified significant adverse pedestrian impacts are discussed in **Chapter 18, Mitigation**.

Table 10-51 Year 2032 With-Action Pedestrian Levels of Service Summary

	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour
Sidewalk Elements				
Sidewalks at LOS A/B/C and Acceptable LOS D	4	4	4	4
Sidewalks at Unacceptable LOS D	0	0	0	0
Sidewalks at LOS E	0	0	0	0
Sidewalks at LOS F	0	0	0	0
Number of significantly impacted sidewalk elements	**0**	**0**	**0**	**0**
Crosswalk Elements				
Crosswalks at LOS A/B/C and Acceptable LOS D	3	4	3	3
Crosswalks at Unacceptable LOS D	0	0	0	1
Crosswalks at LOS E	1	0	1	0
Crosswalks at LOS F	0	0	0	0
Number of significantly impacted crosswalk elements	**1**	**0**	**1**	**2**
Corner Elements				
Corners at LOS A/B/C and Acceptable LOS D	5	5	5	5
Corners at Unacceptable LOS D	0	0	0	0
Corners at LOS E	0	0	0	0
Corners at LOS F	0	0	0	0
Number of significantly impacted corner elements	**0**	**0**	**0**	**0**

Note: Includes four sidewalk, four crosswalk, and five corner analysis locations

Table 10-52 Year 2032 No-Action vs. With-Action Pedestrian Levels of Service – Sidewalks

	Weekday AM Peak Hour					Weekday Midday Peak Hour					Weekday PM Peak Hour					Saturday Peak Hour				
	No-Action		With-Action			No-Action		With-Action			No-Action		With-Action			No-Action		With-Action		
Sidewalk	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/Hr.SF/P	Avg Ped Space, SF/P	Platoon LOS
DeKalb Avenue, between Flatbush Avenue Extension and Hudson Avenue (south side)	113.0	B	3,184	51.7	C	263.8	B	2,020	90.5	B	136.5	B	3,089	56.5	C	194.4	B	2,703	62.5	C
Flatbush Avenue Extension, between DeKalb Avenue and Fulton Street (east side)	239.3	B	1,488	117.5	B	252.7	B	1,485	121.9	B	177.4	B	2,047	86.1	C	184.1	B	2,308	78.4	C
Flatbush Avenue Extension, between Fulton Street and Nevins Street (west side)	144.3	B	1,058	134.1	B	115.6	B	1,190	103.4	B	89.8	C	1,569	81.2	C	90.9	B	1,852	80.1	C
Flatbush Avenue Extension, between Fulton Street and Nevins Street subway entrance (east side)	113.3	B	1,539	106.1	B	164.7	B	1,123	153.4	B	109.5	B	1,678	99.4	B	113.5	B	1,693	94.1	B

Table 10-53 Year 2032 No-Action vs. With-Action Pedestrian Levels of Service – Crosswalks

		Weekday AM Peak Hour					Weekday Midday Peak Hour					Weekday PM Peak Hour					Saturday Peak Hour				
		No-Action		With-Action			No-Action		With-Action			No-Action		With-Action			No-Action		With-Action		
Intersection	Crosswalk	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS
Flatbush Avenue Extension at DeKalb Avenue	East	77.0	A	807	64.7	A	119.9	A	779	90.4	A	76.6	A	1,099	60.5	A	72.2	A	1,099	53.0	B
DeKalb Avenue at Hudson Avenue	South	17.1	D	1,979	13.6	E	49.1	B	1,044	35.2	C	19.9	D	1,841	14.8	E	25.3	C	1,440	16.9	D
Flatbush Avenue Extension at Fulton Street	North	36.9	C	543	31.0	C	28.1	C	755	23.9	D	27.7	C	875	22.6	D	26.1	C	1,003	19.9	D
	East	39.5	C	1,097	32.6	C	37.0	C	991	29.6	C	28.6	C	1,391	22.2	D	28.8	C	1,484	18.3	D

Denotes a significantly impacted crosswalk

Table 10-54 Year 2032 No-Action vs. With-Action Pedestrian Levels of Service – Corners

		Weekday AM Peak Hour					Weekday Midday Peak Hour					Weekday PM Peak Hour					Saturday Peak Hour				
		No-Action		With-Action			No-Action		With-Action			No-Action		With-Action			No-Action		With-Action		
Intersection	Corner	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Avg Ped Space, SF/P	Platoon LOS	Volume, Ped/hr	Avg Ped Space, SF/P	Platoon LOS	Avg Ped Space, SF/P	Platoon LOS	Volume, Ped/hr	Avg Ped Space, SF/P	Platoon LOS
Flatbush Avenue Extension at DeKalb Avenue	Southeast	64.7	A	670	44.2	B	87.6	A	621	56.5	B	53.5	B	763	40.2	B	51.9	B	867	33.6	C
DeKalb Avenue at Hudson Avenue	Southwest	46.5	B	133	37.5	C	117.2	A	149	84.8	A	61.2	A	162	47.3	B	77.7	A	198	52.0	B
Flatbush Avenue Extension at Fulton Street	Northeast	207.0	A	397	79.0	A	188.8	A	425	71.5	A	162.5	A	601	57.2	B	163.9	A	525	49.8	B
	Southeast	91.6	A	0	78.0	A	89.5	A	0	73.1	A	71.6	A	0	55.9	B	70.0	A	0	46.4	B
	Southwest	108.8	A	387	99.2	A	94.0	A	586	84.7	A	77.8	A	662	69.5	A	98.8	A	106	81.8	A

Vehicular and Pedestrian Safety

Crash data were obtained for the study area intersections from NYC DOT for years 2018, 2019, and 2023, which are the last 3 years that are approved by NYC DOT for analysis. This information is based on data provided by the New York State Department of Transportation (NYSDOT), New York State Department of Motor Vehicles (NYSDMV), and the New York City Police Department (NYPD).

The crash data detail reported crashes (crashes resulting in death, injury, or property damage in excess of $1,000), fatalities, injuries, and pedestrian and bicycle injuries annually. According to the *CEQR Technical Manual,* an intersection is considered a high-crash location if it is a Vision Zero Priority Intersection, or there were five or more pedestrian/bicyclist injury crashes in any consecutive 12 months during the most recent 3-year period for which data are available. Per NYC DOT's guidance, an intersection along a Vision Zero Priority Corridor is considered a high-crash location when three or more pedestrian/bicyclist injury crashes occur in any 12 consecutive month period during the most recent 3-year period for which data are available.

Table 10-55 presents a summary of total crashes at the study area intersections and shows the total fatalities, injuries, and pedestrian and bicycle crashes at these intersections. There are five Vision Zero Priority corridors in the study area: Myrtle Avenue between Duffield Street and Ashland Place, Fulton Street between Hoyt Street and St. Felix Street, Lafayette Avenue between 3rd Avenue and Fulton Street, and Atlantic Avenue between 3rd Avenue and Flatbush Avenue. Eight analysis intersections are located along the Vision Zero Priority Corridors and experienced at least three pedestrian/bicyclist crashes within a consecutive 12-month period:

- Flatbush Avenue Extension at DeKalb Avenue
- Flatbush Avenue at Fulton Street and Nevins Street (the crash data was combined due to the proximity of the intersections)
- Flatbush Avenue at Lafayette Avenue
- Flatbush Avenue at Atlantic Avenue
- Fulton Street at Rockwell Place
- Lafayette Avenue at Ashland Place
- DeKalb Avenue at Ashland Place
- Fulton Street at Ashland Place

One of these intersections is also a Vision Zero Priority Intersection (DeKalb Avenue at Ashland Place). Two other Vision Zero Priority Intersections were identified in the study area:

- Flatbush Avenue Extension at Myrtle Avenue
- Atlantic Avenue at 3rd Avenue.

Five of the ten intersections identified above exceed the five pedestrian/bicyclist injury crash thresholds; no non-Vision Zero Priority Intersection or Corridor intersections exceed this threshold.

Table 10-55 presents a summary of the crash data for the study area intersections and identifies the ten high-crash locations.

Table 10-55 Vehicle and Pedestrian Crash Summary

Intersection		Total Crashes by Year					Pedestrian Crashes by Year			Bicycle Crashes by Year		
North-South Roadway	East-West Roadway	2018	2019	2023	Total Fatalities	Total Injuries	2018	2019	2023	2018	2019	2023
Flatbush Avenue Extension	Tillary Street	131	193	44	0	44	0	1	0	0	0	1
Flatbush Avenue Extension	Myrtle Avenue	67	50	24	0	34	2	0	2	1	1	1
Flatbush Avenue Extension	Willoughby Street	27	20	10	0	23	2	1	2	0	0	0
Flatbush Avenue Extension	DeKalb Avenue *	88	65	26	0	53	2	1	5	3	3	2
Flatbush Avenue	Fulton Street / Nevins Street *	46	52	13	0	28	3	1	3	2	1	2
Flatbush Avenue	Livingston Street	50	41	13	0	40	0	2	1	0	0	2
Flatbush Avenue	Lafayette Avenue	18	29	19	0	25	0	3	4	0	1	0
Flatbush Avenue	State Street	12	12	13	0	6	1	0	0	1	0	0
Flatbush Avenue	4th Avenue	27	20	6	1	6	0	0	1	0	1	0
Flatbush Avenue	Atlantic Avenue	96	66	28	0	53	2	3	4	1	1	0
Hudson Avenue	DeKalb Avenue	2	5	2	0	3	0	2	1	0	0	0
Hudson Avenue	Fulton Street	1	4	4	0	6	0	1	1	0	0	0
Rockwell Place	Fulton Street *	18	7	5	0	9	3	0	0	2	1	0
Ashland Place	DeKalb Avenue *	17	20	9	1	17	2	3	0	2	0	3
Ashland Place	Fulton Street *	20	14	11	0	19	3	1	3	0	0	4
Ashland Place	Lafayette Avenue	24	18	9	0	10	1	2	0	0	0	4
3rd Avenue	Schermerhorn Street	9	13	1	0	2	0	1	0	0	0	0
3rd Avenue	Atlantic Avenue	43	34	17	0	25	2	1	0	0	0	1
Nevins Street	Schermerhorn Street	14	8	4	0	4	0	0	0	0	1	1

Denotes a high crash location

* Intersection has five or more pedestrian-/bicyclist-related crashes in a consecutive 12-month period

Source: NYSDOT/NYSDMV (2018, 2019, 2023)

Flatbush Avenue Extension at DeKalb Avenue

The intersection of Flatbush Avenue Extension and DeKalb Avenue was identified as a high-crash location. A total of 179 crashes, including 53 injury crashes and 16 pedestrian/bicyclist-related crashes (of which eight involved pedestrians and eight involved bicyclists), occurred at this intersection in the study years. Of the 16 pedestrian/bicycle crashes, ten involved a vehicle moving straight ahead and not making a turn. Nine of the 16 crashes occurred during daylight hours while

seven occurred during late evening or nighttime hours. Of the eight pedestrian-involved crashes, three involved the pedestrian crossing with the signal and one crash identified that the pedestrian was crossing against the signal.

The intersection is signalized with three phases, including a leading pedestrian interval, with pedestrian countdown clocks and high visibility striped crosswalks along each approach. Flatbush Avenue Extension is a two-way separated six-lane north-south roadway and DeKalb Avenue is a one-way westbound roadway with a striped class II bicycle lane. In 2020, NYC DOT added treatments to increase visibility at the intersection, including striping a DeKalb Avenue marked bicycle crossing through the intersection, designating the left-turn bay along the south leg of the intersection, and implementing a turning wedge to direct westbound left-turning vehicles. The Proposed Actions would convert the parking lane along the east side of Flatbush Avenue Extension, which would provide additional pedestrian space and increase visibility between motorists and pedestrians, which could potentially improve pedestrian conditions.

Flatbush Avenue at Fulton Street and Nevins Street

The intersection of Flatbush Avenue and Fulton Street was identified as a high-crash location. Due to the proximity of Nevins Street, crashes at the intersection of Flatbush Avenue and Nevins Street were also included at this intersection. A total of 111 crashes, including 28 injury crashes and 12 pedestrian/bicyclist-related crashes (of which seven involved a pedestrian and five involved a bicyclist) occurred at the intersection. Of the pedestrian/bicycle-involved crashes, nine involved a vehicle moving straight ahead and three involved a vehicle making a left turn. Eight occurred during daylight hours, three occurred at dawn or dusk, and one occurred during nighttime hours. Of the seven pedestrian-involved collisions, four involved a pedestrian crossing with the signal, one involved the pedestrian crossing against the signal, and two involved crossing not at a signal or crosswalk.

The intersection of Fulton Street and Flatbush Avenue is signalized with a leading pedestrian interval and an overlapping protected southbound left turn and westbound right turn. All approaches have high-visibility crosswalks and pedestrian countdown clocks. Flatbush Avenue is a two-way separated six-lane north-south roadway and Fulton Street is a two-lane bi-directional east-west roadway. The westbound approach has an additional right-turn lane. Eastbound traffic on Fulton Street is restricted to buses and trucks with permits.

Due to the limited opportunities to make left turns along Flatbush Avenue Extension, this intersection would experience the highest increase in project-generated vehicle traffic to the southbound left-turn movement. The southbound left-turn movement is a protected phase with no pedestrian conflicts. Wedge treatments to guide left-turning vehicles could potentially improve safety conditions at this intersection.

Flatbush Avenue at Lafayette Avenue

The intersection of Flatbush Avenue at Lafayette Avenue was identified as a high-crash location. A total of 66 crashes, including 25 injury crashes and eight injury crashes involving a bicyclist or pedestrian occurred at the intersection, seven of which involved a pedestrian and one of which involved a bicyclist. Eight of these nine crashes involved a turning vehicle: three vehicles making a left turn and five vehicles making a right turn. Six crashes occurred during the daylight hours while two occurred during nighttime hours.

Flatbush Avenue and Lafayette Avenue is a signalized intersection with a leading pedestrian interval. Flatbush Avenue is a six-lane bi-directional corridor with a southbound left-turn lane. The Lafayette Avenue approach consists of three travel lanes include one left-turn lane. There is a bike lane along the southern section of Lafayette Avenue. All approaches have high-visibility crosswalks and pedestrian countdown clocks. In 2024, NYC DOT restriped the intersection, including restriping of the painted median along the south leg of the intersection and widening of the south crosswalk to increase pedestrian visibility. These measures could potentially improve safety conditions at this intersection.

Flatbush Avenue at Atlantic Avenue

The intersection of Flatbush Avenue at Atlantic Avenue was identified as a high-crash location. A total of 190 crashes, including 53 injury crashes and 11 injury crashes involving a bicyclist or pedestrian occurred at the intersection, nine of which involved a pedestrian and two of which involved a bicyclist. Nine of these crashes involved a driver going straight ahead, while one involved a vehicle backing up and one involved a vehicle starting from parking. Four of the nine pedestrian injury crashes involved a pedestrian crossing with the signal.

Flatbush Avenue and Atlantic Avenue is a signalized intersection with a leading pedestrian interval. No left turns are permitted at this intersection. Atlantic Avenue is a four-lane bi-directional corridor with right-turn lanes at this intersection and Flatbush Avenue is a six-lane bi-directional corridor. There are high-visibility crosswalks striped across each approach with a pedestrian refuge island and pedestrian signal heads with pedestrian countdown clocks. The Proposed Actions would result in a minor decrease of vehicle traffic at this intersection (one less vehicle) during the weekday AM peak hour, and a modest increase of 15 to 32 vehicles during the peak hours. This change in vehicle traffic would be a less than 1 percent increase in traffic volumes at the intersection and would not be expected to contribute materially to safety conditions at this intersection.

Fulton Street at Rockwell Place

The intersection of Fulton Street and Rockwell Place was identified as a high-crash location. A total of 30 crashes, including nine injury crashes and six injury collisions involving a bicyclist or pedestrian occurred at the intersection. Three crashes involved a bicyclist where a motor vehicle was traveling east through the intersection, and three involved a pedestrian, one of which where the pedestrian was crossing with the signal.

Fulton Street and Rockwell Place is a signalized intersection with a leading pedestrian interval. Rockwell Place is a southbound one-lane roadway while Fulton Street is a four-lane bi-directional roadway with a bus lane in each direction. There is a crosswalk striped across each approach with pedestrian signal heads and a pedestrian countdown clock. Measure to improve safety at this intersection could include installation of turn calming measures including turn wedges and hardening the centerline.

Lafayette Avenue at Ashland Place

The intersection of Lafayette Avenue and Ashland Place was identified as a high-crash location. A total of 51 crashes, including ten injury crashes and seven injury collisions involving a bicyclist or pedestrian occurred at the intersection. Three crashes resulted in an injury to a bicyclist and four resulted in an injury to a pedestrian. Two of the crashes involving a pedestrian involved a vehicle turning left, while three of the crashes involving a bicyclist involved a vehicle going straight ahead.

Four of the crashes occurred during daylight, while two occurred on a dark but lighted road, and one occurred at dusk.

Lafayette Avenue and Ashland Place is a signalized intersection with a leading pedestrian interval. Ashland Place is a bi-directional street south of the intersection and a northbound one-lane roadway north of the intersection. Ashland Place has bi-directional bikes lane on the east side of the roadway north of Lafayette Avenue and shared bike provisions south of Lafayette Avenue. Lafayette Avenue is a two-lane eastbound roadway with a bike lane striped on the north side of the corridor. There is a crosswalk striped across each approach with pedestrian signal heads and a pedestrian countdown clock. In 2023, NYC DOT restriped this intersection, converting Ashland Place north of Lafayette Avenue from a two-way to one-way northbound roadway, and converted the bike provisions from shared street to two-way bike lanes. These improvements should improve safety at this intersection.

DeKalb Avenue at Ashland Place

The intersection of DeKalb Avenue and Ashland Place was identified as a high-crash location. A total of 46 crashes, including 17 injury crashes and ten injury collisions involving a bicyclist or pedestrian occurred at the intersection. Five injury crashes involved a bicyclist and five involved a pedestrian. Of these ten crashes, six involved a vehicle moving straight through the intersection, one involved making a vehicle making a right turn and two involved a vehicle making a left turn. All but two crashes occurred during daylight hours. Two of the five pedestrian-related injury crashes involved a pedestrian crossing at a crosswalk with the signal.

DeKalb Avenue and Ashland Place is a signalized intersection with a leading pedestrian interval. Ashland Place is one-way northbound south of the intersection and bi-directional north of the intersection, with two-way bike lanes on the east side of the street. There is one vehicle lane of traffic in each direction. DeKalb Avenue is a two-lane westbound roadway with bike lanes striped on the north and south sides of the street. There is a crosswalk striped on each approach with pedestrian signal heads and a pedestrian countdown clock. In 2023, NYC DOT restriped this intersection, converting Ashland Place south of DeKalb Avenue from a two-way to one-way northbound roadway, and reconfigured the shared bike routes to two-way bike lanes on the east side of Ashland Place. The uni-direction Ashland Place bike lanes north of DeKalb Avenue were reconfigured to two-way bike lanes on the east side of Ashland Place. These improvements should improve safety at this intersection.

Fulton Street at Ashland Place

The intersection of Fulton Street and Ashland Place was identified as a high-crash location. A total of 45 crashes, including 19 injury crashes and 11 injury collisions involving a bicyclist or pedestrian occurred at the intersection, four of which involved a bicyclist and seven involved a pedestrian. Five involved a vehicle making a turn, three cited a driver's failure to yield the right-of-way, and one cited driver inattention/distraction.

Fulton Street and Ashland Place is a signalized intersection with a leading pedestrian interval. Ashland Place is a northbound one-lane roadway approaching Fulton Street with a left-turn lane and a bi-directional two-way bike lanes on the east side of the roadway. Fulton Street is a four-lane bi-directional roadway with a bus lane in each direction. There is a crosswalk striped across each approach with pedestrian signal heads and a pedestrian countdown clock. In 2023, NYC DOT restriped this intersection, converting Ashland Place from a two-way to a one-way northbound

roadway, and reconfigured the shared bike routes to two-way bike lanes on the east side of Ashland Place. These improvements should improve safety at this intersection.

Flatbush Avenue Extension at Myrtle Avenue

The intersection of Myrtle Avenue at Flatbush Avenue Extension was identified as a high-crash location. A total of 141 crashes, including 31 injury crashes and seven injury collisions involving a bicyclist or pedestrian occurred at the intersection, three of which involved a bicyclist and two of which involved a pedestrian. Five of these crashes involved a vehicle moving straight ahead, one involved a vehicle making a left turn and one involved a vehicle making a right turn. Four occurred during daylight hours, two occurred during nighttime hours, and one occurred during dusk.

Myrtle Avenue and Flatbush Avenue Extension is a signalized intersection with a leading pedestrian interval. Flatbush Avenue Extension is a six-lane bi-directional corridor with an additional southbound bus-only left-turn lane. Myrtle Avenue consists of two travel lanes in each direction There is a crosswalk striped across each approach with pedestrian signal heads and a pedestrian countdown clock. Wedge treatments to turning vehicles could potentially improve safety conditions at this intersection.

Atlantic Avenue at 3rd Avenue

The intersection of Atlantic Avenue at 3rd Avenue was identified as a high-crash location. A total of 94 crashes, including 25 injury crashes and four injury collisions involving a bicyclist or pedestrian occurred at the intersection, one involving a bicyclist and three involving a pedestrian. Two of these crashes occurred during daylight hours, one occurred during nighttime hours, and one occurred at dawn. Two involved a vehicle moving straight ahead, and one involved a pedestrian crossing with the signal.

Atlantic Avenue and 3rd Avenue is a signalized intersection with a leading pedestrian interval. Atlantic Avenue is a four-lane bi-directional corridor; 3rd Avenue consists of one travel lane each direction south of Atlantic Avenue and is a two-lane northbound roadway north of Atlantic Avenue. Left turns are prohibited along Atlantic Avenue. There is a crosswalk striped across each approach with pedestrian signal heads and a pedestrian countdown clock. The Proposed Actions would result in modest increase of no more than eight vehicles during the peak hours; this change in traffic volumes would not be expected to contribute materially to safety conditions at this intersection.

11

Air Quality

Ambient air quality, or the quality of the surrounding air, may be affected by air pollutants produced by motor vehicles, referred to as "mobile sources"; by fixed facilities, usually referred to as "stationary sources"; or by a combination of both. Under CEQR, an air quality assessment determines both a proposed project's effects on ambient air quality as well as the effects of ambient air quality on the project.

Introduction

The New York Department of Housing Preservation and Development (HPD) in conjunction with the New York City Department of Health and Mental Hygiene (DOHMH) and the Department of Citywide Administrative Services (DCAS) (each a co-applicant, and collectively, the Applicant) is seeking approval for a zoning map amendment, zoning text amendments, disposition of City-owned property, site selection and acquisition of real property interest, certification to establish and facilitate a transit volume, and an amendment to the Brooklyn Center Urban Renewal Plan (URP) (collectively, the Proposed Actions) to facilitate a mixed-use development (the Proposed Project) in the Downtown Brooklyn neighborhood within Brooklyn Community District (CD) 2. The Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with a new, approximately 1,552,605-gross-square-foot (gsf), 72-story, 840-foot-tall, mixed-use building. Under With-Action condition, the building would include approximately 1,233,950 gsf of residential floor 129,000 gsf of retail space and 88,500 gsf of office and/or community facility space that may be dedicated for future City use.

The Proposed Project would also include public realm improvements, including an approximately 4,745 square foot (sf) open space available to the public on the southern portion of the Development Site, an expanded sidewalk along the Development Site's Flatbush Avenue Extension frontage, and surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site.

In accordance with the *2021 CEQR Technical Manual* guidelines, the following potential air quality impacts associated with the Proposed Actions were assessed:

- Emissions impact from project-generated vehicular travel on air quality near affected intersections.
- Emissions impact from industrial and manufacturing facilities on the Development Site.
- Emissions impact from large or major sources on the Development Site.

The following analyses were considered, but not required for the Proposed Actions:

- Parking Analysis: The Proposed Actions would not introduce parking in With-Action condition. Therefore, an analysis of parking emissions is not required.
- Heating, Ventilating, and Air-Conditioning (HVAC) and Hot Water Analysis: The proposed building would have an all-electric HVAC and hot water system. Thus, localized HVAC and hot water systems' emissions impacts from the development under With-Action condition are not anticipated, and an analysis of the proposed systems is not required.

Principal Conclusions

The Proposed Actions would not result in significant adverse air quality impacts on the surrounding sensitive receptors, nor would nearby emission sources significantly impact the Proposed Project.

The mobile source analysis determined that project-generated traffic resulting in concentrations of carbon monoxide (CO) and fine particulate matter ($PM_{2.5}$) at the analyzed intersections would not result in any violations of National Ambient Air Quality Standards (NAAQS). Further, the 24-hour and annual incremental $PM_{2.5}$ concentrations were predicted to be below the City's *de minimis* criteria.

A Land Disposition Agreement and/or Regulatory Agreement requiring the Proposed Project to have an all-electric HVAC and hot water system would be executed between HPD and the Lessee prior to construction of the Proposed Project. Therefore, a stationary source analysis is not warranted, and no significant adverse impacts would occur.

The analysis of existing light industrial/manufacturing uses in the surrounding study area determined that emissions of air toxic compounds would not result in any potential significant adverse air quality impacts. An analysis of the cumulative health risk impacts of existing industrial sources on the Development Site was also performed. Maximum concentration levels at the Development Site were found to be below the applicable health risk criteria.

The analysis of existing large and major emissions sources within 1,000 feet of the Development Site concluded that this source would not result in significant adverse air quality impacts on With-Action development.

Air Quality Standards

In accordance with the requirements of the Clean Air Act (CAA), as amended in 1990, the U.S. Environmental Protection Agency (EPA) has promulgated NAAQS (40 CFR part 50) for pollutants considered harmful to public health and the environment. The CAA established two types of national air quality standards: primary and secondary. Primary standards set limits to protect public health, including the health of sensitive populations such as children, the elderly, and asthmatics. Secondary

standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set NAAQS for six principal pollutants, which are called "criteria" pollutants. These six pollutants are ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns in aerodynamic diameter (PM_{10}) and less than 2.5 microns in aerodynamic diameter ($PM_{2.5}$), and lead (Pb). These standards are reviewed from time to time and may be revised, and these pollutants are found and formed from various sources. Ambient concentrations of O_3 are formed in the atmosphere by complex photochemical processes that include nitrogen oxides (nitric oxide [NO] and nitrogen dioxide [NO_2], collectively referred to as NO_x) and volatile organic compounds (VOCs). CO is predominantly influenced by mobile source emissions. Particulate matter (PM), VOCs, and NO_x are emitted from both mobile and stationary sources. Fine PM is also formed when emissions of NO_x, sulfur oxides (SO_x), ammonia, organic compounds, and other gases react or condense in the atmosphere. Emissions of SO_2 are associated mainly with stationary sources, and some sources utilizing non-road diesel such as large international marine engines. On-road diesel vehicles currently contribute very little to SO_2 emissions since the sulfur content of on-road diesel fuel, which is federally regulated, is extremely low. The EPA's NAAQS are presented in **Table 11-1**.

In addition to criteria pollutants, there are other toxic air pollutants not included by the EPA in the list of principal pollutants. These pollutants are sometimes referred to as hazardous air pollutants (HAP) and, when emitted from mobile sources, as Mobile Source Air Toxics (MSATs). No federal ambient air quality standards have been promulgated for toxic air pollutants. However, the New York State Department of Environmental Conservation (NYSDEC) has issued guidelines that establish acceptable ambient levels for these pollutants based on human exposure.

Table 11-1 National Ambient Air Quality Standards

Pollutant	Primary/ Secondary	Averaging Level	Level	Form
Carbon Monoxide (CO)	Primary	8 hours	9 ppm	Not to be exceeded more than once per year
		1 hour	35 ppm	
Lead (Pb)	Primary and secondary	Rolling 3-month average	0.15 µg/m^3 (1)	Not to be exceeded
Nitrogen Dioxide (NO_2)	Primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Primary and secondary	1 year	53 ppb (2)	Annual mean
Ozone (O_3)	Primary and secondary	8 hours	0.070 ppm (3)	Annual fourth-highest daily maximum concentration, averaged over 3 years
Particulate Matter ($PM_{2.5}$)	Primary	1 year	9.0 µg/m^3	Annual mean, averaged over 3 years
	Secondary	1 year	15.0 µg/m^3	Annual mean, averaged over 3 years
	Primary and secondary	24 hours	35 µg/m^3	98th percentile, averaged over 3 years
Particulate Matter (PM_{10})	Primary and secondary	24 hours	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)	Primary	1 hour	75 ppb(4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	1 year	10 ppb	Annual mean, averaged over 3 years

Source: EPA NAAQS Table, https://www.epa.gov/criteria-air-pollutants/naaqs-table, Last updated on December 16, 2024 via 40 CFR 50

Notes:

[1] In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m3 as a calendar quarter average) also remain in effect.

[2] The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

[3] Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O_3 standards additionally remain in effect in some areas. Revocation of the previous (2008) O_3 standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.

[4] The previous SO_2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO_2 standards or is not meeting the requirements of a State Implementation Plan (SIP) call under the previous SO_2 standards (40 CFR 50.4(3)). A SIP call is a USEPA action requiring a state to resubmit all or part of its SIP to demonstrate attainment of the required NAAQS.

Pollutants of Concern

Air pollution is of concern because of its demonstrated effects on human health. Of special concern are the respiratory effects of the pollutants and their potential toxic effects, as described below.

Carbon Monoxide (CO) is a colorless and odorless gas that is a product of incomplete combustion. Carbon monoxide is absorbed by the lungs and reacts with hemoglobin to reduce the oxygen carrying capacity of the blood. At low concentrations, CO has been shown to aggravate the

symptoms of cardiovascular disease. It can cause headaches, nausea, and at sustained high concentration levels, can lead to coma and death.

Particulate Matter (PM) is made up of small solid particles and liquid droplets. PM_{10} refers to particulate matter with a nominal aerodynamic diameter of 10 micrometers or less, and $PM_{2.5}$ refers to particulate matter with an aerodynamic diameter of 2.5 micrometers or less. Particulates can enter the body through the respiratory system. Particulates over 10 micrometers in size are generally captured in the nose and throat and are readily expelled from the body. Particulates smaller than 10 micrometers, and especially particles smaller than 2.5 micrometers, can reach the air ducts (bronchi) and the air sacs (alveoli) in the lungs. Particulates are associated with increased incidence of respiratory diseases, cardiopulmonary disease, and cancer.

Nitrogen Oxides (NO_X), the most significant of which are nitric oxide (NO) and nitrogen dioxide (NO_2), can occur when combustion temperatures are extremely high (such as in engines) and atmosphere nitrogen gas combines with oxygen gas. NO is relatively harmless to humans but quickly converts to NO_2. Nitrogen dioxide has been found to be a lung irritant and can lead to respiratory illnesses. Nitrogen oxides, along with VOCs, are also precursors to ozone formation.

Sulfur Dioxide (SO_2) emissions are the main components of the "oxides of sulfur," a group of highly reactive gases from fossil fuel combustion at power plants, other industrial facilities, industrial processes, and burning of high sulfur containing fuels by locomotives, large ships, and non-road equipment. High concentrations of SO_2 will lead to the formation of other sulfur oxides. By reducing SO_2 emissions, other forms of sulfur oxides are also expected to decrease. When oxides of sulfur react with other compounds in the atmosphere, small particles that can affect the lungs can be formed. This can lead to respiratory disease and aggravate existing heart disease.

Non-criteria Pollutants may be of concern in addition to the criteria pollutants discussed above. Non-criteria pollutants are emitted by a wide range of man-made and naturally occurring sources. Federal ambient air quality standards do not exist for non-criteria pollutants; however, the NYSDEC has issued standards for certain non-criteria compounds, including (but not limited to) beryllium, gaseous fluorides, and hydrogen sulfide. NYSDEC has also developed guidance document DAR-1 (February 2021), which contains a compilation of annual and short term (1-hour) guideline concentration thresholds for these compounds. The NYSDEC's DAR-1 guidance thresholds represent ambient levels that are considered safe for public exposure. These guidelines are used in health risk assessments to determine the potential effects to the public.

Regulatory Context

The 1990 CAA with amendments resulted in states being divided into attainment and non-attainment areas, with classifications based upon the severity of their air quality problems. Air quality control regions are classified and divided into one of four categories: attainment, unclassified, non-attainment or maintenance depending upon ambient concentrations of pollutants. Attainment areas are regions where ambient concentrations of a pollutant are below the respective NAAQS; non-attainment areas are those where concentrations exceed the NAAQS. Maintenance areas are areas of former non-attainment that achieved attainment. An unclassified area is a region where data are insufficient to make a determination and is generally considered as an attainment area for administrative purposes. A single area can be in attainment of the standards for some criteria pollutants while being in non-attainment for others. When an area is designated as non-attainment

by EPA, the state is required to submit a State Implementation Plan (SIP), which outlines the plan to achieve conformity with the NAAQS and the following plan for maintaining the attainment status.

Kings County is designated as a severe non-attainment area for the 2008 8-hour ozone standard and a moderate non-attainment area for the 2015 8-hour ozone standard. Both designations are part of a larger New York–Northern New Jersey–Long Island, NY-NJ-CT non-attainment areas.

The county was designated as a CO maintenance area on May 20, 2002, and as a $PM_{2.5}$ maintenance area for the 2006 24-hour $PM_{2.5}$ standard on April 18, 2014. EPA plans to designate all U.S. areas to the new $PM_{2.5}$ annual standard that was finalized on February 7, 2024. The final rule took effect on May 6, 2024. States had until February 7, 2025, to submit their initial designation recommendation to the EPA for areas under their jurisdiction, and the EPA will finalize these designations by February 6, 2026. Until then, designation for the previous 2012 annual $PM_{2.5}$ standard remains valid.

Kings County is in attainment for all other criteria pollutants (PM_{10}, Pb, NO_2, and SO_2).

Impact Criteria

The predicted concentrations of pollutants of concern associated with a proposed project are compared with either the NAAQS for criteria air pollutants or ambient guideline concentrations for non-criteria pollutants. In general, if a project would cause the standards for any pollutant to be exceeded, it would likely result in a significant adverse air quality impact. In addition, the City's *de minimis* criteria are also used to determine significance of impacts for CO and $PM_{2.5}$.

The NYSDEC DAR-1 guidance document presents guideline concentrations in micrograms per cubic meter ($\mu g/m^3$) for short-term and annual average time periods of various air toxic compounds.[1] Pollutants with short-term averaging periods are compared against the short-term guideline concentrations (SGCs) and pollutants with annual averaging periods are compared against the annual guideline concentrations (AGCs). Residual risk of non-carcinogenic and carcinogenic pollutants is also assessed. To evaluate residual risk of non-carcinogenic toxic air emissions, hazard index is calculated based on annual exposure limits. If the combined ratio of pollutant concentration divided by pollutant annual exposure threshold for each of the toxic pollutants is found to be less than 2.0, according to DAR-1, the residual risk is deemed acceptable. In addition, the potential cancer risk associated with each carcinogenic pollutant, as well as the total cancer risk of the releases of all the carcinogenic toxic pollutants combined, can be estimated. If the total cancer risk of all the carcinogenic toxic pollutants combined is less than ten in one million, the residual risk is deemed acceptable. If the residual risk is acceptable, no significant adverse air quality impacts are predicted to occur due to the pollutant releases.

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 project-generated mobile sources, as set forth in the *CEQR Technical Manual*. These criteria set the minimum change in CO concentration that defines a significant adverse environmental impact. Significant increases of CO concentrations in New York City are defined as:

[1] NYSDEC DAR-1 - http://www.dec.ny.gov/docs/air_pdf/dar1.pdf. Last updated February 2021.

- An increase of 0.5 ppm or more in the maximum eight-hour average CO concentration at a location where the predicted No-Action eight-hour concentration is equal to 8 ppm or between 8.0 and 9.0 ppm; or
- An increase of more than half the difference between baseline (i.e., No-Action) concentrations and the eight-hour standard, when No-Action concentrations are below 8.0 ppm.

$PM_{2.5}$ *De Minimis* Criteria

New York City uses *de minimis* criteria to determine a project's potential to result in a significant adverse $PM_{2.5}$ impact under CEQR. The *de minimis* criteria are as follows:

- 24-hour maximum $PM_{2.5}$ concentration increase which is predicted to be more than half the difference between the background concentration and the 24-hour standard;
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.1 $\mu g/m^3$ at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations); or
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.3 $\mu g/m^3$ at a discrete receptor location (elevated or ground level).

Background Concentrations

Background concentrations are ambient pollution levels associated with existing stationary, mobile, and other area emission sources. Three years of monitoring data coinciding with the meteorological data used in the large source dispersion analysis (2019 to 2021) from monitoring stations representative of the Development Site were used to develop background concentrations for all pollutants. These concentrations were estimated using the form of the NAAQS (see the "Form" column in **Table 11-1** for more information). **Table 11-2** summarizes the background concentrations for each of the pollutants.

Table 11-2 Background Concentrations

Pollutant	Averaging Time	Monitoring Location	Background Concentration
CO	1-hour	Queens College	2.1 ppm
	8-hour		1.6 ppm
NO_2	1-hour	Queens College	97.2 µg/m^3
	Annual		26.7 µg/m^3
PM_{10}	24-hour	Queens College	38.0 µg/m^3
$PM_{2.5}$	24-hour	JHS 126	19.8 µg/m^3
	Annual		7.5 µg/m^3
SO_2	1-hour	Queens College	14.8 µg/m^3

The CO, NO_2, PM_{10}, and SO_2 background concentrations were developed from monitoring data collected at the Queens College monitoring station at 65-30 Kissena Boulevard. The $PM_{2.5}$ background concentrations were developed from monitoring data collected at the JHS 126 monitoring station at 424 Leonard Street.

The CEQR *de minimis* 24-hour threshold, based on the Queens College $PM_{2.5}$ monitoring data, was estimated to be 7.6 µg/m^3.

Mobile Sources

Mobile Source Intersection Analysis

Methodology

Intersection Screening

A screening analysis of mobile source emissions of CO and PM on ambient pollutant levels in the study area was conducted per *CEQR Technical Manual* guidance. For the project's study area, as described in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*, the threshold for conducting an analysis of CO emissions corresponds to 160 project-generated vehicles at a given intersection in the peak hour. The need for conducting an analysis of PM emissions is based on road type and the number of project-generated peak hour heavy-duty diesel vehicles (HDDVs) or its equivalency in vehicular $PM_{2.5}$ emissions as determined using the worksheet provided on page 17-12 of the *CEQR Technical Manual*.

A travel demand forecast was conducted for the weekday AM, midday, PM, and Saturday peak hours (see **Transportation, Chapter 10**). Intersections were ranked by traffic volume for the CO screening and by a combination of traffic volume, vehicle type and road type for the $PM_{2.5}$ screening. Traffic volume and vehicle types were obtained from the travel demand forecast, and road types were obtained from the New York State Department of Transportation Functional Class Viewer. All autos and taxis were conservatively assumed to be vehicle type LDGT1, and all trucks were assumed to be vehicle type HDDV8A as presented in the $PM_{2.5}$ truck equivalent screening spreadsheet on page 17-12 of the *CEQR Technical Manual*. Incremental equivalent truck trips were compared to weighted CEQR $PM_{2.5}$ screen values. The CEQR $PM_{2.5}$ screen values are as follows:

- 12 or more HDDVs for local roads
- 19 or more HDDVs for collector roads
- 23 or more HDDVs for arterial roads

CO Screening

Based on the screening analysis, the projected number of vehicle trips for the Proposed Development would not exceed the CO threshold of 160 vehicles in any peak hours at any intersections that would experience an increase in traffic related to the project. Therefore, CO mobile source detailed analysis is not warranted.

PM Screening

Based on the screening analysis, two intersections would exceed the PM emission thresholds discussed above. Therefore, mobile source detailed analysis of PM emissions is provided. The intersection of Hudson and Dekalb Avenues, which is predicted to have the highest incremental increase in vehicular traffic, was selected for a $PM_{2.5}$ mobile source detailed analysis to represent the worst case.

Intersection Dispersion

Vehicle Emissions

Engine Emissions

Vehicular cruise and idle $PM_{2.5}$ emission factors utilized in the dispersion modeling were computed using EPA's mobile source emissions model, Motor Vehicle Emission Simulator (MOVES).[2] This emissions model is capable of calculating engine emission factors for various vehicle types, based on the fuel type (gasoline, diesel, or natural gas), meteorological conditions, vehicle speeds, vehicle age, roadway types, number of starts per day, engine soak time, and various other factors that influence emissions, such as inspection maintenance programs. The inputs and use of MOVES incorporate the most current guidance available from NYSDEC.

Road Dust

To account for the suspension of fugitive road dust in the air from vehicular traffic in the local microscale analysis, $PM_{2.5}$ emission rates included fugitive road dust. However, fugitive road dust was not included in the neighborhood scale $PM_{2.5}$ microscale analyses, since the New York City Department of Environmental Protection (NYCDEP) considers it to have an insignificant contribution on that scale. Road dust emission factors were calculated according to the latest procedure delineated by EPA[3] and the *CEQR Technical Manual*.

[2] EPA, Motor Vehicle Emission Simulator (MOVES): User Guide for MOVES2014a. EPA420B15095. November 2015. Overview of EPA's Motor Vehicle Emission Simulator (MOVES5). November 2024, EPA-420-R-24-011.

[3] EPA. Compilations of Air Pollutant Emission Factors AP-42. Fifth Edition, Volume I: Stationary Point and Area Sources, Ch. 13.2.1. NC. http://www.epa.gov/ttn/chief/ap42. January 2011.

Traffic Data

Traffic data for the intersection analysis were derived from existing traffic counts, projected future growth in traffic, and other information developed as part of the traffic analysis for the Proposed Actions (see **Chapter 10, Transportation**). Traffic data for the Future without the Proposed Development (the No-Action condition) and the With-Action condition were utilized in the respective air quality modeling scenarios. The peak morning (AM), midday, evening (PM), and Saturday midday period traffic volumes were used as a baseline for determining off-peak volumes for weekdays, and the peak Saturday period was used for weekend days. Off-peak traffic volumes in the No-Action condition, and off-peak increments from the Proposed Development were determined by adjusting the peak period volumes by the 24-hour distributions of actual vehicle counts collected at appropriate locations. For annual impacts, average weekday and weekend 24-hour distributions were used to more accurately simulate traffic patterns over longer periods.

Dispersion Modeling

Potential impacts from the Proposed Actions' mobile sources were predicted using the American Meteorological Society/EPA Regulated Model (AERMOD), Version 24142. AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain, including updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and includes handling of terrain interactions.

The analysis was performed using an EPA line source representation of emission sources in order to simulate traffic-related air pollutant dispersion.[4] In addition, the weighted average release height and initial vertical source parameters were calculated for each modeled roadway.

For the $PM_{2.5}$ analysis, 24-hour traffic volumes were estimated using peak hour volumes as a baseline to determine volumes throughout the day. Off-peak traffic volumes were determined by adjusting the peak period volumes by the 24-hour distributions from available data at appropriate locations.

Meteorology

In general, the transport and concentration of pollutants from vehicular sources are influenced by three principal meteorological factors: wind direction, wind speed, and atmospheric stability. Wind direction influences the direction in which pollutants are dispersed, and atmospheric stability accounts for the effects of vertical mixing in the atmosphere. These factors, therefore, influence the concentration at a particular prediction location (receptor).

The meteorological data used was the recommended set provided by NYSDEC. The data represents surface data from LaGuardia Airport and upper air soundings from Brookhaven for the years 2017 through 2021.

Analysis Year

The microscale analyses were performed for 2030, the year by which development facilitated by the Proposed Development are likely to be completed. The future analysis was performed for both

[4] EPA. Project-Level Conformity and Hot-Spot Analyses, available at: https://www.epa.gov/state-and-localtransportation/project-level-conformity-and-hot-spot-analyses#pmguidance.

without the Proposed Development (the No-Action condition) and with the Proposed Development (the With-Action condition).

Background Concentrations

The background concentrations used in the mobile source analysis are based on concentrations in **Table 11-2**. The 24-hour average $PM_{2.5}$ background concentration was used to determine the *de minimis* criteria threshold.

Receptor Placement

Multiple receptors (i.e., precise locations at which concentrations are evaluated) were modeled at the selected sites. Receptors were placed along the approach and departure links and roadway segments at regularly spaced intervals. Ground-level receptors were placed at sidewalk or roadside locations near intersections with continuous public access, at a pedestrian height of 1.8 meters. Based on the NYCDEP guidance for neighborhood-scale corridor $PM_{2.5}$ modeling, receptors in that analysis were placed at a distance of 15 meters from the nearest moving lane at each analysis location.

Assessment

Using the methodology previously described, maximum predicted 24-hour and annual average $PM_{2.5}$ concentrations were calculated so that they could be compared with the NAAQS and the *de minimis* criteria, respectively. 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 11-3**.

Table 11-3 Mobile Source Analysis Results (µg/m³)

Pollutant	Averaging Period	Background Concentration	No-Action Total Concentration	With-Action Total Concentration	Increment	Impact Threshold (*De Minimis*/ NAAQS)
$PM_{2.5}$	24-hour[1]	19.8	22.853	23.377	0.524	7.6/35
$PM_{2.5}$	Annual[2]	7.5	7.731	7.820	0.089	0.1/9.0

Notes:
The 24-hour $PM_{2.5}$ background concentration is used to develop the *de minimis* criteria.
Annual $PM_{2.5}$ impacts are compared with the $PM_{2.5}$ *de minimis* criteria of 0.1 µg/m³, without considering the annual background.

As shown in **Table 11-3**, the $PM_{2.5}$ 24-hour and annual impacts would be below their corresponding *de minimis* thresholds or NAAQS, respectively.

Stationary Sources

Industrial Source Analysis

Methodology

As described in Section 220 and Section 322 in Chapter 17 of the *CEQR Technical Manual*, an air quality assessment is required to evaluate the potential impacts of air toxics emissions from ventilation exhaust systems of manufacturing or processing facilities within a 400-foot radius of a

development site when a project would result in new sensitive uses (particularly residences, schools, hospitals, or parks). If any sources are identified, a screening analysis is performed using Table 17-3 in Chapter 17 of the *CEQR Technical Manual*. The screening table provides maximum 1-hour, 8-hour, 24-hour and annual average modeled pollutant concentration values at a 20-foot-tall receptor for distances of 30 to 400 feet from a 20-foot-tall stack. These values are based on a generic emission rate of 1 gram per second of a pollutant from the 20-foot-tall point source. Pollutant concentrations predicted from the industrial source of concern based on the screening table are compared with the SGCs and AGCs recommended in NYSDEC's DAR-1 AGC/SGC tables. Additionally, as detailed in the **Impact Criteria** section above, residual risk (hazard index and cancer risk) for non-carcinogenic and carcinogenic pollutants, respectively, are also evaluated as a part of the impact assessment.

If a proposed project fails the above screening analysis, or the screening analysis methodology is not applicable to the project, a refined analysis using EPA's AERSCREEN and/or AERMOD model is conducted to determine any potential for significant adverse impacts.

Assessment

To assess potential air quality impacts on the Proposed Development from existing industrial sources that emit toxic air contaminants, an investigation of existing land uses within a 400-foot radius of the Development Site was conducted to identify potential sources and determine if there are active NYCDEP-issued industrial permits associated with those sources. These sources are typically sites classified as industrial/manufacturing, transportation/utility, public facilities/institutions, or commercial buildings.

Reviews of land use maps, the NYCDEP's Clean Air Tracking System (NYCDEP CATS) website, and NYCDEP permit forms were conducted to identify land uses that have NYCDEP-issued industrial permits and land uses that are unpermitted sources of air toxics within 400 feet of the Development Site. A total of seven permits, presented in **Table 11-4**, were assessed as follows:

- Permit PG000224: Permit PG000224 for is an active permit for a charbroiler under the ownership of the Rockwell Place at 31 Rockwell Place. The permit records showed that this use would release carbon monoxide emissions. Although not listed on the permit, charbroilers traditionally also emit particulate matter. Therefore, an industrial source analysis was conducted for this site.
- Permit PA000791: Permit PA000791 is a registration for a printing press under the ownership of Promotional Slideguide Corp. at 33 Rockwell Place. This permit expired in 1998. There is no evidence that the company is still operating on the premises. Currently, the only businesses on site are a TV station and media company. Therefore, an industrial source analysis was not conducted for this site.
- Permit PB014511: Permit PB014511 is an active registration for a diesel-powered emergency generator (Caterpillar Model #C15), which is not considered an air toxic source. Therefore, an industrial source analysis was not conducted for this site.
- Permit PA013196: Permit PA013196 is a registration that expired in 2011 for a diesel-powered emergency generator (Caterpillar Model #SR4), which is not considered an air toxic source. Therefore, an industrial source analysis was not conducted for this site.
- Permit PB009012: Permit PB009012 is a registration that expired in 2015 for a diesel-powered emergency generator (Caterpillar Model #SR4), which is not considered an air toxic source. Therefore, an industrial source analysis was not conducted for this site.

- Permit PG005019: Permit PG005019 for is an active permit for a charbroiler under the ownership of Burger King at 524 Fulton Street. The permit records showed that this would release carbon monoxide and particulate matter emissions. Therefore, an industrial source analysis was conducted for this site.
- Permit PB040614: Permit PB040614 is a registration that expired in 2017 for a diesel-powered emergency generator (Rudox R150), which is not considered an air toxic source. Therefore, an industrial source analysis was not conducted for this site.

Table 11-4 NYCDEP Permits: Registrations

Application No.	Expiration Date	Address	Block	Lot
PG000224	2/14/2027	31 Rockwell Pl	2095	9
PA000791	2/3/1998	33 Rockwell Pl	2095	1
PB014511	5/16/2026	30 Flatbush Ave	162	1
PA013196	5/3/2011	625 Fulton St	2094	1
PB009012	6/5/2015	625 Fulton St	2094	1
PG005019	12/24/2025	524 Fulton St	161	33
PB040614	10/1/2017	9 Dekalb Ave	149	100

The Permit PG000224 for a charbroiler under the ownership of the Rockwell Place, located at 31 Rockwell Place, is approximately 290 feet away from the Development Site. The Permit PG005019 for a charbroiler owned by Burger King at 524 Fulton Street, is approximately 245 feet away from the Development Site. Contaminants and corresponding hourly and annual emission rates from previous industrial analyses were used for the analysis of PG000224 in absence of permit-specific information.

The emission rates and results of this analysis are presented in **Table 11-5**. The results indicate that carbon monoxide and solid particulates ($PM_{2.5}$) are below their respective short-term and annual NAAQS. Therefore, significant adverse impacts from industrial sources on the Proposed Development are not expected.

Table 11-5 Results of Industrial Source Analysis

Chemical Name	CAS	Short-term Emission Rate (g/s)	Total Short-Term Concentration (µg/m³) [2]	NAAQS – Short Term (µg/m³)	Annual Emission Rate (g/s)	Total Annual Concentration (µg/m³)[2]	NAAQS – Annual (µg/m³)
Permit PG000224							
Carbon Monoxide (CO) – 8-Hour	00630-08-0	2.42×10^{-3}	1,836	10,310	-	-	-
Carbon Monoxide (CO) – 1-Hour	00630-08-0	2.42×10^{-3}	2,420	40,096	-	-	-
Solids ($PM_{2.5}$)[1]	NY075-02-5	2.19×10^{-4}	20.0	35	2.19×10^{-4}	7.5	9
Permit PG005019							
Carbon Monoxide (CO) – 8-Hour	00630-08-0	1.12×10^{-3}	1,835	10,310	-	-	-
Carbon Monoxide (CO) – 1-Hour	00630-08-0	1.12×10^{-3}	2,418	40,096	-	-	-
Solids ($PM_{2.5}$)[1]	NY075-02-5	1.01×10^{-4}	19.9	35	1.01×10^{-4}	7.5	9

Notes:
[1] Conservatively assuming all PM is PM2.5.
[2] Total CO and PM2.5 concentrations include background concentrations from **Table 11-2.**

Large or Major Source Analysis

Methodology

As described in Section 220 and Section 322 in Chapter 17 of the *CEQR Technical Manual*, an air quality assessment is required to evaluate the potential impacts of emissions from a "large" or "major" emission source within a 1,000-foot radius of a project site. Major sources are identified as sources with NYSDEC-issued Title V/ Prevention of Significant Deterioration (PSD) permits. Large sources are identified as sources with NYSDEC-issued Air State Facility (ASF) permits. A detailed analysis is usually performed for such sources to determine any potential for significant adverse impact on a proposed development.

A review of available information identified one large source with an ASF permit located within a 1,000-foot radius of the project site: the Brooklyn Hospital Center at 121 Dekalb Avenue. The hospital operates four dual-fired (natural gas or no. 2 fuel oil) boilers for the building's heating and hot water supply and three emergency generators. The impact of emissions from the four dual-fired boilers at the facility on the With-Action development was estimated using the latest version of the EPA's AERMOD model. The EPA guidance on treatment of intermittent sources allows for sources with infrequent and unpredictable hours of operation to be excluded from compliance demonstration.[5] Based on this guidance, the emergency generators were excluded from the large source analysis.

AERMOD Dispersion Modeling

The dispersion modeling for the large source analysis was conducted using AERMOD version 24142. AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain, including updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and handling of terrain interactions. The AERMOD model calculates pollutant concentrations from one or more points (e.g., exhaust stacks) based on hourly meteorological data and has the capability to calculate pollutant concentrations at locations where the plume from the exhaust stack is affected by the aerodynamic wakes and eddies (downwash) produced by nearby structures. AERMOD can be run with and without building downwash. The downwash option accounts for the effects on plume dispersion created by the structure the stack is located on, and other nearby structures. The potential impacts of the large source were estimated both as a direct plume impact and using the downwash algorithm.

Emission Rates and Stack Parameters

The Brooklyn Hospital Center large source facility presented the use of four dual-fired boilers exhausted through one stack: three boilers with capacities of 32 MMBtu/hr each and one boiler with a capacity of 26.1 MMBtu/hr. Emission rates and stack parameters from the facility were estimated based on the permit, annual compliance reports, the EPA's AP-42, Compilation of Air Pollutant Emissions Factors (AP-42) and Google aerial imagery. Several pollutants of concern were identified for this large source as it uses both no. 2 fuel oil and natural gas: PM, both PM_{10} and $PM_{2.5,}$ and NO_2. The analysis also included SO_2.

[5] EPA, OAQPS, Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO2 NAAQS, March 2011.

Annual emission rates were determined using emission of the peak year from the latest four years of annual compliance reports for the combined use of fuel oil and natural gas and AP-42 emission factors. Short-term, 24-hour PM, and 1-hour SO_2 emission rates were determined using the boiler capacity at 100 percent load for the worst-case scenario of no. 2 fuel oil usage and AP-42 emission factors. Short-term, 1-hour NO_2 emission rates were determined using emission of the peak month from the latest four years of annual compliance reports and AP-42 emission factors. All boilers were assumed to operate year-round.

Stack parameters, which include exhaust height, diameter, temperature, and velocity were determined as follows: Stack height and diameter were obtained from the permit and Google aerial imagery. Stack temperature and velocity were obtained from the NYCDEP boiler database for boilers of similar sizes.

Methodology Utilized for Estimating NO_2 Concentrations

Short-term and annual NO_2 concentrations were estimated to account for the conversion of NO_x to NO_2 using different modeling options in AERMOD.

1-hour NO_2: The 1-hour NO_2 concentration associated with the With-Action development was estimated using the AERMOD Plume Volume Molar Ratio Method (PVMRM) module. The PVMRM module limits the NO_x to NO_2 conversion by considering NO_2 formation based on the amount of ozone within the plume volume. A default in-stack NO_2 to NO_x ratio of 0.5 and NO_2/NO_x equilibrium ratio of 0.9 were applied. Both ozone and NO_2 background data from NYSDEC were incorporated in the model:

- Background ozone concentrations from the Queens College ambient monitoring station for the latest five years (2017–2021) of hourly data were incorporated into the model.
- Hourly background NO_2 concentrations from the Queens College monitoring station for 2019 through 2021 were used.

Overall, the total 1-hour NO_2 concentration was estimated using 5 years of background ozone concentrations and seasonal hourly background NO_2 concentrations directly in the model.

Annual NO_2: The annual NO_2 concentrations were estimated using the AERMOD Ambient Ratio Method (ARM2). Modeled concentrations were added with the background concentrations from **Table 11-2**.

Receptor Locations

Receptors were placed on the podium and tower of the Development Site. Receptors were spaced 20 feet horizontally and included on every floor of the building.

Meteorological Data

The meteorological data used was the recommended set provided by NYSDEC. The data represents surface data from LaGuardia Airport and upper air soundings from Brookhaven for the years 2017 through 2021.

Criteria

The resultant concentrations from the large source were compared with the NAAQS to determine the potential for adverse air quality impacts.

Assessment

The AERMOD dispersion modeling analysis was conducted to assess potential impacts of emissions from the Brooklyn Hospital Center on the With-Action development. The analysis accounted for emissions from four boilers exhausted through one stack. Stack parameters used in the modeling, which include stack height, diameter, exit velocity and temperature of the plume, are presented in **Table 11-6**.

Table 11-6 Large Source Stack Parameters

Parameter	Four Boilers	Unit
Stack Height	58.5	m
Stack Diameter	1.83	m
Exit Velocity	2	m/s
Exhaust Temperature	426.3	^{o}K

Source: NYSDEC Permit and NYCDEP Boiler Database

As detailed in the **Methodology** section above, emission rates for the analysis were estimated using the permit, annual compliance reports, and the EPA's AP-42 and are presented in **Table 11-7**.

Table 11-7 Large Source Emission Rates (g/sec)

Pollutant	Time period	Emission Rate
Nitrogen Oxides	1-hour	0.291
	Annual	0.143
Particulate Matter ($PM_{2.5}$)	24-hour	0.371
	Annual	0.019
Particulate Matter (PM_{10})	24-hour	0.371
Sulfur Dioxide (SO_2)	1-hour	0.024

Source: VHB Inc. 2025

The AERMOD analysis calculated pollutant concentration results with and without downwash effects, at receptor locations on the With-Action development. **Table 11-8** presents the highest impact from the modeling along with the background concentrations and a comparison to the NAAQS.

Table 11-8 Highest Concentrations from the Large Source

Pollutant	Time Period	Unit	Predicted Impact	Background Concentration	Total Concentration	NAAQS
Nitrogen Dioxide	1-hour	$\mu g/m^3$	113.7		113.7*	188
	Annual	$\mu g/m^3$	0.696	26.7	27.4	100
Particulate Matter ($PM_{2.5}$)	24-hour	$\mu g/m^3$	11.4	19.8	31.2	35
	Annual	$\mu g/m^3$	0.09	7.5	7.6	9
Particulate Matter (PM_{10})	24-hour	$\mu g/m^3$	15.6	38.0	53.6	150
Sulfur Dioxide (SO_2)	1-hour	$\mu g/m^3$	2.96	14.8	17.8	197

Source: VHB Inc. 2025
Note:
*The total 1-hour NO_2 concentration includes predicted impact and the background level as they were added by AERMOD during the modeling run.

Results of the large source analysis show that potential impacts on the With-Action development are below the respective ambient standards for all pollutants of concern. Therefore, no significant adverse air quality impacts on the With-Action development are anticipated from the large source.

Further, the Proposed Actions would not result in significant adverse impacts to air quality (HVAC systems and hot water equipment) as a Land Disposition Agreement and/or Regulatory Agreement would require the Proposed Project to have an all-electric HVAC and hot water system. Such an agreement would be executed between HPD and the Lessee prior to construction of the Proposed Project.

12

Noise

The goal of this chapter is to determine whether the Proposed Actions would have a significant adverse impact on the environment at existing noise-sensitive receptors and whether noise levels at any new receptors at the Development Site would exceed applicable New York City noise limits.

Introduction

The New York Department of Housing Preservation and Development (HPD), in conjunction with the New York City Department of Health and Mental Hygiene (DOHMH) and the Department of Citywide Administrative Services (DCAS) (each a co-applicant, and collectively, the Applicant) is seeking approval for a zoning map amendment, zoning text amendments, disposition of City-owned property, site selection and acquisition of real property interest, certification to establish and facilitate a transit volume, and an amendment to the Brooklyn Center Urban Renewal Plan (URP) (collectively, the Proposed Actions) to facilitate a mixed-use development (the Proposed Project) in the Downtown Brooklyn neighborhood within Brooklyn Community District (CD) 2. The Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with a new, approximately 1,552,605-gross-square-foot (gsf), 72-story, 840-foot-tall, mixed-use building. Under With-Action condition, the building would include approximately 1,233,950 gsf of residential floor area, 129,000 gsf of retail space and 88,500 gsf of office and/or community facility space that may be dedicated for future City use.

The Proposed Actions would introduce approximately 1,263 dwelling units, of which approximately 253 to 379 would be designated as permanently affordable for households with incomes averaging between 40 and 80 percent area median income (AMI), pursuant to applicable requirements of the City's Mandatory Inclusionary Housing (MIH) Program option 1, 2, or 3.

The Proposed Project would also include public realm improvements, including an approximately 4,745 square foot (sf) open space available to the public on the southern portion of the Development Site, an expanded sidewalk along the Development Site's Flatbush Avenue Extension frontage, and

surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site. Additionally, the With-Action development would also include private amenity spaces for project-generated residents, consisting of no less than 28,000 sf of active recreational space (including but not limited to gym and play areas) and 5,000 sf of passive recreational space (including but not limited to lounge areas, a roof deck, and dog run). Such amenities would be located throughout the building, including potential use of terrace and rooftop areas.

Per the *2021 City Environmental Quality Review (CEQR) Technical Manual*, a noise analysis is appropriate if an action would generate mobile or stationary sources of noise or would be located in an area with high ambient noise levels. The purpose of the noise assessment under CEQR is to determine if:

- The Proposed Actions would have a significant adverse environmental impact by significantly increasing sound levels from mobile and stationary sources at existing sensitive noise receptors adjacent to the Development Site, including residential and commercial land uses; and
- New noise receptors introduced at the Development Site would be in an acceptable ambient sound-level environment.

The noise assessment includes the following:

- Background on metrics used to describe noise;
- The methodology and criteria used to assess potential noise impacts;
- An assessment of the potential for the Proposed Actions to significantly affect existing receptors due to the introduction of new mobile or stationary sources;
- Results from ambient sound level monitoring on the Development Site; and
- An evaluation of the ambient sound levels at new receptor locations.

This noise analysis considers two receptor types when evaluating noise: existing and new receptor(s). Since the Proposed Actions would introduce new buildings with residential, commercial office, and/or community facility spaces, these are considered "new receptors." The analysis also considers "existing receptors," which are the current noise-sensitive uses such as commercial office, community facility, and/or residential properties surrounding the Development Site. The following describes the results of the noise assessment for these two types of receptors.

Principal Conclusions

A noise assessment was conducted to determine whether the Proposed Actions would significantly increase sound levels from mobile and stationary sources at existing noise receptors, and if new noise receptors that would be introduced would be in an acceptable ambient sound level environment.

Stationary Source

The Proposed Actions would introduce a new active recreational space as a stationary source on the rooftop of the building podium. Besides that, no other substantial stationary source noise generators are anticipated to be introduced as the result of the Proposed Actions. The design and specifications for the With-Action building's mechanical equipment would incorporate sufficient noise reduction

devices that would comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Control Code.

The noise analysis for existing and new receptors evaluates whether receptors would be introduced into an environment with acceptable ambient noise conditions. With-Action noise levels have been evaluated at new receptors based on ambient noise measurements, mobile source proportional noise modeling, and detailed modeling of noise from the With-Action development. Based on the modeling results, With-Action sound levels are expected to increase by up to 3.6 A-weighted decibels (dBA) over No-Action levels. However, as the noise level increases in exceedance of 3 dBA were found at the locations where With-Action condition noise levels (L_{eq}) are less than 65 dBA, these increments are not considered as significant impacts. Therefore, the Proposed Actions would not result in a significant adverse noise impact due to new mobile and stationary sources.

Based on the highest predicted L_{10} sound levels, a minimum outdoor-to-indoor window/wall sound attenuation of 33 dBA would be required on the northern façade facing DeKalb Avenue, 31 dBA of window/wall attenuation would be required on the western façade facing Flatbush Avenue Extension and the southern façade facing Fulton Street, and 28 dBA of window/wall attenuation would be required on the eastern façade facing Hudson Avenue to maintain acceptable interior noise conditions for residential, commercial office, and/or community facility uses. Additionally, a minimum outdoor-to-indoor composite window/wall sound attenuation of 33 dBA would be required on the top of the podium facing the proposed active open space. With the implementation of the attenuation requirements described above, no significant adverse noise impacts would occur as a result of the Proposed Actions.

Open Space

The Proposed Actions would introduce approximately 4,745 sf of open space available to the public on the southern portion of the Development Site. Future noise levels (L_{10}) within the newly created open space would be above 55 dBA. This exceeds the 55 dBA (L_{10}) guideline for outdoor areas requiring serenity and quiet contained in the *CEQR Technical Manual*. However, this relatively low noise level is often not achieved in outdoor areas due to the level of nearby noise sources (e.g., nearby roadway, train, and aircraft activity, as well as activities within the outdoor space itself) at most New York City outdoor public open space areas and parks. Furthermore, under existing and No-Action conditions, noise levels at the future location of the project-generated open space at the southern portion of the Development Site fronting Fulton Street currently exceed—and in the future would continue to exceed—55 dBA (L_{10}). This level of existing noise is comparable to noise levels in a number of passive open space areas that are within range of substantial noise sources, including Fort Greene Park, Prospect Park, and Brooklyn Bridge Park. The proposed uses of the project-generated open space do not require serenity and quiet. Therefore, the proposed open spaces are not considered sensitive.

Noise Background

Noise is defined as unwanted or excessive sound. Sound becomes unwanted when it interferes with normal activities such as sleep, work, or recreation. How people perceive sound depends on several measurable physical characteristics. These factors include:

› **Frequency:** Sounds comprise acoustic energy distributed over a variety of frequencies. Acoustic frequencies, commonly referred to as tone or pitch, are typically measured in hertz (Hz). Pure

tones have energy concentrated in a narrow frequency range and can be more audible to humans than broadband sounds.

› **Sound Level:** Sound is based on the amplitude of sound pressure fluctuations above and below atmospheric pressure as detected by the human ear. Since the range of sound pressures detected by the human ear is quite large, sound levels are expressed on a logarithmic scale using decibels (dB) and a reference pressure of 20 micropascals. The decibel scale compresses the audible sound pressures to sound levels, which can vary from the threshold of hearing (0 dB) to the threshold of pain (120 dB). Because sound levels are measured in dB, the addition of two sound levels is not linear. Adding two equal sound levels results in a 3 dB increase in the overall level. Research indicates the following general relationships between changes in sound levels and human perception:

- A 3-dB increase is a doubling of acoustic energy and is the threshold of perceptibility to the average person.
- A 10-dB increase is a tenfold increase in acoustic energy and is perceived as a doubling in loudness to the average person.

Audible sound is comprised of acoustic energy over a range of frequencies typically from 20 to 20,000 Hz. The human ear does not perceive sound levels at each frequency as equally loud. To compensate for this phenomenon in perception, a frequency filter known as dBA is used to evaluate environmental noise levels. **Table 12-1** presents a list of common outdoor and indoor sound levels.

Table 12-1 Common Indoor and Outdoor Sound Levels

Outdoor Sound Levels	Sound Pressure μPa		Sound Level dBA	Indoor Sound Levels
	6,324,555	-	110	Rock Band at 5 m
Jet Over-Flight at 300 m		-	105	
	2,000,000	-	100	Inside New York Subway Train
Gas Lawn Mower at 1 m		-	95	
	632,456	-	90	Food Blender at 1 m
Diesel Truck at 15 m		-	85	
Noisy Urban Area—Daytime	200,000	-	80	Garbage Disposal at 1 m
		-	75	Shouting at 1 m
Gas Lawn Mower at 30 m	63,246	-	70	Vacuum Cleaner at 3 m
Suburban Commercial Area		-	65	Normal Speech at 1 m
	20,000	-	60	
Quiet Urban Area—Daytime		-	55	Quiet Conversation at 1 m
	6,325	-	50	Dishwasher Next Room
Quiet Urban Area—Nighttime		-	45	
	2,000	-	40	Empty Theater or Library
Quiet Suburb—Nighttime		-	35	
	632	-	30	Quiet Bedroom at Night
Quiet Rural Area—Nighttime		-	25	Empty Concert Hall
Rustling Leaves	200	-	20	
		-	15	Broadcast and Recording Studios
	63	-	10	
		-	5	
Reference Pressure Level	20	-	0	Threshold of Hearing

μPA Micropascals describe pressure. The pressure level is what sound level monitors measure.
dBA A-weighted decibels describe pressure logarithmically with respect to 20 μPa (the reference pressure level).
Source: Highway Noise Fundamentals, Federal Highway Administration, September 1980.

Because sound levels change over time, a variety of sound level metrics can be used to describe environmental noise. The following is a list of sound level descriptors that are used in the noise analysis:

- L_{10} is the sound level that is exceeded 10 percent of the time during a given time period. Therefore, it represents the higher end of the range of sound levels. The unit is commonly used in the *CEQR Technical Manual* to evaluate acceptable thresholds for noise exposure for new receptors that would be introduced by a proposed development.
- L_{eq} is the equivalent continuous A-weighted sound level. The L_{eq} is a single value that is equivalent in sound energy to the fluctuating levels over a period of time. Therefore, the L_{eq} considers how loud noise events are during the period, how long they last, and how many times they occur. L_{eq} is commonly used to describe environmental noise and relates well to human annoyance. In accordance with the *CEQR Technical Manual*, the L_{eq} sound level is used to assess the potential for significant increases in noise due to a proposed development at existing receptors in the study area.

- L_{max} (maximum sound level) is the highest exponential-time-average sound level, in A-weighted decibels, that is measured with a sound level meter during a stated time period, using a time constant of 1 second for ("slow") or a time constant of 0.125 seconds ("fast"). In general, the *CEQR Technical Manual* requires a slow time constant.
- L_{min} (minimum sound level) is the lowest exponential-time-average sound level, in A-weighted decibels, that is measured with a sound level meter during a stated time period, using a time constant of 1 second ("slow"), or a time constant of 0.125 seconds ("fast"). In general, the *CEQR Technical Manual* requires a slow time constant.

Noise Standards and Impact Criteria

Noise Exposure Guidelines

The *CEQR Technical Manual* provides noise exposure guidelines for assessing ambient noise conditions at residential, community facility and commercial receptors, as shown in **Table 12-2**.

Impact Criteria

The determination of significant adverse noise impacts in this analysis is based on both absolute noise level limits and relative impact criteria. According to the *CEQR Technical Manual*, for the purposes of determining a significant impact during daytime hours, it is reasonable to consider an L_{eq} noise level of 65 dBA as an absolute noise level that should not be significantly exceeded.

If mobile or stationary sources associated with the Proposed Project would increase L_{eq} sound levels by 3 dB or more and absolute levels would exceed 65 dBA L_{eq}, the Proposed Project would cause a significant adverse impact. Additionally, if No-Action condition noise levels are 60 dBA L_{eq} or less, a 5-dB increase would be considered a significant adverse noise impact.

Table 12-2 Noise Exposure Guidelines for Use in City Environmental Impact Review[1]

Receptor Type	Time Period	Acceptable General External Exposure	Airport[3] Exposure	Marginally Acceptable General External Exposure	Airport[3] Exposure	Marginally Unacceptable General External Exposure	Airport[3] Exposure	Clearly Unacceptable General External	Airport[3] Exposure
1. Outdoor area requiring serenity and quiet[2]		L10 ≤ 55 dBA	DNL ≤ 60 dBA		60 dBA < DNL ≤ 65 dBA		65 dBA <DNL ≤ 75 dBA		75 dBA ≤ DNL
2. Hospital, nursing home		L10 ≤ 55 dBA		55 <L10≤ 65 dBA		65<L10≤80 dBA		L10>80dBA	
3. Residence, residential hotel, or motel	7 AM to 10 PM	L10 ≤ 65dBA		65 <L10≤ 70 dBA		70<L10≤80 dBA		L10>80dBA	
	10 PM to 7 AM	L10 ≤ 55dBA		55 <L10≤ 70 dBA		70<L10≤80 dBA		L10>80dBA	
4. School, museum, library, courthouse of worship, transient hotel or motel, public meeting room, auditorium, outpatient public health facility		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM- 10 PM)		Same as Residential Day (7 AM –10 PM)	
5. Commercial or office		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM –10 PM)		Same as Residential Day (7 AM-10 PM)	
6. Industrial, public areas only[4]	Note 4	Note 4		Note 4		Note 4		Note 4	

Source: Table 19-2, *2021 CEQR Technical Manual*.
In addition, any new activity shall comply with Impact Thresholds detailed in Section 410.
Notes:
[1] Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute Standards; all values are for the worst hour in the time period.
[2] Tracts of land where serenity and quiet are extraordinarily important and serve as important public need, and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients as well as patients and residents of sanitariums and nursing homes.
[3] One may use the Federal Aviation Administration (FAA)–approved differential nonlinearity (DNL) contours supplied by the Port Authority of New York and New Jersey (PANYNJ), or the noise contours may be computed from the federally approved Aviation Environmental Design Tool Computer Model using flight data supplied by the PANYNJ.
[4] External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are listed by octave bands). Sources: New York City Department of Environmental Protection (adopted policy 1983).

The *CEQR Technical Manual* also provides required composite building sound attenuation values based on the level of exposure to vehicular traffic noise at the building's exterior, as shown in **Table 12-3**. Based on the level of traffic noise exposure, the table provides the required attenuation to achieve acceptable interior noise levels.

Table 12-3 Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Vehicular Traffic	$70<L_{10}\leq73$	$73<L_{10}\leq76$	$76<L_{10}\leq78$	$78<L_{10}\leq80$	$80<L_{10}$
Attenuation	(I) 28 dBA	(II) 31 dBA	(III) 33 dBA	(IV) 35 dBA	See note [B]

Notes:
[A] The above composite window/wall attenuation values are for residential dwellings and community facility development. Commercial office spaces and meeting rooms would be 5 dBA less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.
[B] The required attenuation value is the difference between L_{build} and $L_{interior}$, using the appropriate noise descriptor:
Where: L_{build} is the projected noise level under the build condition rounded up to the whole number
$L_{interior}$ is the designed interior noise level (45 dB(A) for vehicular noise, 40 dB(A) for aircraft and train noise)
Source: New York City Department of Environmental Protection (*2021 CEQR Technical Manual,* Table 19-3)

Assessment Methodology

General Methodology

This noise analysis considers two receptor types when evaluating noise for a proposed development: existing and new receptor(s). Since the Proposed Actions would introduce new residential, community facility, and/or commercial office uses on the Development Site, these are considered "new receptors."

For the With-Action development's new receptors, With-Action condition noise levels are compared to the values contained in the CEQR Noise Exposure Guidelines. The descriptor used to assess the mobile noise sources is dependent upon the source of noise. For example, if a new receptor is exposed to aircraft noise, DNL is used, while L_{eq} or L_{10} is used to evaluate noise from other sources. Since the Proposed Actions would not introduce new receptors within an existing 65 dB(A) DNL contour of an airport (i.e., LaGuardia Airport), noise impact analysis from aircraft noise is not warranted.

New noise receptors that would be introduced by the Proposed Actions are evaluated under With-Action noise conditions to determine if receptors would be in an acceptable ambient sound level environment. As shown in **Table 12-2**, exterior ambient sound levels exceeding 70 dBA (L_{10}) or 65 dBA (L_{dn}) are considered Marginally Unacceptable. Exterior sound levels exceeding 80 dBA (L_{10}) or 75 dBA (L_{dn}) are considered Clearly Unacceptable. If there would be Marginally Unacceptable or Clearly Unacceptable ambient noise conditions, there is a need to provide window/wall sound attenuation that is sufficient to reduce interior sound levels to acceptable levels. The noise exposure guidelines for acceptable ambient conditions depend on the type of land use; for residential use and community facility uses (see **Table 12-2**), the goal is to maintain interior noise levels of 45 dBA(L_{10}) or lower, and for commercial office spaces, the goal is to maintain interior noise levels of 50 dBA (L_{10}) or lower. It is generally assumed that without specific information on a building's window and wall construction, the outdoor-to-indoor noise reduction of the building is 25 decibels.

Since the Proposed Actions would introduce residential, community facility, and/or commercial office spaces, the highest L_{10} sound level among all the peak transportation periods (i.e., weekday morning, midday, afternoon, and Saturday midday) is used to evaluate whether the Proposed Actions would introduce new receptors into an acceptable noise environment.

The Proposed Actions would introduce 4,745 sf of open space available to the public on the southern portion of the Development Site. As indicated in the *CEQR Technical Manual*, noise exposure guidelines (as shown in **Table 12-2**), publicly accessible outdoor areas where serenity and quiet serve an important public need, and where the preservation of these qualities is essential for the area to serve its intended purpose, are considered noise sensitive receptors. According to the *CEQR Technical Manual*, such areas could include amphitheaters, particular parks or portions of parks, or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. According to the *CEQR Technical Manual*, examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and nursing homes. As described in **Chapter 1, Project Description**, the open space introduced by the Proposed Actions would include passive open space. The intended uses of the open spaces do not require serenity and quiet, so they are not considered sensitive. In addition, any newly created active recreational space would not be considered sensitive receptors but rather stationary sources of noise—specifically those active open spaces with sports courts and playgrounds.

The analysis also considers "existing receptors" that are the current noise-sensitive land uses, such as residential, commercial office, community facility, and institutional properties surrounding the Development Site. The potential for noise impacts at existing sensitive receptors is assessed according to the relative increase between No-Action condition and With-Action condition sound levels. Noise impacts are assessed according to the increase in the L_{eq} sound level in accordance with the *CEQR Technical Manual*. If mobile or stationary sources associated with the With-Action development would increase L_{eq} sound levels by 3 dB or more, and absolute levels would exceed 65 dBA L_{eq}, the With-Action development would result in a significant adverse impact. Additionally, if No-Action condition noise levels are 60 dBA L_{eq} or less, a 5-dB increase would be considered a significant adverse noise impact.

Mobile Sources

As described in **Chapter 10, Transportation**, a detailed traffic analysis has been conducted at multiple nearby intersections to evaluate Existing, No-Action, and With-Action condition traffic volumes near the Development Site. Proportional modeling has been conducted for the peak periods at the following roadway sections, which are located immediately adjacent to the existing and new receptors:

- Flatbush Avenue Extension between DeKalb Avenue and Fulton Street;
- DeKalb Avenue between Flatbush Avenue Extension and Hudson Avenue;
- Hudson Avenue between DeKalb Avenue and Fulton Street;
- Fulton Street between Flatbush Avenue Extension and Hudson Avenue.

If the Proposed Actions would result in a doubling or more of passenger car equivalents (PCEs), it would result in a 3 dBA or greater increase in noise levels. If PCEs would not double due to the Proposed Actions, there would not be a significant adverse vehicular noise impact, and no further

mobile source noise analysis is warranted. The *CEQR Technical Manual* describes the process to determine PCEs. Vehicle classes are defined as having the following PCEs:

- Each automobile or light truck: 1 noise PCE
- Each medium truck: 13 noise PCEs
- Each bus: 18 noise PCEs
- Each heavy truck: 47 noise PCEs

Future With-Action noise increases are calculated using the following equation:

$$With\ Action\ L_{eq}\ Increase = 10 * \log\left(\frac{With\ Action\ PCE}{No\ Action\ PCE}\right)$$

Detailed Analysis

As instructed in the *CEQR Technical Manual*, the latest version of the approved Federal Highway Administration (FHWA) Traffic Noise Model (TNM) should be used when:

- Conditions result in new or significant changes in roadway or street geometry;
- Roadways that currently carry no or very low traffic volumes are involved;
- Ambient noise is the result of multiple sources including traffic; or
- A detailed analysis of changes due to the traffic component of the total ambient noise levels is necessary.

The TNM model considers various factors that influence vehicular noise, including traffic volumes, vehicle classifications, source/receptor geometry, shielding (from barriers, rows of buildings, and terrain), ground attenuation, etc. According to the FHWA, the TNM model requires validation at measurement sites to verify the accuracy of the model for a given scenario. The model is considered validated when differences between the measured and modeled noise levels are within +/- 3 dB(A).

One particularly useful application of the TNM model is for situations where traffic is one of the components of the total ambient noise. In such situations, the TNM model may be used to compute the traffic component of the noise and may then be subtracted from the measured ambient noise levels to determine the non-traffic components of the total ambient noise levels.

Computerized models, such as CadnaA and SoundPLAN, have developed algorithms that incorporate the TNM model for vehicular noise calculations. Within the Development Site, the With-Action development would result in new changes in the roadways that currently carry very low traffic volumes. Following the procedures of Section 332.1 in the *CEQR Technical Manual*, the CadnaA noise prediction software was used to estimate the noise levels within the Development Site.

Existing Condition

The study area for this analysis is bounded by Dekalb Avenue to the north with approximately 193 feet of frontage, Fulton Street to the south with approximately 130 feet of frontage, Hudson Avenue to the east with approximately 365 feet of frontage, and Flatbush Avenue Extension to the west with approximately 334 feet of frontage. This area includes the Development Site and nearby receptors that would experience increases in traffic on adjacent roadways as a result of the Proposed Actions.

To characterize existing conditions, noise measurements were conducted at four locations around the Development Site, as shown in **Figure 12-1**. Measurements were conducted on March 4, 2025, and April 26, 2025, which were dates approved by the New York City Department of Transportation (DOT) for traffic counts and similar data collection efforts and were not subject to any blackout period. One additional noise measurement was taken on the existing building's rooftop for noise assessment of the proposed private active recreational space on the top of the proposed building podium. Existing noise measurements were adjusted based on the difference between the vehicle counts conducted during noise measurements and the existing vehicle counts collected and summarized in **Chapter 10, Transportation**.

Vehicular traffic was the dominant source of noise at all measurement locations. Consequently, 20-minute spot measurements were taken at four locations along local roadways during the three weekday periods that reflect peak hours of trip generation: AM weekday (7:00–9:00 AM), midday (MD) weekday (12:00 PM–2:00 PM), PM weekday (4:00–6:00 PM), and Saturday midday (12:00 PM–2:00 PM).

Measurements were conducted using Type I sound level meters at a height of 5 feet above ground level and followed the procedures outlined in the *CEQR Technical Manual*, which include documenting significant sources of sound and conducting spot counts of traffic by vehicle classification. The noise monitors were placed with a minimum of 5 feet between the microphone and nearby reflecting surfaces. Data collected included A-weighted overall and one-third octave band sound levels including minimum (Lmin), maximum (Lmax), statistics (Lxx), and equivalent continuous noise levels (Leq). Atmospheric conditions including air temperature, wind speed, wind direction, relative humidity, and precipitation were obtained from a nearby weather station. The atmospheric conditions were within acceptable ranges and did not influence the measurement results.

Table 12-4 presents the measured L_{eq}, L_{10}, L_{50}, and L_{90} sound level during each peak period at each measurement location where vehicular traffic is the predominant noise source. Existing sound levels ranged from 63.6 to 75.7 dBA (L_{eq}) and from 65.7 to 78.7 dBA (L_{10}), excluding the AM and midday peak periods along Hudson Avenue. During the measurement, it was noted that the site located at 625 Fulton Street, across Hudson Avenue, was under construction. Hudson Avenue was closed during AM and midday peak periods. The measured noise-level L_{eq} and L_{10} during AM and midday peak periods include the noise from the ongoing construction activities. Since such events are not common characteristics of the noise environment in the area, the measurement result during AM and midday peak periods at the Hudson Avenue noise measurement location were not used.

Table 12-4 Ambient Sound Level Measurements

Site	Monitoring Location	Period	Duration	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}
1	DeKalb Avenue	AM	20 mins	74.7	69.1	88.9	76.2	74.3	71.1
		Midday	20 mins	72.8	68.2	87.9	73.8	71.7	70.0
		PM	20 mins	72.2	67.9	81.3	74.9	71.5	69.2
		Saturday	20 mins	68.6	62.5	85.2	72.2	66.2	64.2
2	Flatbush Avenue Extension	AM	20 mins	75.7	64.7	94.1	77.5	72.9	68.0
		Midday	20 mins	75.4	64.6	92.8	77.9	73.5	69.5
		PM	20 mins	75.7	65.5	93.0	78.7	72.9	69.0
		Saturday	20 mins	70.6	63.4	85.5	72.1	68.1	65.2
3	Fulton Street	AM	20 mins	70.0	62.1	81.3	72.5	68.7	65.9
		Midday	20 mins	72.7	65.3	88.4	74.2	70.4	67.7
		PM	20 mins	74.0	61.5	95.3	74.4	69.2	65.9
		Saturday	20 mins	69.6	62.4	85.4	72.6	67.5	64.7
4	Hudson Avenue	AM*	20 mins	76.9	61.3	90.3	81.4	67.6	63.6
		Midday*	20 mins	74.5	63.5	91.1	77.4	71.1	65.7
		PM	20 mins	67.1	60.2	85.4	69.4	64.1	61.9
		Saturday	20 mins	63.6	59.2	81.7	65.7	62.2	60.8

Source: Measurements conducted by VHB on March 4, 2025, and April 26, 2025.
* Due to the construction activities across the street, AM and midday noise measurement data were not used for noise assessment.

Existing noise measurements were adjusted based on the difference between the vehicle counts conducted during noise measurement and the existing vehicle counts collected and summarized in **Chapter 10, Transportation**.

Table 12-5 presents the existing PCE values at the study area intersections and the vehicle counts conducted during noise measurements, and the adjustment.

Table 12-5 Measurement and Existing Condition Noise PCEs

Site #	Intersection	Period	Measurement PCEs	Existing PCEs	Sound Increase (Existing minus Measurement) (dBA)
1	DeKalb Avenue	AM	1,902	1,696	-0.5
		Midday	1,392	1,775	1.1
		PM	1,035	1,255	0.8
		Saturday	1,278	978	-1.2
2	Flatbush Avenue Extension	AM	7,107	8,690	0.9
		Midday	7,362	7,484	0.1
		PM	6,258	5,177	-0.8
		Saturday	4,719	4,666	0.0
3	Fulton Street	AM	2,616	3,618	1.4
		Midday	1,857	2,878	1.9
		PM	2,313	2,343	0.1
		Saturday	1,689	2,081	0.9

Source: VHB, 2025

As shown in **Table 12-6**, the predicted existing L_{eq} noise levels would range from 66.3 to 74.6 dBA, and L_{10} levels would range from 69.2 to 75.3 dBA.

Table 12-6 Predicted Existing Condition Noise Levels Compared to Measurement Noise Levels

Site #	Intersection	Period	Measurement L_{eq} (dBA)	Measurement L_{10} (dBA)	Change (dBA)	Existing L_{eq} (dBA)	Existing L_{10} (dBA)
1	DeKalb Avenue	AM	73.1	75.8	-0.5	72.6	75.3
		Midday	69.9	72.4	1.1	71.0	73.5
		PM	73.8	73.8	0.8	74.6	74.6
		Saturday	67.5	70.4	-1.2	66.3	69.2
2	Flatbush Avenue Extension	AM	71.7	73.8	0.9	72.6	74.7
		Midday	71.1	75.1	0.1	71.2	75.2
		PM	69.3	72.1	-0.8	68.5	71.3
		Saturday	69.0	71.7	0.0	69.0	71.7
3	Fulton Street	AM	69.1	71.7	1.4	70.5	73.1
		Midday	70.1	71.5	1.9	72.0	73.4
		PM	71.6	70.5	0.1	71.7	70.6
		Saturday	68.2	70.1	0.9	69.1	71.0

Source: VHB, 2025

As summarized in **Chapter 10, Transportation**, Hudson Avenue currently carries very low traffic volumes. Additionally, as Hudson Avenue was closed during the AM and midday peak periods due to construction activities related to 625 Fulton Street, and since the noise measurement data included the on-going construction activities across street, a detailed CadnaA (TNM Module) modeling for a total of 46 receptors was performed to assess the potential for noise impact along Hudson Avenue.

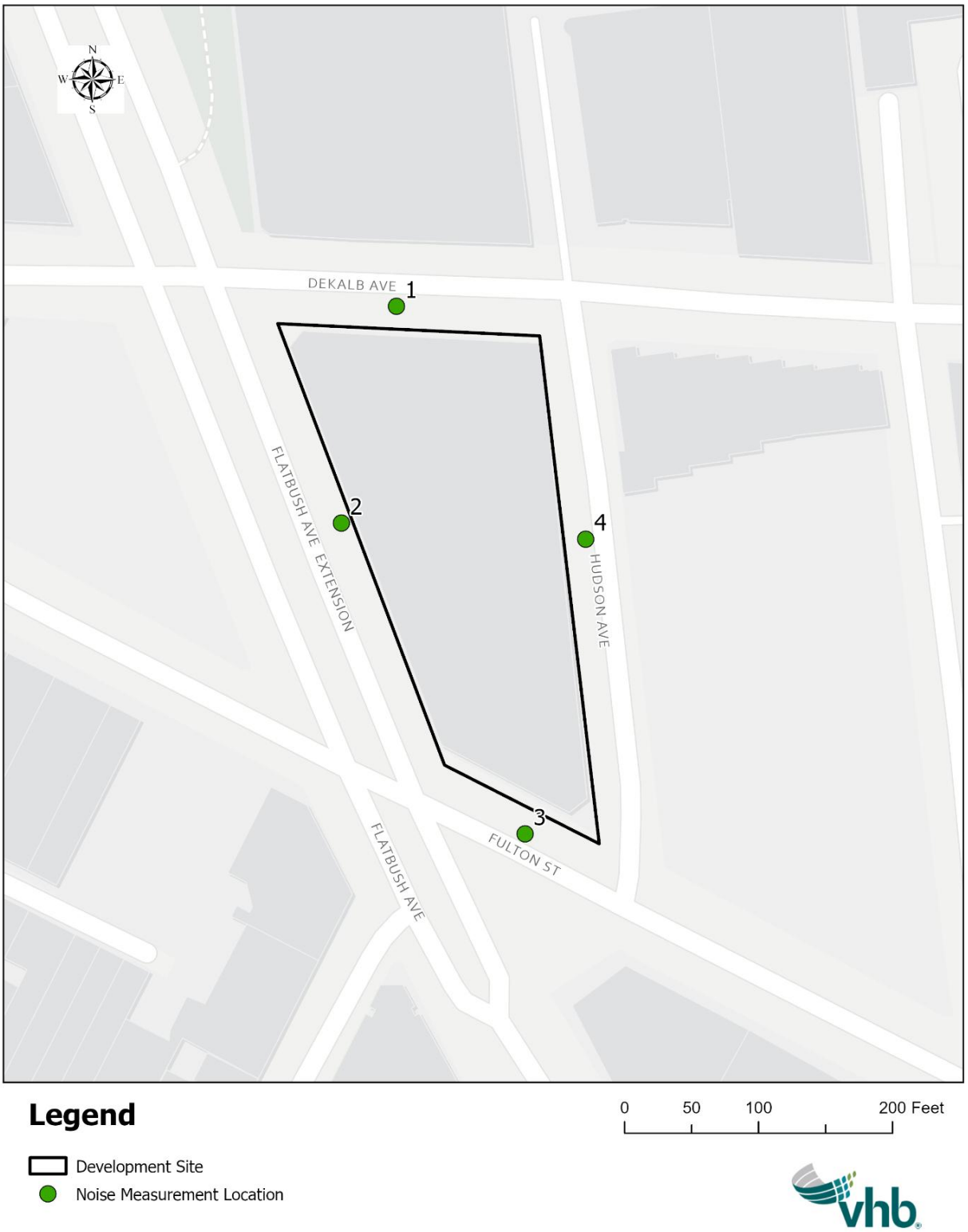
Table 12-7 presents the range of predicted existing noise levels along Hudson Avenue based on traffic volumes.

Table 12-7 Range of Predicted Existing Condition Noise Levels along Hudson Avenue

Site #	Intersection	Period	Minimum Modeled L_{eq} (dBA)	Maximum Modeled L_{eq} (dBA)
4	Hudson Avenue	AM	55.3	67.0
		Midday	54.1	66.1
		PM	53.2	65.2
		Saturday	54.2	64.5

Source: VHB, 2025

Figure 12-1 Noise Monitoring Locations



Source: VHB, 2025

No-Action Condition

A mobile source screening analysis (see **Table 12-8**) has been conducted for both existing and new receptors at corresponding roadway segments based on proportional noise modeling to determine the existing and No-Action noise levels as well as noise increases at four monitored locations. Existing noise PCEs have been computed based on the existing vehicle counts collected and summarized in **Chapter 10, Transportation**. No-Action noise levels have been computed based on the sound increment between the No-Action PCEs and the existing PCEs.

Table 12-8 presents the No-Action and existing PCE values at the study area intersections, and the corresponding change in sound level based on the change in PCE values. No-Action sound levels are expected to increase by up to 1.3 dBA over existing sound levels.

Table 12-8 No-Action and Existing Condition Noise PCEs

Site #	Intersection	Period	Existing PCEs	No-Action PCEs	Sound Increase (No-Action minus Existing) (dBA)
1	DeKalb Avenue	AM	1,696	2,213	1.2
		Midday	1,775	2,407	1.3
		PM	1,255	1,677	1.3
		Saturday	978	1,333	1.3
2	Flatbush Avenue Extension	AM	8,690	9,457	0.4
		Midday	7,484	8,282	0.4
		PM	5,177	5,770	0.5
		Saturday	4,666	5,172	0.4
3	Fulton Street	AM	3,618	4,258	0.7
		Midday	2,878	3,550	0.9
		PM	2,343	3,089	1.2
		Saturday	2,081	2,661	1.1

Source: VHB, 2025

As shown in **Table 12-9,** the predicted No-Action L_{eq} noise levels including the increase in mobile sources would range from 67.7 to 75.9 dBA, and L_{10} levels would range from 70.6 to 76.5 dBA.

Table 12-9 Predicted No-Action Noise Levels Compared to Existing Condition Noise Levels

Site #	Intersection	Period	Existing L_{eq} (dBA)	Existing L_{10} (dBA)	Change (dBA)	No-Action L_{eq} (dBA)	No-Action L_{10} (dBA)
1	DeKalb Avenue	AM	72.6	75.3	1.2	73.8	76.5
		Midday	71.0	73.5	1.3	72.3	74.8
		PM	74.6	74.6	1.3	75.9	75.9
		Saturday	66.3	69.2	1.3	67.7	70.6
2	Flatbush Avenue Extension	AM	72.6	74.7	0.4	71.8	73.9
		Midday	71.2	75.2	0.4	71.8	75.8
		PM	68.5	71.3	0.5	68.2	71.0
		Saturday	69.0	71.7	0.4	68.2	70.9
3	Fulton Street	AM	70.5	73.1	0.7	68.7	71.3
		Midday	72.0	73.4	0.9	71.7	73.1
		PM	71.7	70.6	1.2	72.3	71.2
		Saturday	69.1	71.0	1.1	69.8	71.7

Source: VHB, 2025
The numbers in the No-Action columns may not equal the exact sum of the Existing noise level plus the Change due to rounding.

Table 12-10 presents the range of predicted No-Action Condition noise levels and sound increase compared to Existing Condition along Hudson Avenue based on traffic volumes.

Table 12-10 Range of Predicted No-Action Condition Noise Levels along Hudson Avenue

Site #	Intersection	Period	Minimum Modeled L_{eq} (dBA)	Maximum Modeled L_{eq} (dBA)	Maximum Sound Increase (dBA)
4	Hudson Avenue	AM	58.2	67.8	2.9
		Midday	57.6	67.1	3.5
		PM	57.2	66.4	4.0
		Saturday	58.4	65.8	4.3

Source: VHB, 2025

With-Action Condition

Similar to the No-Action condition, the With-Action noise levels have been computed for both existing and new receptors at corresponding roadway segments based on proportional noise modeling to determine the With-Action and No-Action noise levels as well as noise increases at five monitored locations as shown in **Table 12-11**. Existing noise PCEs have been computed based on the existing vehicle counts collected and summarized in **Chapter 10, Transportation**. With-Action noise levels have been computed based on the sound increment between the With-Action PCEs and the No-Action PCEs.

Table 12-11 presents the With-Action and No-Action PCE values at the study area intersections. As shown in **Table 12-12**, the predicted With-Action L_{eq} noise levels, including the increase in mobile sources, would range from 67.8 to 76.0 dBA and L_{10} levels would range from 70.3 to 76.7 dBA. As shown in **Table 12-12**, With-Action sound levels are expected to increase by up to 0.3 dBA over No-

Action levels along DeKalb Avenue during the Saturday peak period. As shown in **Table 12-13**, With-Action sound levels are expected to increase by up to 2.4 dBA over No-Action levels along Hudson Avenue during the weekday AM peak period. Since noise increases at all locations are less than 3 dBA, significant adverse mobile source noise impacts due to mobile sources from the With-Action development are not predicted to occur.

Table 12-11 With-Action and No-Action Condition Noise PCEs

Site #	Intersection	Period	No-Action PCEs	With-Action PCEs	Sound Increase (With-Action minus No-Action) (dBA)
1	DeKalb Avenue	AM	2,213	2,322	0.2
		Midday	2,407	2,456	0.1
		PM	1,677	1,719	0.1
		Saturday	1,333	1,412	0.3
2	Flatbush Avenue Extension	AM	9,457	9,524	0.0
		Midday	8,282	8,371	0.0
		PM	5,770	5,854	0.1
		Saturday	5,172	5,291	0.1
3	Fulton Street	AM	4,258	4,288	0.0
		Midday	3,550	3,588	0.0
		PM	3,089	3,144	0.1
		Saturday	2,661	2,725	0.1

Source: VHB, 2025

Table 12-12 Predicted With-Action Noise Levels Compared to No-Action Noise Levels

Site #	Intersection	Period	No-Action L_{eq} (dBA)	No-Action L_{10} (dBA)	Change (dBA)	With-Action L_{eq} (dBA)	With-Action L_{10} (dBA)
1	DeKalb Avenue	AM	73.8	76.5	0.2	74.0	76.7
		Midday	72.3	74.8	0.1	72.4	74.9
		PM	75.9	75.9	0.1	76.0	76.0
		Saturday	67.7	70.6	0.3	67.9	70.8
2	Flatbush Avenue Extension	AM	71.8	73.9	0.0	71.8	73.9
		Midday	71.8	75.8	0.0	71.8	75.8
		PM	68.2	71.0	0.1	68.3	71.1
		Saturday	68.2	70.9	0.1	68.3	71.0
3	Fulton Street	AM	68.7	71.3	0.0	68.7	71.3
		Midday	71.7	73.1	0.0	71.7	73.1
		PM	72.3	71.2	0.1	72.4	71.3
		Saturday	69.8	71.7	0.1	69.9	71.8

Source: VHB, 2025
Notes:
The numbers in the With-Action columns may not equal the exact sum of the No-Action noise level plus the change due to rounding.

Table 12-13 presents the range of predicted No-Action condition noise levels and sound increase compared to the existing condition along Hudson Avenue based on traffic volumes.

Table 12-13 Range of Predicted With-Action Condition Noise Levels along Hudson Avenue

Site #	Intersection	Period	Minimum Modeled Noise Level L_{eq} (dBA)	Maximum Modeled Noise Level L_{eq} (dBA)	Maximum Sound Increase (dBA)	Maximum Modeled Noise Level[A] L_{10} (dBA)
4	Hudson Avenue	AM	59.4	68.1	3.6[B]	71.1
		Midday	58.3	67.4	3.5[B]	70.4
		PM	57.7	66.7	3.2[B]	69.7
		Saturday	58.9	68.2	2.9[B]	71.2

Note:
[A] Where traffic is the dominant source of noise, the L_{10} is typically 3 dBA above the L_{eq} for the measurement period. Source: FHWA-HEP-17-053 - Resources - Noise - Environment – FHWA.
[B] The sound increase with more than 3 dBA were found at the locations that With-Action condition noise levels (L_{eq}) are less than 65 dBA, as described in the **Impact Criteria** section above, it is reasonable to consider an L_{eq} noise level of 65 dBA as an absolute noise level that should not be significantly exceeded. Therefore, these increments are not considered as significant impacts.
Source: VHB, 2025

Stationary Source

Sensitive uses introduced by the Proposed Actions also have the potential to be affected by stationary source noise from the project's proposed active recreational spaces. As described above and in **Chapter 1, Project Description**, a portion of the 28,000 sf of proposed active recreational amenity space would be located on the project's fifth-floor terrace and rooftop, which are considered

stationary noise sources according to *CEQR Technical Manual* guidance. As mentioned in the **Assessment Methodology** above, noise from the proposed active recreational spaces (which may include but are not limited to gym facilities and play areas) would be evaluated based on the 1992 SCA Playground Noise Study that is referenced in the *CEQR Technical Manual*. The evaluation assumes sound from the recreational area would be equivalent to the sound from an intermediate school playground, which is 71.0 dBA (Leq) at the playground boundary. Sound levels at receptors farther than the playground boundary are reduced by 4.8 dBA at 20 feet, 6.8 dBA at 30 feet, 9.1 dBA at 40 feet, and a 4.5-dB per doubling of distance between 40 and 300 feet.

The following **Table 12-14**Error! Reference source not found. summarizes the stationary sources noise assessment and shows predicted With-Action sound levels at the new receptors from the proposed recreational space.

Table 12-14 Predicted With-Action Sound Levels from Recreational Space

Recreational Space	Distance[A] (feet)	Noise Level (L_{eq}) from the Proposed Recreational Space (dBA)	Background (L_{eq}) Noise Level[B] (dBA)	Combined Noise Level (L_{eq}) (dBA)	Combined Noise Level[c] (L_{10}) (dBA)
1	20	66.7	71.8	73.0	76.0

Source: VHB, 2025

Note:

[A] Distance from the boundary of the proposed recreational spaces to the closest receptors.

[B] Background noise level is based on the noise measurement result at the existing rooftop.

[c] Where traffic is the dominant source of noise, the L_{10} is typically 3 dBA above the L_{eq} for the measurement period. Source: FHWA-HEP-17-053 - Resources - Noise - Environment – FHWA.

Open Space

Besides the residential and community facility spaces, the Proposed Actions would also introduce approximately 4,745 sf of open space available to public on the southern portion of the Development Site. Future noise levels (L_{10}) within project-generated open spaces would be above 55 dBA. This exceeds the 55 dBA (L_{10}) guideline for outdoor areas requiring serenity and quiet contained in the *CEQR Technical Manual*. However, this relatively low noise level is often not achieved in outdoor areas due to the level of nearby noise sources (e.g., nearby roadway, train, and aircraft activity, as well as activities within the outdoor space itself) at most New York City outdoor public open space areas and parks. Furthermore, under existing and No-Action conditions, noise levels at the location of the future project-generated open space currently exceed—and, in the future, would continue to exceed—55 dBA (L_{10}). These levels of existing noise are comparable to noise levels in a number of passive open space areas that are within range of substantial noise sources, including Fort Greene Park, Prospect Park, and Brooklyn Bridge Park. Furthermore, the proposed uses of the open spaces do not require serenity and quiet.

Building Attenuation Assessment

The *CEQR Technical Manual* provides noise exposure guidelines for assessing the compatibility of different land uses with ambient sound levels, as shown in **Table 12-3**. Based on these noise exposure guidelines, noise impact has been assessed to determine the required building attenuation values for new sensitive receptors at the Development Site to maintain acceptable interior levels, as shown in **Table 12-15**.

With-Action noise conditions at new sensitive receptors are evaluated according to absolute exterior sound level. The noise exposure guidelines for acceptable ambient conditions depend on the type of land use; for residential or community facility use, the goal is to maintain interior noise levels of 45 dBA or lower. With-Action exterior sound levels are evaluated to determine if receptors would be in an acceptable ambient sound level environment.

As summarized in **Table 12-15** below, the highest predicted L_{10} sound level (76.7 dBA) is the noise levels at the northern façade (Location 1) during weekday AM period. The highest predicted L_{10} sound level at the western façade (Location 2), would be 75.7 dBA. The highest predicted L_{10} sound level at the southern façade (Location 3) would be 74.4 dBA. The highest predicted L_{10} sound level at the eastern facade, would be 70.3 dBA. According to the noise exposure guidelines in the *CEQR Technical Manual*, a noise level (L_{10}) that is greater than 70 dBA and less than 80 dBA is considered Marginally Unacceptable. Based on the finding of Marginally Unacceptable sound levels at the receptors mentioned above, window/wall sound attenuation is required at all façades of the proposed buildings to maintain interior sound levels at acceptable levels.

Table 12-15 Predicted With-Action Noise Level and Required Building Attenuation Value

Façade	Maximum Noise Level L_{10} (dBA)	Peak Period	Required Attenuation (dBA)
North	76.7	AM	33
West	75.8	Midday	31
South	73.1	AM	31
East	71.2	Saturday	28
Podium	76.0	Midday	33

Source: VHB, 2025

As part of the Proposed Actions, HPD would develop environmental controls that would include project requirements in the form of window/wall attenuation to ensure interior noise levels suitable for residential and community facility uses. The project requirements would result in a window/wall attenuation of 28 to 33 dBA for the four façades of the With-Action building (see **Figure 12-2**). These attenuation values would be required to achieve a 45 dBA interior noise level. This represents a closed window condition at the site, and therefore an alternate means of ventilation for the interior spaces would also be required.

An (E)-Designation (E-124) for noise has already been applied to the Development Site as part of 2004 Downtown Brooklyn Rezoning FEIS. With the Proposed Action, the (E)-designation would be updated for the project site. The text for the updated (E)-Designation would be as follows:

Development Site (Block 2093, Lot 1)

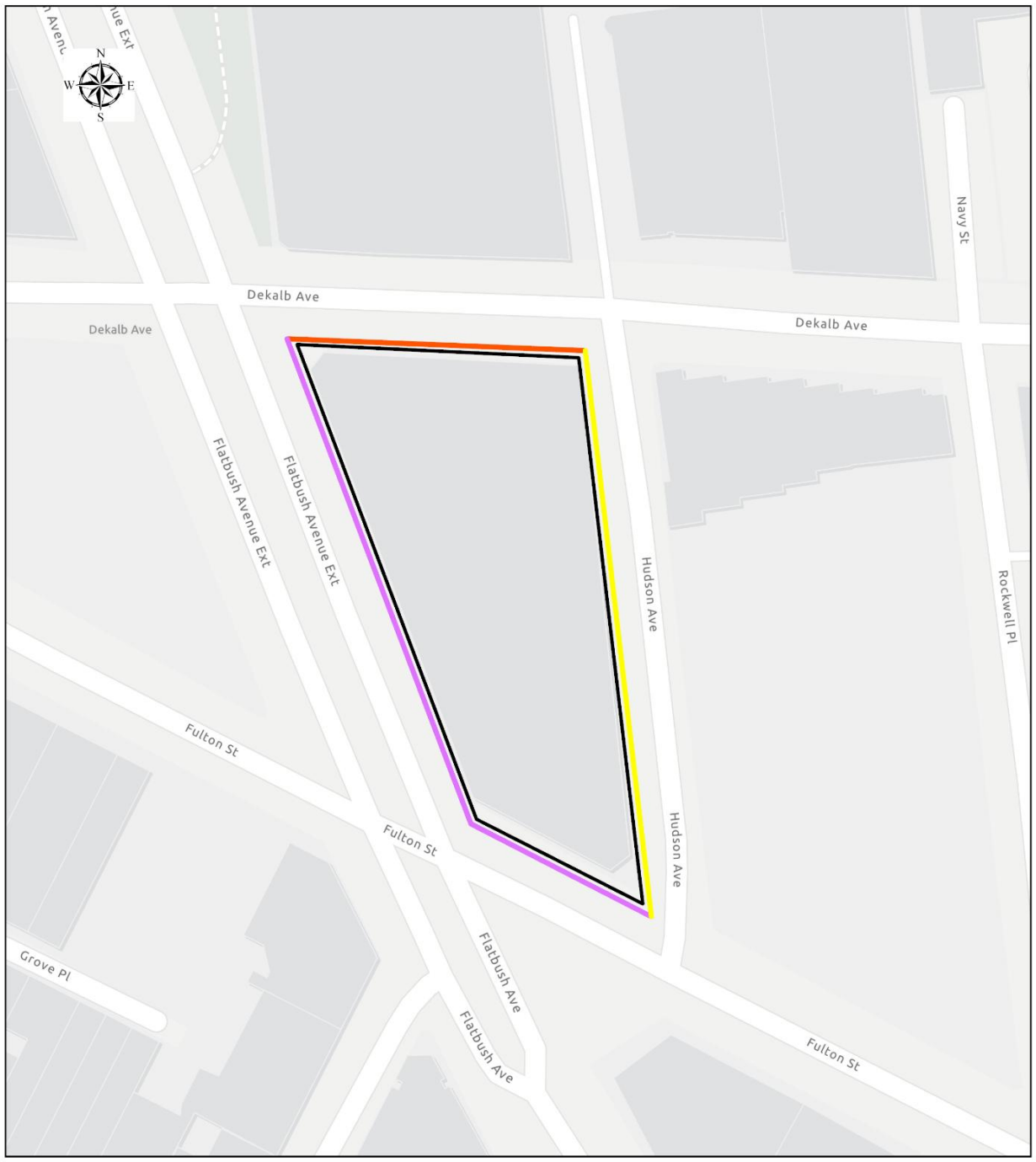
In order to ensure an acceptable interior noise environment, future residential uses and community facility uses must provide a closed-window condition with a minimum of 33 dBA window/wall attenuation on the facade facing DeKalb Avenue, 31 dBA window/wall attenuation on the façade facing Flatbush Avenue Extension and Fulton Street, and 28 dBA window/wall attenuation on the façade facing Hudson Avenue, to maintain an interior noise level (L_{10}) not greater than 45 dBA for residential uses and community facility uses. For future commercial office uses, the required attenuation along each respective facade would be 5 dBA lower in order to maintain an interior noise level (L_{10}) not greater than 50 dBA for commercial office use. To maintain a closed-window

condition, an alternative means of ventilation must also be provided. Alternative means of ventilation includes, but is not limited to, well-sealed air conditioners, package-terminal air conditioners, or central air conditioning.

The (E)-Designation identifies the highest attenuation values needed at the lower levels for conservative analysis and disclosure purposes. However, the attenuation requirements would not be the same along the height of each building façade.

With the implementation of the attenuation requirements described above, no significant adverse noise impacts related to building attenuation would occur as a result of the Proposed Actions.

Figure 12-2 Attenuation Requirement



Source: VHB, 2025

13

Greenhouse Gas Emissions and Climate Change

This chapter describes the potential impact of the Proposed Actions on greenhouse gas (GHG) emissions and considers whether the Proposed Actions are consistent with the Citywide GHG emissions reduction goals.

Introduction

As discussed in the *2021 City Environmental Quality Review (CEQR) Technical Manual*, increased concentrations of greenhouse gases change the global climate and result in wide-ranging effects on the environment, including rising sea levels, increases in temperature, and changes in precipitation levels. Although this is occurring on a global scale, the environmental effects of climate change are also likely to be felt at the local level. Although the contribution of a proposed project's GHG emissions to global GHG emissions is small when compared to the scale and magnitude of global climate change, certain projects' contribution of GHG emissions still should be analyzed to determine their consistency with the City's Citywide GHG reduction goal, which is currently the most appropriate standard by which to analyze a project under CEQR.

According to the *CEQR Technical Manual*, a GHG emissions assessment is typically conducted for larger projects undergoing an environmental impact statement, especially projects that would result in development of 350,000 square feet (sf) or greater. As development under the With-Action condition would exceed this threshold, a GHG emissions assessment is appropriate. The GHG consistency assessment focuses on those projects that have the greatest potential to produce GHG emissions and evaluates their potential to result in significant inconsistencies with the GHG reduction goal.

New York City's sustainable development policy, starting with PlaNYC and continued and enhanced in OneNYC, established sustainability initiatives and goals for greatly reducing GHG emissions and for adapting to climate change in the city. In 2014, the City Council passed a bill to reduce citywide greenhouse gas emissions by 80 percent by 2050 (Local Law 66 of 2014). The New York Climate

Mobilization Act, Local Law 97 of 2019, the most recent legislation, is the most aggressive climate legislation to date. It requires buildings larger than 25,000 sf to meet strict GHG emission limits starting in 2024. Buildings are the largest source of greenhouse gas emissions, representing nearly 70 percent of New York City's total emissions. Focusing on the city's largest buildings will promote energy efficiency and renewable energy and discourage reliance on fossil fuels. The GHG emission reduction goal for NYC buildings is 40 percent by 2030 and 80 percent by 2050, compared to 2005.

As discussed in **Chapter 1, Project Description**, the Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with a new, approximately 1,552,605-gross-square-foot (gsf), 72-story, 840-foot-tall, mixed-use building. Under With-Action conditions, the building would include approximately 1,233,950 gsf of residential floor 129,000 gsf of retail space, 88,500 gsf of office and/or community facility space that may be dedicated for future City use. The Development Site is located outside of the areas vulnerable to flooding—marked as Special Flood Hazard Areas (prone to flooding by 1 percent annual chance of storm) or 500-year flood plain (prone to flooding from 0.2 percent annual chance of storm)—as defined by Federal Emergency Management Agency (FEMA). Furthermore, the Development Site will remain outside of any future floodplains and above the elevation of any mean higher high water and sea level rise projections through 2100s. Therefore, potential vulnerabilities due to climate change related to storm surge or coastal flooding were not warranted for this project.

Principal Conclusions

The Proposed Actions would be consistent with the applicable City's GHG emissions reduction and climate change goals, and there would be no significant adverse GHG emission or climate change impacts as a result of the Proposed Actions.

Following the methodology provided in the *CEQR Technical Manual*, it is estimated that development under the With-Action condition would result in approximately 7,811 metric tons of carbon dioxide equivalent (CO_2e) emissions from its annual operations and 235 metric tons a year of CO_2e emissions from mobile sources. This represents less than 0.02 percent of the City's overall 2022 GHG emissions of 53.7 million metric tons.

Development under the With-Action condition would comply with the 2020 Energy Conservation Construction Code of New York State and 2020 New York City Energy Conservation Code, which govern performance requirements of heating, ventilation, and air-conditioning systems, as well as the exterior building envelope of new buildings. The Proposed Project under With-Action conditions would comply with the Local Law 97 requirements and would contribute toward the NYC GHG reduction goals.

Pollutants of Concern

GHGs are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of infrared radiation emitted by Earth's surface, the atmosphere, and clouds. This property causes the general warming of Earth's atmosphere, or the "greenhouse effect." Some GHGs, such as carbon dioxide (CO_2), occur both naturally and are emitted into the atmosphere through human activities (anthropogenic).

The *CEQR Technical Manual* lists six GHGs that could potentially be included in the scope of an environmental impact assessment: CO_2, nitrous oxide (N_2O), methane (CH_4), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

GHGs differ in their ability to trap heat. To compare emissions of GHGs, compilers use a weighting factor called a global warming potential (GWP), where the heat-trapping ability of 1 metric ton (1,000 kilograms) of CO_2 is taken as the standard, and emissions are expressed in terms of CO_2 equivalents (CO_2e) but can also be expressed in terms of carbon equivalents. The GHGs that are emitted as a result of human activities and their GWPs are presented in **Table 13-1**.

Table 13-1 Global Warming Potential for Primary Greenhouse Gases

Greenhouse Gas	Common Sources	Global Warming Potential
CO_2 - Carbon Dioxide	Fossil fuel combustion, forest clearing, cement production	1
CH_4 - Methane	Landfills, production and distribution of natural gas and petroleum, anaerobic digestion, rice cultivation, fossil fuel combustion	21
N_2O - Nitrous Oxide	Fossil fuel combustion, fertilizers, nylon production, manure	310
HFCs - Hydrofluorocarbons	Refrigeration gases, aluminum smelting, semiconductor manufacturing	6,500-9,200*
PFCs - Perfluorocarbons	Aluminum production, semiconductor manufacturing	6,500–9,200*
SF_6 - Sulfur Hexafluoride	Electrical transmissions and distribution systems, circuit breakers, magnesium production	23,900

Notes:
The GWPs above are based on the Intergovernmental Panel for Climate Change (IPCC) Second Assessment Report (SAR). The IPCC has since published updated GWP values that reflect new information. However, GWP values from the SAR are still used, in accordance with the *CEQR Technical Manual* to maintain consistency in GHG reporting. It should be noted that New York State, per the Climate Act (CLCPA) calculates GHG emissions using the 20-year global warming potentials (GWPs).
*The GWPs of HFCs and PFCs vary depending on the specific compound emitted.

- **Carbon Dioxide (CO2).** CO_2 enters the atmosphere via the combustion of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement). CO_2 is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle. Although not the GHG with the strongest effect per molecule, CO_2 is by far the most abundant and, therefore typically included in GHG assessment.
- **Methane (CH4).** CH_4 is emitted during the production, transport, and combustion of fossil fuels, such as coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices, as well as by the decay of organic waste in municipal solid waste landfills and wastewater treatment facilities.
- **Nitrous Oxide (N2O).** N_2O is emitted during agricultural and industrial activities, as well as during the combustion of fossil fuels and solid waste.
- **Fluorinated Gases.** Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are powerful synthetic greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances (e.g.,

chlorofluorocarbons [CFCs], hydrochlorofluorocarbons [HCFCs], and halons). These gases are typically emitted in smaller quantities. However, because they are potent greenhouse gases, they are sometimes referred to as high global warming potential gases (high GWP gases).

The assessment for the With-Action development focuses on emissions of CO_2, N_2O, and CH_4 (collectively as CO_2e) as there are no significant direct or indirect sources of HFCs, PFCs, or SF_6 associated with the Proposed Actions.

Policy and Regulations on GHG Emissions and Climate Resilience

The following provides the climate requirements and policies at the federal, state, and local levels to provide context of the information provided herein.

Federal

The U.S. Environmental Protection Agency (USEPA) enforces the Clean Air Act, which regulates air emissions, including GHG emissions. The USEPA issued an endangerment finding in 2009 under Section 202(a) of the Clean Air Act, which stated that GHGs threaten public health and welfare, providing the basis for regulating these emissions.

The U.S. Department of Energy (USDOE) is responsible for the country's energy policy and research, including efforts to reduce GHG emissions through energy efficiency and renewable energy technologies. The USDOE also regulates energy production and consumption, including the standards for energy efficiency in buildings.

In addition to these agencies, the Federal Government also has planning and policy tools to address energy use and GHG emissions. The Council on Environmental Quality's (CEQ's) *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change* serves as guidance for addressing GHG emissions and climate change in federal environmental review documents.[1]

Recent federal policy and investment have been established to support energy modernization, reduce dependency on fossil fuels, and reduce GHG emissions. This includes the Inflation Reduction Act, which expands tax credits for initiatives such as clean energy, electric vehicles (EVs), and energy efficiency; and the Infrastructure Investment and Jobs Act (2021), which provides investments in energy modernization, transportation, and building decarbonization. Executive Orders 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis,[2] and 14008, Tackling the Climate Crisis at Home and Abroad,[3] seek to lower GHG emissions and strengthen the climate resilience of infrastructure against the impacts of climate change.

[1] Council on Environmental Quality, National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change, January 9, 2023, https://www.regulations.gov/document/CEQ-2022-0005-0023

[2] Executive Order 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, 86 Fed. Reg. 7,037, January 20, 2021.

[3] Executive Order 14008, Tackling the Climate Crisis at Home and Abroad, 86 Fed. Reg. 7,619, January 27, 2021.

State

In 2019, New York State enacted the Climate Leadership and Community Protection Act (CLCPA) per which the New York State Department of Environmental Conservation (NYSDEC) adopted 6 NYCRR Part 496, Statewide Greenhouse Gas Emission Limits,[4] which contains limits on the emission of GHGs in 2030 and 2050 as a percentage of 1990 emissions. The rule established 410 million metric tons of carbon dioxide equivalent emissions (million metric tons CO_2e) as the 1990 baseline and, per the CLCPA, the State committed to the following requirements:

- 40 percent GHG emissions reduction from 1990 baseline level by 2030 (60 percent of 1990 emission levels, which equates to 246 million metric tons CO_2e);
- 85 percent GHG emissions reduction from 1990 baseline level by 2050 (15 percent of 1990 emission levels, which equates to 61 million metric tons CO_2e); and
- net-zero GHG emissions by 2050 (the remaining 15 percent achieved through GHG emissions offset projects).

Part 496 applies to all emission sources in the State, although it does not itself impose compliance obligations. Other relevant State policies and guidelines include the following:

- Guide for Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements
- Energy Conservation Construction Code
- Climate Action Council Scoping Plan. The Scoping Plan is the framework for how New York will reduce GHG emissions and achieve net-zero emissions, increase renewable energy use, and ensure all communities equitably benefit in the clean energy transition.[5]
- Part 490 Projected Sea-Level Rise

New York State is also developing an economywide Cap-and-Invest Program to meet the requirements set forth in the CLCPA. It is anticipated that large-scale GHG emissions sources and distributors of heating and transportation fuels will be required to purchase or obtain allowances for the emissions associated with their activities. Proceeds from the Cap-and-Invest auctions will be invested to bolster carbon reductions and help ensure the Cap-and-Invest Program is affordable for all New Yorkers and delivers benefits to disadvantaged communities. Proceeds will support critical investments in climate mitigation, energy efficiency, clean transportation, and other projects, in addition to funding an annual Consumer Climate Action Account that will be distributed to New Yorkers to mitigate any potential consumer costs associated with the program.[6]

Local

New York City's long-term comprehensive plan for a sustainable and resilient New York City, which began as PlaNYC 2030 in 2007, and continues to evolve today as OneNYC, includes GHG emissions reduction goals, many specific initiatives that can result in emission reductions, and initiatives aimed at adapting to future climate change impacts. The goal to reduce citywide GHG emissions to 30

[4] Title 6 of the New York Codes, Rules and Regulations, Chapter IV: Quality Services, Subchapter I: Climate Change, Part 486, Statewide Greenhouse Gas Emissions Limits, as established in the Climate Leadership and Community Protection Act, Chapter 106 of the Laws of 2019 (Environmental Conservation Law Article 75-0107).

[5] New York State, Climate Act, New York's Scoping Plan, https://climate.ny.gov/resources/scoping-plan/

[6] New York State, Cap-and-Invest, https://capandinvest.ny.gov/

percent below 2005 levels by 2030 (30 by 30) was codified by Local Law 22 of 2008, known as the New York City Climate Protection Act (the GHG reduction goal). The City also has announced a longer-term goal of reducing emissions to 80 percent below 2005 levels by 2050 (80 by 50), which was codified by Local Law 66 of 2014, and has published a study evaluating the potential for achieving that goal. More recently, as part of OneNYC, the City has announced a more aggressive goal for reducing emissions from building energy down to 30 percent below 2005 levels by 2025.

In May 2019, the New York City Council enacted Local Law 97 of 2019—the Climate Mobilization Act. For most buildings that exceed 25,000 gsf (excluding electricity/steam generation facilities, rent-regulated accommodations, places of public worship, and city-owned properties), the City has established annual building emission limits beginning in 2024 and would require the owner of a covered building to submit annual reports demonstrating the building is in compliance with the current GHG emission limits. For buildings not covered under the GHG emissions limits, owners may either demonstrate compliance with the current limits or implement specified energy conservation measures where applicable. Additionally, New York City's Local Law 154 of 2021 prohibits the on-site combustion of fuels that emit more than 25 kg CO_2/ MMBTU.

Executive Order 23 of 2022, Clean Construction, is aimed at using lower embodied carbon construction materials and reducing construction waste, recognizing that the embodied carbon from cement manufacturing is responsible for an estimated 8 percent of global GHG emissions and the embodied carbon from iron and steel production accounts for approximately 7 percent of global GHG emissions.

There are also local initiatives related to assessing the potential local impacts of global climate change and development strategies to make existing and proposed infrastructure and development more resilient to the effects of climate change. The initiatives include the work of the Climate Change Adaptation Task Force that the City launched in 2008 and the work of the New York City Panel on Climate Change (NPCC) composed of academic, policy advisers, and agencies to develop climate change projections of New York City. The 2009 *Climate Risk Information* report was prepared by the NPCC as part of PlaNYC to advise the mayor and the task force on issues related to potential impacts on infrastructure due to climate change including, temperature, precipitation, rising sea levels, and extreme weather events. The NPCC developed projections using the Intergovernmental Panel on Climate Change (IPCC)-based methods to generate model-based probabilities for temperature, precipitation, sea level rise, and extreme events including coastal flooding in the 1 percent annual chance floodplain for the 2020s to the 2080s. These projections were developed using 16 global climate model (GCM) simulations and three GHGH emission scenarios. The NPCC released *Climate Change Adaptation in New York City: Building a Risk Management Response* in 2010 to serve as a basis for climate change adaptation in the city. In June 2013, the NPCC published *Climate Risk Information 2013: Observations, Climate Change Projections, and Maps,* which outlines the most recent NPCC future climate projections. The NPCC regularly assesses climate change projections and updates those projections regularly. The resulting reports serve as a guide in the City's policymaking process.

The City has also established an interagency group to work with the Federal Emergency Management Agency (FEMA) to revise the Flood Insurance Rate Maps (FIRMs) for the City, which set the base flood elevations for development on the floodplain and triggers the City's building code flood protection requirements. Currently, the FIRMs are undergoing revision to reflect changes in coastal shorelines and elevation, but the city's building code requirements will continue to reflect the 2015 Preliminary FIRMs.

The City has started preparing for extreme climate events, as outlined in the Natural Hazard Mitigation Plan, Coastal Storm Plan, Heat Emergency Plan, Debris Management Plan, Power Disruption Plan, Winter Weather Emergency Plan, and Flash Flood Emergency Plan. Additionally, the New York City Department of Environmental Protection (DEP) issued several plans aimed at evaluating and implementing adaptive strategies for infrastructure, and the Department of City Planning (DCP) developed the Waterfront Revitalization Program (WRP), which serves as the City's principal coastal management tool and established the City's policies for development and use on the waterfront. DCP also published the Zoning for Coastal Flood Resiliency (ZCFR), a series of zoning changes for developments on the floodplain.

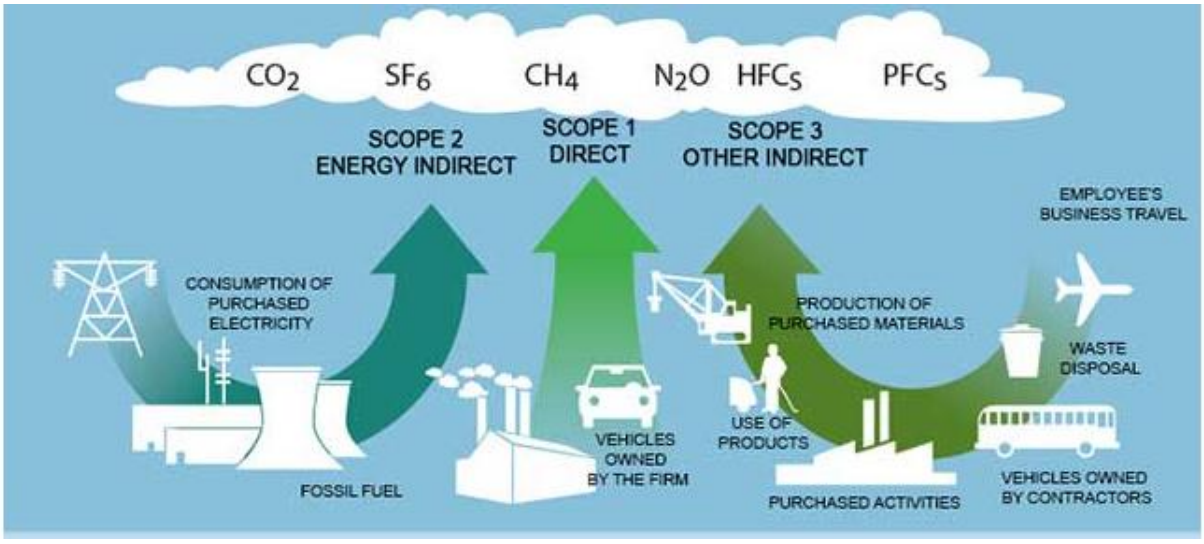
Methodology

GHG Emissions Assessment

According to the *CEQR Technical Manual*, a GHG emissions assessment is typically conducted for larger projects undergoing an environmental impact statement, especially projects that would result in the development of 350,000 sf or greater. The Proposed Actions would result in the total development of approximately 1,552,605 gsf on the Development Site, of which approximately 1,233,950 gsf would be residential, 88,500 gsf would be office, 129,000 gsf would be retail, and 101,155 gsf would be mechanical space. These areas were used in the following analysis.

GHG emissions are generally divided into three types—three scopes—as illustrated in **Figure 13-1**.

Figure 13-1 Three Scopes of GHG Emissions



Source: http://synergyfiles.com/2017/04/scope-ghg-emissions/

Scope 1, or direct emissions, are emissions resulting from the fossil-fuel combustion by the proposed buildings or by vehicles owned or operated by the proposed building management. Emissions from heating, ventilation, and air conditioning (HVAC) systems are the most typical source of GHG emissions for new building projects in New York City. Scope 2, or indirect emissions, are emissions from the generation of purchased electricity used by the buildings. Scope 3 are all other GHG

emissions, including emissions from the vehicular trips generated by the proposed building, like employees' commute.

A project's GHG emissions under CEQR are assessed in two steps: first, GHG emissions of the proposed action are estimated, and second, the proposed action is assessed in comparison with the City's goals for reducing GHG emissions. The *CEQR Technical Manual* recommends that the project's emissions be estimated with respect to the following main emissions sources: on-site operational emissions (direct and indirect); mobile source emissions (direct and indirect); and, when applicable, construction emissions and emissions from solid waste management. Pursuant to *CEQR Technical Manual* methodology, the assessment is based on the GHG emissions associated with the Proposed Actions.

Operational and mobile source emissions were quantified for this analysis. Emissions associated with construction are described qualitatively. Construction emissions would include emissions from construction-equipment, construction-worker, and delivery-vehicle trips, and emissions associated with the production and transport of construction material, such as concrete and steel (embodied carbon emissions). Typical construction emissions and emissions associated with embodied carbon can account for about 10 years of building operational GHG emissions. The actual emissions of CO_2e could vary depending on the efficiency of building operations and efficiency and use of sustainable practices during construction. Development under the Proposed Actions is not expected to fundamentally change the City's solid waste management system; therefore, no estimate of emissions from solid waste management is warranted. Management of construction waste that would result from the future With-Action development is discussed qualitatively.

Assessment

Direct GHG Emissions

The With-Action development would use electricity for its heating, hot water, and ventilation needs. As such, no substantial direct GHG emissions are associated with the With-Action development.

Indirect GHG Emissions

Indirect GHG emissions would be generated as a result of purchased and consumed electricity for the With-Action development. Electricity consumption was estimated using values in the *CEQR Tech Manual* Table 15-1 for commercial and large residential uses. This table uses energy use estimates from existing building stock for source energy consumption. Both the Proposed Project's retail and office uses were considered commercial for the purposes of this analysis. Estimates of the GHG emissions from the electricity are presented in **Table 13-2**. A total of approximately 7,811 metric tons of CO_2e per year would be generated to satisfy the With-Action development's annual consumption. Approximately 6,004 metric tons would result from residential uses and approximately 1,807 metric tons would result from the retail and office. This results in a total carbon emissions intensity of 5.0 kilograms CO_2e per sf.

Table 13-2 GHG Emissions from Purchased Electricity Consumption

	Amount	Unit
Residential Electricity Use Intensity (*2021 CEQR TM* Table 15-1)	126.7	kBtu/sf
Commercial Electricity Use Intensity (*2021 CEQR TM* Table 15-1)	216.3	kBtu/sf
2021 CEQR TM CO_2e Carbon Conversion Factor	35.902	kg CO_2e/MMBtu
Electricity CO_2e	7,810,883	kg CO_2e
	7,811	MT CO_2e

Mobile Source Emissions

The number of annual vehicle trips by mode (cars, taxis, and trucks) that would be generated by the Proposed Actions was calculated using the transportation planning assumptions developed for the traffic analysis and presented in **Chapter 10, Transportation**. The number of project-generated trips by autos, taxis and trucks was obtained from the transportation analysis. Annual VMT was estimated based on the average one-way distances, and the percentages of daily VMT by facility type as shown in Tables 18-5 through Table 18-7 of the *CEQR Technical Manual* (presented as **Table 13-3** and **Table 13-4** below) and the trips from the transportation analysis. The average truck trip was assumed to be 38 miles as per the *CEQR Technical Manual*. Tables 18-5 and 18-6 of the *CEQR Technical Manual* were used to determine the one-way trip distances for personal and taxi trips in Brooklyn and the mobile GHG emissions calculator provided in the *CEQR Technical Manual* was used to obtain an estimate of auto, taxi, and truck CO_2e emissions attributable to the Proposed Actions. The resultant GHG emissions for the With-Action development are presented in **Table 13-5**. The total CO_2e emissions from the mobile sources attributable to the Proposed Action would be 235 metric tons annually.

Table 13-3 Average One-Way Trip Distances (Miles)

Personal Vehicles				Taxi
Other NYC	Residential	Office	Retail	Other NYC
Weekday	8	8	4	7.88
Weekend	4	8	4	

Source: *2021 CEQR TM* Tables 18-5 and 18-6

Table 13-4 Percentages of Daily Vehicle-Mile-Travel (VMT) by Facility Type

Facility	Other NYC
Freeways	39%
Arterials	41%
Locals	20%

Source: *2021 CEQR TM* Table 18-7

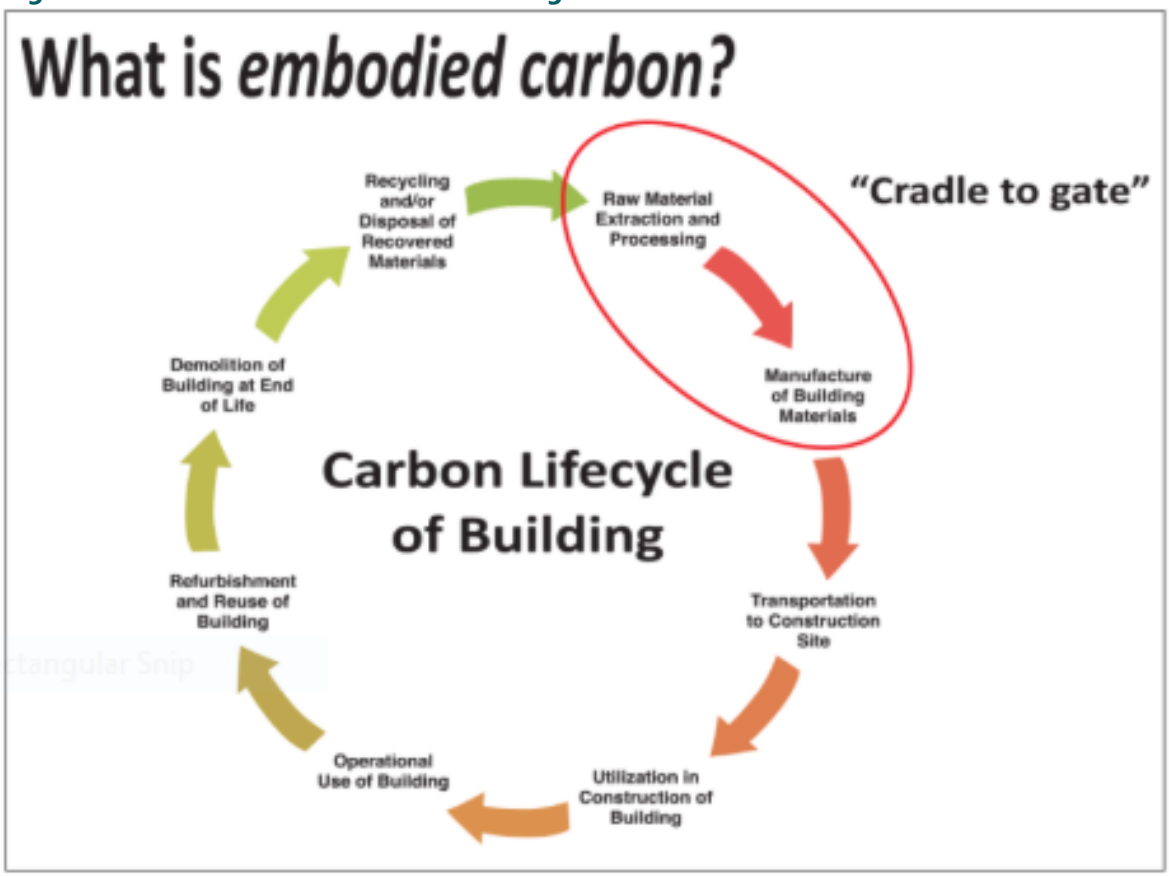
Table 13-5 GHG Emissions from Mobile Sources

Vehicle Type	Annual VMT generated	Annual CO_2e [MT]
Auto	267,368	93
Taxi	89,383	28
Truck	76,798	114
Total	433,549	235

Construction Emissions

The construction of the With-Action development would comply with the New York City Air Pollution Control Code, the latest version of which was adopted on May 12, 2020. As per *CEQR Technical Manual* guidance, emissions associated with the construction of the With-Action development have been assessed qualitatively. Construction of the With-Action development would follow New York City's regulations and codes for construction that require the use of recycled materials, reduced diesel emissions, limited idle time for vehicles and equipment on-site, and other measures to reduce carbon emissions. In addition, following these practices would contribute to the overall goal of reducing GHG emissions from construction. Thus, construction of the With-Action development would adhere to the City's goals to reduce GHG.

Figure 13-2 Embodied Carbon of a Building



Source: Sustainable Energy Association

Evaluation of the With-Action Development's Consistency with GHG Reduction Goals

According to the *CEQR Technical Manual*, the assessment of consistency with the City's GHG reduction goals should answer the following question: Is the Proposed Project consistent with the goal of reducing GHG emissions, specifically the attainment of the City's established goal of reducing Citywide GHG emissions by 80 percent below 2005 levels by 2050? The other more immediate goal is to meet the requirements of the Local Law 97, Climate Mobilization Act. This act requires that all newly constructed New York buildings larger than 25,000 sf become more efficient and reduce their GHG under a certain level, depending on the building size. **Table 13-6** presents the Local Law 97 carbon intensity rates for future years by building-use type.

Table 13-6 Local Law 97 GHG Limits of the With-Action Development

	2030-2034	
Land Use (Building Code)	**Carbon Intensity Rate Kg of CO2e/sq ft**	**Total Operational CO2e Emission Limit in MT**
Office (B)	4.53	429
Residential (R-2)	4.07	5,372
Retail (M)	4.03	556
	Total	**6,357**

Under Local Law 97, it is estimated that the development under With-Action conditions would be limited to 6,357 metric tons for the years 2030-2034. While **Table 13-2** shows GHG emissions above the Local Law 97 emissions limits, these values are not directly comparable since the estimated energy use intensity is based on existing building stock not up to current energy codes and represents source energy and not the site energy considered under Local Law 97. As such, actual building emissions in 2030-2034 are likely to be less than those presented in **Table 13-2**. Should the actual 2030-2034 emissions of the With-Action development be above the Local Law 97 limits when calculated using the appropriate emission factor and actual project site energy consumption, the Applicant would purchase renewable energy credits to comply with the law.

The overall GHG emissions from the With-Action development constitute approximately 0.02 percent of the 2022 NYC annual GHG emissions of 53.7 million metric tons (MMT) of CO_2e. In addition, the *CEQR Technical Manual* outlines major goals toward GHG reduction:

- Construct new resource- and energy-efficient buildings (including the use of sustainable construction materials and practices) and improve the efficiency of existing buildings; and,
- Encourage sustainable transportation through improving public transit, improving the efficiency of private vehicles, and decreasing the carbon intensity of fuels.

The Proposed Actions and With-Action development are consistent with these goals, as follows:

- The Proposed Actions would allow increases in residential and commercial density in the Development Site. The inclusion of local retail will likely result in internal capture that will reduce mobile source emissions.
- The With-Action development would be built in accordance with the latest NYS and NYC codes, including the 2020 Energy Conservation Construction Codes of New York State (ECCNYS) and

2020 New York City Energy Conservation Code (NYCECC)—both of which govern building efficiency in the choice of HVAC system and the exterior building envelope.

- The Development Site would include the efficient electrification of the heating and cooling equipment which would result in a complete (100 percent) reduction in local fossil fuel usage and allow the building's carbon footprint to be reduced as the grid gets greener. The With-Action development's all-electric design fully aligns with the Scoping Plan for the CLCPA and could take full advantage of the grid sourcing increasing renewable energy, resulting in less GHG emissions.
- The With-Action development would construct numerous residential units in close proximity to both bus and subway transit stations. The Development Site is situated in an existing high-density, mixed-use area with access to ten subway lines within walking distance as well as bus lines. Within walking distance, building residents have access to retail and essential neighborhood services. Development in this kind of location is more efficient and lowers per-person carbon footprints.

Accordingly, the Proposed Actions and With-Action development would be consistent with the NYC GHG reduction goals for large buildings and would contribute toward the goal of reducing Citywide GHG emissions by 40 percent by 2030 and 80 percent by 2050 compared to 2005 levels. Overall, the Proposed Actions would not result in significant adverse GHG emissions or climate change impacts.

14

Public Health

This chapter addresses the Proposed Actions' effect on public health. As defined by the *2021 City Environmental Quality Review (CEQR) Technical Manual*, public health is the organized effort of society to protect and improve the health and well-being of the population through monitoring; assessment and surveillance; health promotion; prevention of disease, injury, disorder, disability, and premature death; and reducing inequalities in health status. The goal of CEQR with respect to public health is to determine whether adverse impacts on human health may occur as a result of a proposed project, and if so, to identify measures to mitigate such effects.

Introduction

The *CEQR Technical Manual* states that a public health assessment is not necessary for most projects. Where no significant unmitigated adverse impact is found in other CEQR analysis areas related to public health—such as air quality, water quality, hazardous materials, or noise—no public health analysis is warranted. If, however, an unmitigated significant adverse impact is identified in any of these other CEQR analysis areas, the lead agency may determine that a public health assessment is warranted for that specific technical area.

As discussed in **Chapter 1, Project Description**, the Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with a new, approximately 1,552,605-gross-square-foot (gsf), 72-story, 840-foot-tall, mixed-use building (the Proposed Project). Under With-Action conditions, the building would include approximately 1,233,950 gsf of residential floor 129,000 gsf of retail space and 88,500 gsf of office and/or community facility space that may be dedicated for future City use.

As described in the relevant analyses of this Environmental Impact Statement (EIS), upon completion of construction, the Proposed Actions would not result in significant adverse impacts in any of the technical areas related to public health. However, the Proposed Actions could result in significant adverse noise impacts during construction of the Proposed Project. The relevant analyses for the consideration of public health impacts are summarized and reviewed in this chapter.

Principal Conclusions

The Proposed Actions would not result in any significant adverse public health impacts as defined in the *CEQR Technical Manual*. During operation, the Proposed Actions would not result in unmitigated significant adverse impacts in the areas of air quality, noise, water quality, or hazardous materials. While significant adverse noise impacts could occur during construction, these impacts would be temporary and would result from conditions that are common during the construction of high-rise buildings in densely populated areas of New York City. Excessive noise can affect health through the disruption of sleep or hearing. While noise during the construction period would reach applicable *CEQR Technical Manual* impact thresholds at several receptors, these thresholds are based on quality-of-life considerations as opposed to public health considerations. Noise levels during the construction period would not be high enough to constitute a public health concern. The impacts would occur only during the construction period, after which noise levels would be below the relevant *CEQR Technical Manual* impact thresholds. While the Proposed Actions would have the potential to result in a significant adverse construction noise impact that would remain unmitigated, the temporary nature of the noise levels during the construction period combined with the attenuation provided by building conditions would not cause a significant adverse public health impact.

Methodology

As noted above, the *CEQR Technical Manual* states that where no significant unmitigated adverse impact is found in other CEQR analysis areas related to public health—such as air quality, water quality, hazardous materials, or noise—no public health analysis is warranted. If, however, an unmitigated significant adverse impact is identified in any of these other CEQR analysis areas, the lead agency may determine that a public health assessment is warranted for that specific technical area. Where significant adverse construction-period noise impacts are identified, it is the practice of the New York City Department of Housing Preservation and Development (HPD) to examine the potential for these construction-period noise impacts to affect public health.

Assessment

Operational Period

Hazardous Materials

Potential health exposure from hazardous materials in soil and dust included metals, hazardous compounds, or dust conditions that the public can be exposed to through ingestion, inhalation, or dermal contact. Health effects of exposure can lead to poisonings, gastroenteric illnesses, chronic illnesses, asthma, or respiratory complaints. The potential for health impacts associated with

hazardous materials can be evaluated in terms of potential concentrations from the analysis in **Chapter 9, Hazardous Materials.**

As detailed in **Chapter 9, Hazardous Materials**, the Phase I Environmental Site Assessment (ESA) identified one Recognized Environmental Condition (REC) in connection with the Development Site, which pertains to historic off-site activity. To address this condition during site redevelopment, the Proposed Actions would adhere to requirements of the existing (E) Designation for hazardous materials (E-124), which was applied to Brooklyn Block 2093, Lot 1 as part of the 2004 Downtown Brooklyn Development project. The implementation of the remedial measures required under the (E) Designation would reduce the potential for significant adverse hazardous materials impacts due to the Proposed Actions.

Compliance with the (E) Designation protocol would use the Phase I ESA to the extent practicable. Any testing and sampling required by the Office of Environmental Remediation (OER) for the Development Site would be followed in accordance with the requirements of the OER (E) Designation process.

In addition to the (E) Designation on the Development Site, regulatory requirements pertaining to the disturbance and handling of any lead-based paint, asbestos-containing materials, and PCB-containing building materials would be followed. As such, implementation of the Proposed Actions would not result in significant adverse impacts related to hazardous materials.

Air Quality

Potential health exposures from inhalation of air pollutants such as fine particles, carbon monoxide (CO), nitrogen dioxide (NO_2), and ozone can lead to the exacerbation of asthma symptoms and can contribute to poor cardiovascular and respiratory health outcomes. Health effects may also occur from exposure to other pollutants from combustion and process emissions such as volatile organic compounds (VOCs). The potential for health impacts associated with air quality conditions can be evaluated from the results of the analysis detailed in **Chapter 11, Air Quality**.

As detailed in **Chapter 11, Air Quality**, no significant adverse air quality impacts are anticipated from mobile or stationary sources of air pollution associated with the Proposed Project.

The mobile source analysis determined that project-generated traffic resulting in concentrations of carbon monoxide (CO) and fine particulate matter ($PM_{2.5}$) at the analyzed intersections would not result in any violations of National Ambient Air Quality Standards (NAAQS). Further, the 24-hour and annual incremental $PM_{2.5}$ concentrations were predicted to be below the City's *de minimis* criteria.

Because the Applicant would commit to using electric heating, ventilation, and air conditioning (HVAC) and hot water systems for the Proposed Project (which will be memorialized through a Land Disposition Agreement and/or Regulatory Agreement tied to the Development Site), a stationary source analysis is not warranted, and no significant adverse impacts would occur.

The analysis of existing light industrial/manufacturing uses in the surrounding study area determined that emissions of air-toxic compounds would not result in any potential significant adverse air quality impacts. An analysis of the cumulative health risk impacts of existing industrial sources on the Development Site was also performed. Maximum concentration levels were found to be below the applicable health risk criteria.

The analysis of existing large and major emissions sources within 1,000 feet of the Development Site concluded that this source would not result in significant adverse air quality impacts on the Proposed Project.

Overall, no significant adverse air quality impacts are anticipated from mobile or stationary sources of air pollution associated with the Proposed Actions.

Noise

Prolonged exposure to high noise levels has the potential to decrease quality of life, raise blood pressure, and cause myocardial infarctions. Chronic exposure to levels above 85 A-weighted decibels (dBA) will eventually harm hearing. Noise modeling results from **Chapter 12, Noise** assess whether there will be exceedances of allowable noise levels that may result in public health impacts.

As detailed in **Chapter 12, Noise**, a noise assessment was conducted to determine whether the Proposed Actions would significantly increase sound levels from mobile and stationary sources at existing noise receptors, and if the new noise receptors that would be introduced would be in an acceptable ambient sound level environment.

The Proposed Actions would introduce active recreational space (including but not limited to gym and play areas) as a stationary source on the rooftop of the With-Action building's podium. Besides that, no other substantial stationary source noise generators are anticipated to be introduced as the result of the Proposed Actions. The design and specifications for the With-Action building's mechanical equipment would incorporate sufficient noise reduction devices that would comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Control Code.

The noise analysis for existing and new receptors evaluates whether receptors would be introduced into an environment with acceptable ambient noise conditions. With-Action noise levels have been evaluated at new receptors based on ambient noise measurements, mobile source proportional noise modeling, and detailed modeling of noise from the With-Action development. Based on the modeling results, With-Action sound levels are expected to increase by up to 3.6 dBA over No-Action levels. However, as the noise level increases in exceedance of 3 dBA were found at the locations where With-Action condition noise levels (L_{eq}) are less than 65 dBA, these increments are not considered as significant impacts. Therefore, the Proposed Actions would not result in a significant adverse noise impact due to new mobile and stationary sources.

An (E)-Designation (E-124) for noise has already been applied to the Development Site as part of the 2004 Downtown Brooklyn Development FEIS (CEQR No. 03DME016K). The existing (E)-Designation identifies the highest attenuation values needed at the lower levels for conservative analysis and disclosure purposes which requires 35 outdoor/indoor transmission class on all facades to maintain acceptable interior noise conditions for residential, commercial office, and/or community facility uses. With the implementation of the attenuation requirements described above, no significant adverse noise impacts would occur as a result of the Proposed Actions, therefore, there would be no potential for a significant adverse public health impact related to noise.

The Proposed Actions would introduce approximately 4,745 sf of open space available to the public on the southern portion of the Development Site. Future noise levels (L_{10}) within the newly created open space would exceed the 55 dBA (L_{10}) guideline for outdoor areas requiring serenity and quiet contained in the *CEQR Technical Manual*. However, this relatively low noise level is often not

achieved in outdoor areas due to the level of nearby noise sources (e.g., nearby roadway, train, and aircraft activity, as well as activities within the outdoor space itself) at most New York City outdoor public open space areas and parks. Furthermore, under existing and No-Action conditions, noise levels at the future location of the project-generated open space at the southern portion of the Development Site fronting Fulton Street currently exceed—and in the future would continue to exceed—55 dBA (L_{10}). This level of existing noise is comparable to noise levels in a number of passive open space areas that are within range of substantial noise sources, including Fort Greene Park, Prospect Park, and Brooklyn Bridge Park. The proposed uses of the project-generated open space do not require serenity and quiet. Therefore, the proposed open spaces are not considered sensitive and there would be no potential for a significant adverse public health impact related to noise.

Water Quality

Potential exposures to contaminated water (potable, non-potable, and recreational) from ingestion or secondary contact can cause infectious disease, neurologic effects, kidney or other organ system effects, and cancers. The potential effects of a project's impact of water quality can be assessed from its potential to impact surrounding natural resources or water systems as analyzed in **Section 3, Water and Sewer Infrastructure** of the EAS (no analysis of natural resources was warranted per *CEQR Technical Manual* guidance, and the Proposed Actions would have no significant adverse impacts with respect to natural resources).

As discussed in **Section 3, Water and Sewer** of the EAS**,** the Proposed Actions would have no significant adverse impacts related to water quality. The Proposed Actions would result in a total daily water demand of approximately 0.40 million gallons per day (mgd), which is lower than the *CEQR Technical Manual* screening threshold of 1 mgd. Therefore, the Proposed Actions would not result in any significant adverse impacts on the water supply. The total volume of sanitary runoff and stormwater generated by the Proposed Actions as part of the combined sewer system would discharge into the Red Hook Water Resource Recovery Facility (WRRF). This WRRF has a SPDES-permitted dry weather flow capacity of 60 mgd. The average monthly flow to Red Hook WRRF over a 12-month period is 30 mgd. The Proposed Actions have the potential to result in a total generation of 0.263 MG over the No-Action total volume. This incremental increase in combined sewage flow would represent an estimated 0.44 percent of the Red Hook WRRF's SPDES-permitted capacity. The projected increase in combined sewage would not cause the Red Hook WRRF to exceed its operational capacity or SPDES-permitted capacity.

The Development Site is served by one storm sewer outfall—CSO Outfall RH-005. The Proposed Actions would incorporate best management practices (BMPs) that would be required in accordance with the New York City Department of Environmental Protection (NYCDEP) Unified Stormwater Rule (USWR) guidelines, which include requirements for bringing the Development Site into compliance with the allowable stormwater release rate. To achieve the release rate, stormwater would be managed by utilizing one or a combination of detention techniques. Where necessary, green infrastructure technologies and subsurface detention would be implemented to retain or release stormwater with slowed discharge rates to control peak runoff rates.

Therefore, the Proposed Actions would not result in any significant adverse combined sewage impacts. Therefore, there would be no potential for significant adverse public health impacts related to water quality.

Construction Period

Hazardous Materials

As discussed above and detailed in **Chapter 9, Hazardous Materials**, the Proposed Actions would adhere to requirements of the existing (E)-Designation for hazardous materials (E-124), which was applied to Brooklyn Block 2093, Lot 1 as part of the 2004 Downtown Brooklyn Development project. The implementation of the remedial measures required under the (E)-Designation would reduce the potential for significant adverse hazardous materials impacts due to the Proposed Actions. Any testing and sampling required by OER for the Development Site would be followed in accordance with the requirements of the OER (E)-Designation process. In addition to the (E)-Designation on the Development Site, regulatory requirements pertaining to the disturbance and handling of any LBP, ACM, and PCB-containing building materials would be followed. As such, implementation of the Proposed Actions would not result in significant adverse impacts related to hazardous materials. Therefore, there would be no potential for public health impacts related to hazardous materials during the construction period.

Air Quality

As detailed in **Chapter 17, Construction**, measures required to reduce pollutant emissions during construction include all applicable laws, regulations, and the City's building codes. These include dust suppression measures, idling restrictions, and the use of ultra-low sulfur diesel (ULSD) fuel and the best available tailpipe reduction technologies. With the implementation of these emission reduction measures, the dispersion modeling analysis of construction-related air emissions for both on-site and on-road sources determined that particulate matter ($PM_{2.5}$ and PM_{10}), annual-average nitrogen dioxide (NO_2), and carbon monoxide (CO) concentrations would be below their corresponding *de minimis* thresholds or National Air Quality Ambient Standards (NAAQS), respectively. Therefore, construction of the Proposed Project would not result in significant adverse air quality impacts during construction, and there would be no potential for significant adverse public health impacts related to construction-period air quality.

Noise

As detailed in **Chapter 17, Construction**, construction of the Proposed Project would involve standard construction activities and practices for buildings in New York City. Foundation installation and superstructure phases of construction are typically when the noisiest activities occur. The exterior and interior fit-out phases of construction typically involve minimal exterior equipment and substantially quieter noise conditions. The Development Site is near existing residential, community facility, and commercial land uses, and the introduction of new residences would occur throughout construction of the phased development. Based on the proximity of these noise-sensitive land uses, there is the potential for construction to cause significant adverse noise impacts.

To assess the potential for the Proposed Project to result in noise impacts during construction, a quantified noise analysis was conducted.

Construction noise from mobile sources was evaluated for the 6:00 AM to 7:00 AM peak period, when construction traffic would be greatest. Construction noise from mobile sources would not increase by 3 dBA or more, the applicable analysis threshold, and there would be no significant adverse noise impact due to construction mobile sources.

Construction noise from stationary sources was evaluated for five phases of construction, since there would be overlapping activities for demolition, construction of the building foundation, construction of the core and shell, and interior phases of construction associated with the Proposed Project. Construction of the Proposed Project is predicted to result in elevated noise levels at several of the analyzed receptors during limited periods of time during the overall construction period. To the west of the Development Site, at the residential building (R03) located at 540 Fulton Street, construction is predicted to result in noise level increases up to approximately 13.6 dBA for up to27 months. To the north of the Development Site, at the Long Island University (LIU) facilities (R13 and R14) along DeKalb Avenue, construction is predicted to result in noise level increases up to 17.7 dBA for up to 32 months. To the east of the Development Site, at the residential buildings (R15 and R16) along Hudson Avenue, construction is predicted to result in noise level increases of up to approximately 29.2 dBA over a 49-month period. To the south of the Development Site, at the residential buildings (R17) along Fulton Street at 1 Flatbush Avenue, construction is predicted to result in noise level increases up to approximately 10.3 dBA over an 11-month period. Such exceedances may be intrusive but would be temporary and would typically occur during weekdays during construction activities. At each of these locations, since all of the buildings have central HVAC systems or a similar closed-window condition, approximately 30 to 35 dBA attenuation (depending on the building) can be achieved with a closed-window condition resulting in interior noise levels that are close to or exceed the CEQR interior noise level threshold for these types of uses (i.e., 45 dBA (L_{10}) for residential and community facility uses and 50 dBA (L_{10}) for office or equivalent spaces).

Since noise level increases due to construction would exceed the CEQR exterior noise level thresholds at several existing sensitive receptors, and since the CEQR interior noise levels would also be exceeded at some of these receptors, construction of the Proposed Project would result in significant adverse construction noise impacts. As described in **Chapter 17,** all construction noise impacts would occur at existing residential and/or community facility buildings located close to the Development Site, including the following sensitive receptors: R03, R13, R14, R15, and R16. Interior noise levels at these receptors, which include a mix of residential and community facility receptors, would primarily experience an exceedance of the CEQR interior noise level impact criteria during the demolition, excavation/foundation, and core and shell phases of construction.

Therefore, the Proposed Actions would have the potential to result in a temporary significant adverse noise impact that would remain unmitigated. However, due to the temporary nature of the noise combined with the attenuation provided by building conditions, the impacts would not be large enough to substantially decrease quality of life due to noise exposure and therefore would not result in impacts on public health. Additionally, exposure to this type of noise is common in dense, urban environments. Construction of the Proposed Project would not involve any unusual or exceptional construction activities or practices for high-rise type buildings in New York City. Therefore, the Proposed Actions would not result in significant adverse public health impacts during construction.

Water Quality

As detailed above, the protection of nearby natural resources is important to the maintenance of water quality, which is connected to public health. The Development Site is not adjacent to any water resources. Therefore, construction of the Proposed Project would not have an impact on water quality. As noted in **Chapter 17, Construction**, construction of the Proposed Project would comply with all applicable regulations governing on-site stormwater management and disposal into the sewer system, including the NYC Construction Code, NYC Plumbing Code, USWR, and Local Law 97

of 2017. The incorporation of the appropriate sanitary flow and stormwater source control storm management practices would reduce the overall volume of sanitary sewer discharge and stormwater runoff as well as the peak stormwater runoff rate from the Development Site. As such, construction associated with the Proposed Actions is not expected to result in a significant adverse impact on the City's water and sewer infrastructure. Therefore, there would be no public health impacts related to water quality during the construction period.

15

Neighborhood Character

This chapter considers how the Proposed Actions would affect neighborhood character, which is defined as the elements of the environment that combine to create the context and feeling of a neighborhood.

Introduction

This analysis of neighborhood character follows the guidelines set forth in the *2021 City Environmental Quality Review (CEQR) Technical Manual*. As defined within the manual, neighborhood character is an amalgam of various elements that give neighborhoods a distinct "personality," including land use, socioeconomic conditions, community facilities and services, open space resources, historic and cultural resources, urban design and visual resources, shadows, transportation, and noise. Not all these elements affect neighborhood character in all cases; a neighborhood usually draws its distinctive character from a few defining elements. For a proposed project, a neighborhood character assessment under CEQR first identifies the defining features of the neighborhood and then evaluates whether the project has the potential to affect these defining features, either through the potential for a significant adverse impact or a combination of moderate effects in relevant technical analysis areas. Thus, to determine the effects of a proposed project on neighborhood character, the salient features of neighborhood character are considered together. According to the *CEQR Technical Manual*, neighborhood character impacts are rare and occur under unusual circumstances. Moreover, a significant adverse impact identified in one of the technical areas that contribute to a neighborhood's character is not automatically equivalent to a significant adverse impact on neighborhood character but, rather, serves as an indication that neighborhood character should be examined.

This section includes a preliminary assessment of neighborhood character; the assessment was prepared in conformance with the *CEQR Technical Manual* using information from the technical analyses presented in other relevant chapters of this Draft Environmental Impact Statement (DEIS).

As described in **Chapter 1, Project Description**, the New York Department of Housing Preservation and Development (HPD) in conjunction with the New York City Department of Health and Mental Hygiene (DOHMH) and the Department of Citywide Administrative Services (DCAS) (each a co-applicant, and collectively, the Applicant) is seeking approval for a zoning map amendment, zoning text amendments, disposition of City-owned property, site selection and acquisition of real property interest, certification to establish and facilitate a transit volume, and an amendment to the Brooklyn Center Urban Renewal Area (BCURA) plan (collectively, the Proposed Actions) to facilitate a mixed-use development (the Proposed Project) in the Downtown Brooklyn neighborhood within Brooklyn Community District (CD) 2. The Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with a new, approximately 1,552,605-gross-square-foot (gsf), 72-story, 840-foot-tall, mixed-use building. Under With-Action conditions, the building would include approximately 1,233,950 gsf (1,263 dwelling units [DUs]) of residential floor 129,000 gsf of retail space and 88,500 gsf of office and/or community facility that may be dedicated for future City use, as well as 4,745 square feet (sf) of publicly accessible open space and an expanded sidewalk width along Flatbush Avenue Extension.

Principal Conclusions

The Proposed Actions would not result in a significant adverse impact to neighborhood character. As outlined in the *CEQR Technical Manual*, the assessment of neighborhood character is based on the impacts on the defining features of the neighborhood and potential impacts found in other technical areas. The Proposed Actions would not result in significant adverse impacts in the technical areas of land use, zoning and public policy; socioeconomic conditions; community facilities and services; open space; historic and cultural resources; urban design and visual resources; shadows; or noise. The Proposed Actions would result in significant impacts to transportation (traffic and pedestrians). Therefore, a preliminary assessment of neighborhood character is provided.

The Proposed Actions would result in the development of new, mixed-use building that would include affordable housing and align with the Downton Brooklyn trend toward residential and mixed-use development without significantly affecting the neighborhood's defining features or existing open spaces. New development under the Proposed Actions would enhance the pedestrian experience and preserve visual corridors while introducing new public open space. Regarding the significant impacts on traffic and pedestrians, as described in **Chapter 18, Mitigation**, some of the significant impacts could be mitigated through various measures while others would remain unmitigated or could only be partially mitigated. Overall, although there would be an increase in transportation activity due to the Proposed Actions, the resulting conditions would be similar to those typically found in the urban neighborhood defining the study area and would not result in density of activity or service conditions that would be out of character with the surrounding neighborhood. As such, the Proposed Actions would not result in significant adverse impacts on neighborhood character.

Methodology

As indicated above, a neighborhood character assessment is generally needed, per the *CEQR Technical Manual*, when a proposed project has the potential to result in significant adverse impacts in certain technical areas (land use, zoning, and public policy; socioeconomic conditions; community facilities and services; open space; historic and cultural resources; urban design and visual resources;

shadows; transportation; or noise) or when the Proposed Project may have moderate effects on several of the elements that define a neighborhood's character. A "moderate" effect is generally defined as an effect considered reasonably close to the significant adverse impact threshold for a particular technical analysis area.

In the absence of an impact on any of the relevant technical areas, a combination of moderate effects to the neighborhood could result in an impact to neighborhood character. A significant impact identified in one of the technical areas that contribute to a neighborhood's character is not necessarily equivalent to a significant impact on neighborhood character. Therefore, an assessment of neighborhood character is generally appropriate if a proposed project has the potential to result in any significant adverse impacts in the technical areas listed above. Examples of possible changes in those technical areas that could result in an adverse effect on neighborhood character, should those technical areas be defining features of the neighborhood, are as follows:

- **Land Use, Zoning, and Public Policy:** If development resulting from a proposed action would conflict with surrounding uses, conflict with land use policy or other public plans for the area, or change land use character, neighborhood character could be affected.
- **Socioeconomic Conditions:** If a proposed action results in direct or indirect displacement or addition of population, employment, or businesses; or substantial differences in population or employment density, neighborhood character could be affected.
- **Community Facilities and Services:** If a proposed action would displace or alter a community facility or increase demand on community facilities, neighborhood character could be affected.
- **Open Space:** If an action would result in a reduction or displacement of an open space or result in additional population that would place a substantial demand on open space, neighborhood character could be affected.
- **Historic and Cultural Resources:** If a proposed action would result in substantial direct changes to a historic resource or substantial changes to public views of a historic resource, neighborhood character could be affected.
- **Urban Design and Visual Resources:** If a proposed action would result in substantially different building form, size, scale, or arrangement; block form, street pattern, or street hierarchy; streetscape elements; or substantial direct changes to a visual feature, such as unique and important public view corridors and vistas, or to public visual access to such a feature, neighborhood character could be affected.
- **Shadows:** If a proposed project would cast an incremental shadow on sun-sensitive resources, neighborhood character could be affected.
- **Transportation:** If a proposed project would result in a change in traffic patterns or would substantially increase traffic volumes on residential streets, neighborhood character could be affected.
- **Noise:** If a proposed action would substantially increase noise levels in an area, neighborhood character could be affected.

A preliminary assessment of neighborhood character determines whether changes expected in other technical analysis areas may affect a defining feature of neighborhood character. As part of a neighborhood character analysis, the defining features of the neighborhood are identified and then a determination is made as to whether a project has the potential to adversely affect these defining features, either through the potential for a significant adverse impact or a combination of moderate effects in relevant technical areas. A neighborhood that has a more varied context is typically able to

tolerate greater change without experiencing significant adverse impacts. If the assessment concludes that a proposed project has the potential to adversely affect defining features of a neighborhood, a detailed analysis is undertaken to determine whether the project would result in a significant adverse impact on neighborhood character.

The neighborhood character analysis draws from the technical assessments listed above. As recommended in the *CEQR Technical Manual*, the study area for the neighborhood character analysis is consistent with the study areas in the relevant technical areas assessed under CEQR that contribute to the defining elements of the neighborhood. As such, the study area for neighborhood character is consistent with the 400-foot study area used for the analysis of land use, zoning, and public policy.

As detailed in the relevant chapters of this EIS, the Proposed Actions would not result in significant adverse impacts in the technical areas of land use, zoning, and public policy; socioeconomic conditions; community facilities; open space; historic and cultural resources; urban design and visual resources; shadows; or noise. The Proposed Actions would result in significant adverse impacts in transportation (traffic and pedestrians). Therefore, a preliminary assessment of neighborhood character impacts is provided below. The analysis begins with the identification of the defining features of the neighborhood and then assesses whether the Proposed Actions would adversely affect those defining features within the framework of the above technical areas.

Preliminary Assessment

Defining Features of the Neighborhood

The Development Site is located within the Downtown Brooklyn neighborhood of Brooklyn CD 2. The 400-foot study area consists of mixed residential and commercial buildings, which make up the majority of as well as public facilities and institutions uses, transportation and utility, open space and outdoor recreation, and vacant land. Buildings within the study area are varied, with buildings ranging from tall towers to three-story mixed-use buildings. Buildings that are located along Flatbush Avenue, as well as buildings located directly adjacent to the Development Site, are generally large-footprint commercial buildings and mixed-use residential towers with ground-floor retail. Additionally, the study area is separated by Flatbush Avenue, which is a major thoroughfare that induces traffic noise and heavy pedestrian activity.

The roadway network generally consists of a mix of principal arterial roads like Flatbush Avenue, Fulton Street, and DeKalb Avenue, which feature varying widths and traffic patterns, and local roadways such as Rockland Place and Nevins Street, which accommodate one-way traffic and curbside parking. The area's unique street pattern results from Flatbush Avenue/Flatbush Avenue Extension and Fulton Street intersecting at angles, contributing to an irregular network. The infrastructure supports heavy pedestrian and vehicular activity due to the presence of major thoroughfares, public transportation hubs, and commercial and residential buildings. Despite active ground-floor uses along key streets, street trees are sparse, particularly concentrated west of Flatbush Avenue.

As discussed in **Chapter 2, Land Use, Zoning, and Public Policy**, recent development trends show high-rise mixed-use buildings throughout the study area, highlighting the neighborhood's growth in residential, commercial, and community facility uses. Key characteristics of the land use and development trends include the promotion of mixed land uses by the three Business Improvement Districts (BIDs) encompassing the study area: the MetroTech BID to the east of the Flatbush Avenue

Extension; the Court-Livingston-Schermerhorn BID to the southwest; and the Fulton Mall Improvement Association BID to the west of the extension. This pattern of both residential and commercial expansion in Downtown Brooklyn is epitomized by notable projects such as 9 DeKalb Avenue, a 73-story mixed-use building; 570 Fulton Street, a 23-story development; and 91 DeKalb Avenue, which serves as a Long Island University (LIU) facility for student housing and supporting community amenities.

Potential to Affect the Defining Features of the Neighborhood

Overall, the Proposed Actions would not adversely affect the defining features of the neighborhood. In the No-Action condition, the existing seven-story commercial office and retail building currently occupying the Development Site would remain as under existing conditions and its commercial spaces would be fully occupied by office and retail tenants. The proposed mix of uses would be consistent with the mixed-use character present in the surrounding study area. The Proposed Project would reflect the ongoing trend toward residential and mixed uses in the Downtown Brooklyn neighborhood while creating much needed affordable housing for the surrounding community. Additionally, the Proposed Actions would not physically displace any existing open space resources or affect their current uses, nor would the Proposed Actions have any significant adverse indirect impact on either passive or active open space within the open space study areas when considering both the quantitative and qualitative assessments. Additionally, the Proposed Actions would introduce 4,745 sf of new publicly accessible open space, 28,000 sf of private active recreational space and 5,000 sf of private passive recreational space within the With-Action building. The Proposed Project's emphasis on urban design, coupled with consistent architectural treatments height, and bulk, would be compatible with the existing character of the surrounding area. Additionally, the Proposed Actions would include an expanded sidewalk along Flatbush Avenue Extension that would enhance the pedestrian experience.

The proposed building envelopes would integrate harmoniously with the existing street grid of the study area, upholding the existing visual corridors along the roadways. The With-Action development would not obstruct any significant view corridors to the Williamsburgh Savings Bank or Fort Greene Park since the Development Site would be constructed on an existing block and would not entail any changes to block shapes, street pattern and hierarchy, topography, or open spaces in the primary or secondary study area.

Potential to Affect the Contributing Elements of Neighborhood Character

Overall, the Proposed Actions would not adversely affect the following analytical areas that could contribute to neighborhood character, either individually or through a combination of moderate effects. Though the With-Action condition is expected to result in significant adverse traffic impacts at seven, five, six, and ten intersections during the weekday AM, midday, PM, and Saturday peak hours respectively, and significant adverse pedestrian impacts at specific crosswalk elements during certain peak hours, such effects would not cause substantial changes to the neighborhood character.

Land Use, Zoning, Public Policy

The Proposed Actions would result in an expansion of existing land uses in the study area and the Proposed C6-12 zoning district would reflect appropriately the unique nature of the Development

Site encompassing an entire block situated in a transit-rich area and surrounded by other high-density mixed-use buildings in the study area. The permitted bulk and height under the Proposed Actions would help revitalize the Development Site to increase housing capacity, furthering the current housing goals of New York City as well as the goals of the Special Downtown Brooklyn District (DB). Alongside its residential offerings, the Proposed Project would also provide non-residential uses, such as local retail space, office space, and/or community facility space serving the local community, enhancing the pedestrian experience, and serving the goals of the DB. The Proposed Actions would also enable much-needed public realm improvements, including the introduction of a new, publicly accessible open space and an expanded sidewalk along Flatbush Avenue Extension. The mix of ground-floor retail and open space is expected to continue to support the area's existing commercial activities while improving the pedestrian experience, benefiting area residents and visitors. The Proposed Actions would not conflict with the current surrounding zoning or existing uses. Rather, the Proposed Actions would facilitate developments that would integrate well with this transit-rich area and the existing zoning framework within the study area. Therefore, the Proposed Actions would not adversely affect surrounding land uses, zoning, or public policy (see below).

The Proposed Actions would be supportive of several New York City policies, including the goals set forth in the *Brooklyn Center Urban Renewal Plan);* the *Brooklyn Cultural District and Business Improvement Districts; Housing Our Neighbors: A Blueprint for Housing and Homelessness (Housing Blueprint); OneNYC 2050;* the *Where We Live NYC/Fair Housing Together* Plan; and City of Yes initiatives (including City of Yes for Housing Opportunity, Economic Opportunity, and Carbon Neutrality). The Proposed Actions would facilitate more housing development, including permanently affordable housing, along with other local retail uses, commercial offices, and/or community facility space to serve the local community and enhance the pedestrian experience within the Downtown Brooklyn neighborhood and DB. Additionally, the redevelopment of the Development Site would offer new retail opportunities at commercial corridors, which would further enhance the pedestrian experience at and within the vicinity of the Development Site. The Proposed Project would also seek to incorporate a multitude of sustainable measures and integrate high-performance building strategies, furthering the City's sustainability goal.

The proposed public realm improvements facilitated by the Proposed Actions would consist of a publicly accessible open space and an expansion of the sidewalk along the portion of Flatbush Avenue Extension fronting the Development Site. The Proposed Project would also provide surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site. The proposed mixed-use development would introduce additional 24-hour population to the Development Site and its surrounding neighborhood, activating the area with new residents, workers and visitors and contributing to a more resilient local economy in this neighborhood.

Therefore, the land use and zoning patterns and the public policies contributing to neighborhood character would not be adversely affected by the Proposed Actions, either alone or in combination with potential impacts in other relevant technical areas discussed herein.

Socioeconomic Conditions

As discussed in **Chapter 3, Socioeconomic Conditions**, the Proposed Actions would not significantly alter the socioeconomic character of the study area. The analysis determined that while the estimated weighted average incomes of the new population are expected to exceed the average incomes of the existing study area population, the projected population increase would be

approximately 3.5 percent compared with the No-Action conditions. This level of population increase would not be expected to introduce or accelerate a trend leading to the displacement of vulnerable populations or create a significant indirect residential displacement adverse impact. Therefore, socioeconomic conditions contributing to neighborhood character would not be adversely affected by the Proposed Actions, either alone or in combination with potential effects in other relevant technical areas discussed in this chapter.

Community Facilities and Services

As described in **Chapter 4, Community Facilities and Services**, the Proposed Actions would not introduce a sizeable new population to the neighborhood, nor would it displace or alter the existing public high schools, libraries, healthcare facilities, and police and fire protective services. The assessment also found the Proposed Actions would not result in significant adverse impacts to early childhood programs and elementary and intermediate schools. The Proposed Actions would result in a collective utilization rate for early childhood programs under 100 percent. Therefore, the Proposed Actions would not result in a significant adverse impact on publicly funded early-childhood programs. As for elementary and intermediate schools, the utilization rate of elementary and intermediate schools would not exceed 100 percent, nor would the Proposed Actions generate more than 100 elementary- or intermediate-school aged students. Therefore, the Proposed Actions would not result in a significant adverse impact on elementary and intermediate schools. Overall, the Proposed Actions would not displace or alter a community facility or increase demand on community facilities. The neighborhood character would not be adversely affected by the Proposed Actions through impacts to community facilities, either alone or in combination with potential effects in other relevant technical areas discussed in this chapter.

Open Space

As described in **Chapter 5, Open Space**, an analysis of the potential for the Proposed Actions to indirectly impact residential open space was conducted for a half-mile study area. The residential study area's open space ratios are below the City's guidelines and the Proposed Actions would result in a change to open space ratios exceeding the threshold for a possible adverse impact. However, the Development Site is located in a Walk-to-a-Park Service Area and would continue to be served by nearby open space resources not accounted for in the quantitative assessment. Additionally, the Proposed Actions would introduce 4,745 sf of new open space available to the public. Furthermore, the Proposed Actions would introduce private amenity space for project-generate residents, including no less than 28,000 sf of private active recreational space and 5,000 sf of private passive recreational space. These amenities would help to absorb a portion of the incremental demand on active and passive open spaces within the study area. Therefore, considering both the quantitative and qualitative open space assessments provided in **Chapter 5**, the neighborhood character would not be adversely affected by the Proposed Actions through impacts to open space, either alone or in combination with potential impacts in other relevant technical areas discussed in this chapter.

Shadows

As discussed in **Chapter 6, Shadows**, the Proposed Actions would result in new developments that would cast incremental shadows within the vicinity of the study area. Based on a detailed analysis, it was concluded that the With-Action development would not result in significant adverse impacts to public sunlight-sensitive resources. Therefore, significant adverse impacts on neighborhood character

due to shadows are not expected, and contributing features of the neighborhood character would not be adversely affected due to potential shadows-related effects of the Proposed Actions, either alone or in combination with potential impacts in other relevant technical areas discussed in this chapter.

Historic and Cultural Resources

As discussed in **Chapter 7, Historic and Cultural Resources**, the Proposed Actions would not result in a significant adverse impact to historic and cultural resources. Additionally, the Development Site does not have archaeological significance. As such, an assessment of archaeological resources is not warranted, and no significant adverse impacts would result from the Proposed Actions. None of the architectural resources within the study area are within 90 feet of the Development Site and as such, the Proposed Actions would not result in direct impacts to historic resources. Although the Proposed Actions would introduce a new building that is taller than the existing building on the Development Site, this new development would be consistent with the ongoing growth and transformation of Downtown Brooklyn. As a result, it is not expected that construction of the Proposed Project would result in significant adverse impact to historic and cultural resources. As such, the neighborhood character would not be adversely affected by the Proposed Actions through impacts to historic and cultural resources, either alone or in combination with potential impacts in other relevant technical areas discussed in this chapter.

Urban Design and Visual Resources

As discussed in **Chapter 8, Urban Design and Visual Resources**, the Proposed Actions would not result in significant adverse impacts to urban design or visual resources in the study area. The Proposed Actions would not result in significant adverse impacts to urban design in either the primary or secondary study areas. The proposed With-Action building on the Development Site would be constructed on an existing block and would not entail any changes to block shapes, street pattern and hierarchy, topography, open space, or natural features in the primary or secondary study area. The Proposed Actions would not create land uses or structures that would be substantially incompatible with existing and emerging character of the surrounding area. As described below, the proposed With-Action building would be of a similar height and bulk to buildings that have been recently completed and buildings that are expected to be completed by the 2032 build year. The Proposed Actions would activate the streetscape by introducing a 24-hour population to the Development Site. Furthermore, the Proposed Actions would introduce several public realm improvements that increase pedestrian safety and circulation (as well as improving access to public transit through improvements to the DeKalb Avenue subway station entrance) and enhance the pedestrian experience of the Development Site and primary study area.

Visual resources within the primary and secondary study area include the Williamsburgh Savings Bank, located south of the Development Site, and Fort Greene Park, located northeast of the Development Site. An analysis of the Proposed Actions' impact on significant view corridors to the Williamsburgh Savings Bank and Fort Greene Park was conducted. As detailed below, development under With-Action conditions at the Development Site would not obstruct any significant view corridors to the Williamsburgh Savings Bank or Fort Greene Park. Therefore, urban design and visual resources contributing to neighborhood character would not be adversely affected, either alone or in combination with potential impacts in other relevant technical areas discussed in this chapter.

Transportation

As discussed in **Chapter 10, Transportation**, the Proposed Actions would not result in significant adverse transportation impacts to buses and subways. However, the Proposed Actions would result in significant traffic impacts at seven, six, six, and ten intersections during the weekday AM, midday, PM, and Saturday peak hours, respectively. Standard traffic capacity improvements typically implemented by New York City Department of Transportation (NYC DOT), such as signal timing modifications, could potentially provide full or partial mitigation at some of the significantly impacted intersections. These mitigation measures are described in **Chapter 18, Mitigation**.

Pedestrian analysis was conducted for four sidewalk elements, four crosswalk elements, and five corner elements at key intersections for the weekday AM, midday, PM, and Saturday peak hours. Of the 13 pedestrian elements analyzed, the Proposed Actions would result in significant adverse impacts at one crosswalk element during the weekday AM and PM peak hours and two crosswalk elements during the Saturday peak hour. Significant pedestrian impacts are not expected during the weekday AM and midday peak hours. The widening of the impacted crosswalks, as described in **Chapter 18, Mitigation**, could mitigate these significant impacts.

The implementation of traffic and pedestrian improvements measures identified above are subjected to NYC DOT's review and approval. Overall, although there would be an increase in transportation activity due to the Proposed Actions, the resulting conditions would be similar to those typically found in the urban neighborhood defining the study area and would not result in density of activity or service conditions that would be out of character with the surrounding neighborhood. Therefore, the impacts on traffic and pedestrians would not cause substantial changes to the character of the neighborhood.

Noise

As discussed in **Chapter 12, Noise**, based on noise measurements, the Proposed Actions, which include the introduction of a new active recreational space as a stationary source on the rooftop of the building podium, have been analyzed for their impact on noise levels at both existing and new noise receptors. Based on noise measurements and modeling, the Proposed Actions would not result in significant adverse noise impacts on existing noise-sensitive receptors and would not significantly change noise characteristics in the neighborhood. The Development Site has an existing (E)-Designation (E-124) for noise, established as part of the 2004 Downtown Brooklyn Development FEIS (CEQR No. 03DME016K). This designation specifies noise attenuation requirements, needing a 35 outdoor/indoor transmission class on all facades to ensure acceptable interior noise levels for residential, commercial office, and community facility uses. The Proposed Actions would adhere to these requirements and therefore would not result in significant adverse noise impacts. Additionally, the Proposed Actions would introduce approximately 4,745 square feet of publicly accessible open spaces on the southern portion of the Development Site. While future noise levels in these spaces would exceed the 55 dBA guideline for serenity, this relatively low noise level is often not achieved in outdoor areas due to the level of nearby noise sources (e.g., nearby roadway, train, and aircraft activity, as well as activities within the outdoor space itself) at most New York City outdoor public open space areas and parks. Thus, these open spaces are not considered sensitive and would not require conditions of serenity and quiet. The Proposed Actions would not result in significant adverse noise impacts on existing noise-sensitive receptors and would not change noise characteristics in the neighborhood. Therefore, defining features of the neighborhood character would not be adversely affected due to potential effects of the Proposed Actions on noise, either alone or in combination with potential impacts in other relevant technical areas discussed in this chapter.

16

Effects on Disadvantaged Communities

This section assesses the potential for the Proposed Actions to cause or increase a disproportionate pollution burden on disadvantaged communities (DACs). Potential impacts are weighed against the benefits that would result from the Proposed Actions in assessing whether they would cause a disproportionate burden on affected communities.

Introduction

Section 8-0109(2)(k) of the New York State Environmental Conservation Law, effective December 30, 2024, requires that lead agencies consider the effects of proposed actions on DACs as part of environmental review, including whether the action(s) may cause or increase a disproportionate pollution burden.

As described in **Part I, Project Description**, the New York City Department of Housing Preservation and Development (HPD), in conjunction with the New York City Department of Health and Mental Hygiene (DOHMH) and the Department of Citywide Administrative Services (DCAS) (each a co-applicant, and collectively, the Applicant) is seeking approval for the Proposed Actions, which include a zoning map amendment, zoning text amendments, disposition of City-owned property, site selection and acquisition of real property interest, certification to establish and facilitate a transit volume, and an amendment to the Brooklyn Center Urban Renewal Plan (URP) to facilitate a mixed-use development in the Downtown Brooklyn neighborhood of Brooklyn, Community District (CD) 2. The Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with a new 72-story, 840-foot-tall mixed-use building (the Proposed Project). Under With-Action conditions, the building would contain approximately 1,552,605 gross square feet (gsf), including 1,233,950 gsf of residential floor area and 217,500 gsf of non-residential floor area designated for commercial (office and retail) and/or community facility space that may be dedicated for future City use.

The Proposed Actions would also introduce a number of public realm improvements, including:

- A new, publicly accessible open space area (approximately 4,745 sf) on the southern portion of the Development Site;
- An expanded sidewalk along Flatbush Avenue Extension; and
- surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site.

As shown in **Figure 16-1**, while the Development Site itself is not located within a DAC, there are several DACs identified by the New York State Department of Environmental Conservation within a half mile of the Development Site, and therefore further assessment is warranted.

Principal Conclusions

The Proposed Actions would not have significant adverse impacts related to their effects on disadvantaged communities. Based on the technical analyses presented in the Environmental Impact Statement (EIS) pursuant to *CEQR Technical Manual* guidance, the Proposed Actions would not have the potential to result in significant adverse impacts in any technical areas other than transportation (traffic and pedestrian) and construction (transportation and noise). All potential impacts would occur in both non-DAC census tracts or DACs with "lower burdens and vulnerabilities." Although not all transportation and construction impacts could be mitigated, none of these significant adverse impacts would cause or increase a disproportionate pollution burden on a DAC, either alone or in conjunction with other technical areas.

Methodology

The *CEQR Technical Manua*l predated changes to the Environmental Conservation Law § 8-0109 and does not provide guidance regarding the scope of this analysis. The New York State Department of Environmental Conservation (NYSDEC) proposed a rule in January 2025 that provides additional considerations regarding this new statutory provision. Draft NYSDEC regulations and guidance were consulted to develop this assessment. The assessment in this chapter incorporates that draft guidance and discusses the impact categories outlined in the *CEQR Technical Manual*.

Based on guidance in the Appendix C of New York State Environmental Quality Review Act-Environmental Justice Siting Law Amendments Draft SEQR Guidance,[1] an evaluation of a proposed action's potential effects on DACs is warranted if a project is located in or within half a mile of an identified disadvantaged community—or if its impacts could otherwise affect a disadvantaged community. The next step is to identify direct or indirect impacts and the scale of which related to pollution (e.g., wastewater discharges, air emissions, noise, odor, solid or hazardous waste generation, transportation, or disposal) that could occur as a result of the proposed actions. The final step is to determine whether the proposed actions would cause or increase a pollution burden within a DAC.

Study Area

DACs in New York State were identified based on criteria adopted in 2023 by the Climate Justice Working Group (CJWG), a group composed of representatives from state agencies and

[1] NYSDEC (2025), https://dec.ny.gov/sites/default/files/2025-01/part617risguidanceappc.pdf

environmental justice groups across the State. The CJWG used 45 indicators to identify 35 percent of Census Tracts within New York State as DACs. The criteria include multiple indicators that represent the environmental burdens or climate change risks within a community, or population characteristics and health vulnerabilities that can contribute to more severe adverse effects of climate change.[2]

Based on guidance received from HPD, a half-mile radius from the Development Site is used to account for areas that could experience impacts on DACs from the Proposed Actions. As shown in **Figure 16-1**, nine DACs are within the half-mile radius from the Development Site. Three DACs identified have comparatively higher burdens and vulnerabilities while the other six identified have comparatively lower burdens and vulnerabilities (see **Table 16-1**).[3]

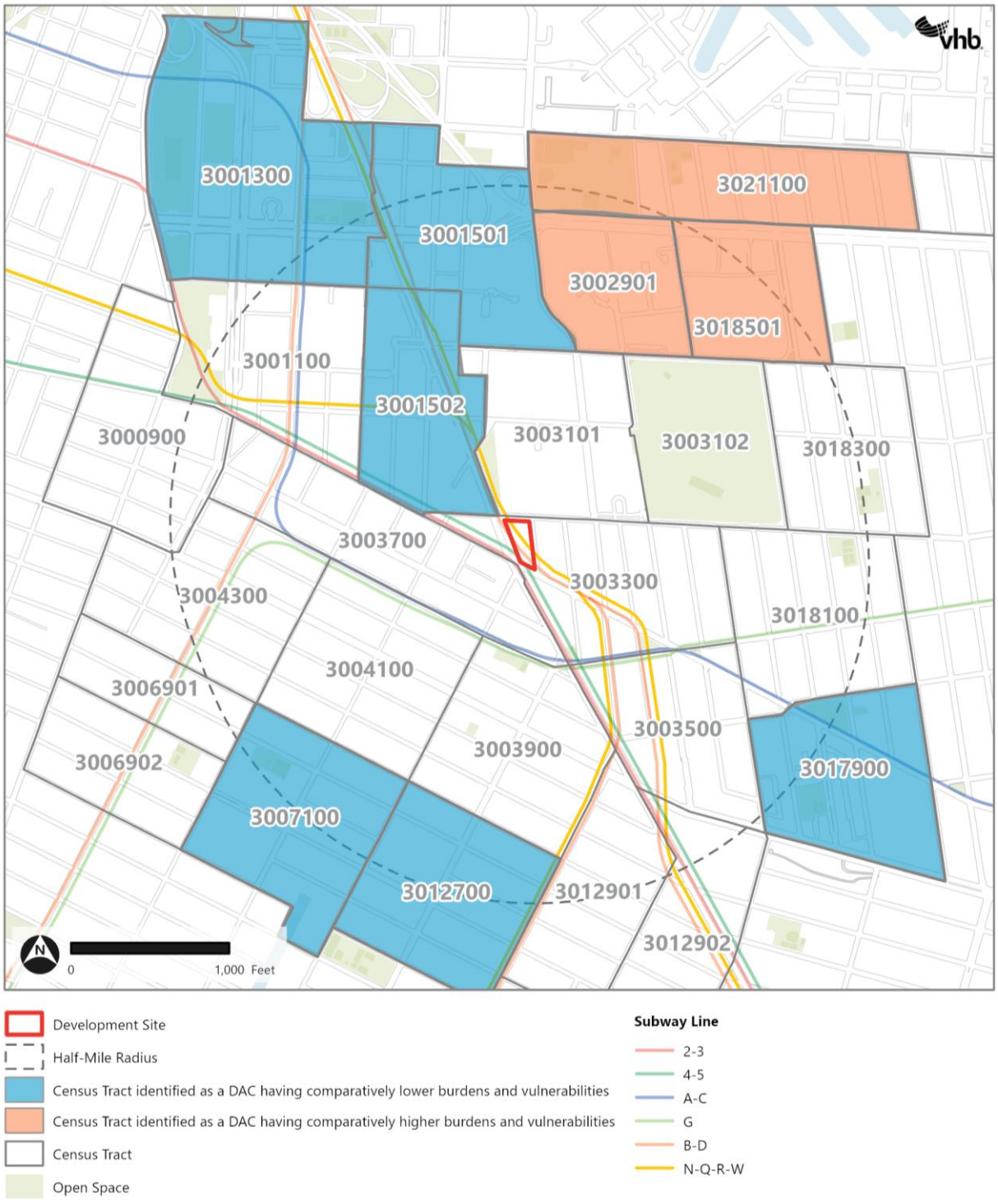
Table 16-1 Disadvantaged Communities in the Half-Mile Radius

Census Tract	DAC Burdens and Vulnerabilities
3001300	Comparatively lower
3001501	Comparatively lower
3021100	**Comparatively higher**
3002901	**Comparatively higher**
3018501	**Comparatively higher**
3001502	Comparatively lower
3007100	Comparatively lower
3012700	Comparatively lower
3017900	Comparatively lower

[2] NYSDEC (2025), https://climate.ny.gov/resources/disadvantaged-communities-criteria/

[3] The Disadvantaged Community Assessment Tool (DACAT) identifies DACs as having either 1) comparatively higher existing burdens or vulnerabilities and therefore an increased likelihood that a proposed action may have a moderate to large impact on the DAC, or 2) having comparatively lower existing burdens or vulnerabilities and therefore a decreased likelihood that a proposed action may have a moderate or large impact on the DAC. The methodology used by NYSDEC to delineate these categories is based on data from the CJWG and uses statistically meaningful thresholds to compare existing burdens in a DAC with existing burdens in the following non-DAC scenarios: statewide rural, statewide urban, regional rural, and regional urban. A detailed description of this methodology is provided here: https://es.dec.ny.gov/sites/default/files/2025-01/part617risdactoolappa.pdf

Figure 16-1 Disadvantaged Communities (DACs) Census Tracts



Source: NYC DCP (2025); NYC Parks (2025), New York Department of Environmental Conservation (DEC) (2025)

DACs Assessment

Impact Summary

The foregoing sections of the EIS have found that the Proposed Actions would not result in significant adverse impacts in any of the following CEQR technical areas: land use, zoning, and public policy; socioeconomic conditions; community facilities and services; open space; shadows; historic and cultural resources; urban design and visual resources; hazardous materials; air quality (operational and construction); water and sewer infrastructure; energy; greenhouse gas emissions and climate change; public health; and neighborhood character. The Proposed Actions would not result in significant adverse impacts to hazardous materials and noise on the Development Site as the existing E-designation (E-124) would eliminate the potential for any significant adverse impacts. Further, the Proposed Actions would not result in significant adverse impacts to air quality (HVAC systems and hot water equipment) as a Land Disposition Agreement and/or Regulatory Agreement will be placed on the site that would require the proposed building to have an all-electric HVAC and hot water system. However, the EIS identified the potential for the Proposed Actions to result in significant adverse impacts on transportation (traffic and pedestrian) and construction (transportation and noise). As described in **Chapter 18, Mitigation** and **Chapter 20, Unavoidable Significant Adverse Impacts**, the operational traffic impacts and construction-related transportation and noise impacts would not be fully mitigated. As such, the potential effects of these significant adverse impacts on disadvantaged communities are described in the sections below.

Transportation: Traffic and Pedestrians

As discussed in **Chapter 10, Transportation**, the Proposed Actions would result in significant adverse traffic impacts to eight intersections during the weekday AM, seven intersections during the weekday midday, five intersections during the weekday PM, and nine intersections during the Saturday peak hours. These intersections are in both non-DAC and DAC census tracts (see **Figure 16-2**). As discussed in **Chapter 18, Mitigation,** standard traffic capacity improvements typically implemented by New York City Department of Transportation (NYC DOT), such as signal timing modifications, could mitigate traffic impacts at six intersections during the weekday AM peak hour (one additional intersection would be partially mitigated), five intersections during the weekday midday peak hour (one additional intersection would be partially mitigated), two intersections during the weekday PM peak hour, and five intersections during the Saturday peak hour (three additional intersections would be partially mitigated). However, significant traffic impacts to the intersections listed in **Table 16-2** would remain unmitigated:

Table 16-2 Intersections with Unmitigated Traffic Impacts

Map Key	Intersection	Time
1	Fulton Street and Hudson Avenue	AM, midday, PM, and Saturday
2*	Flatbush Avenue Extension and Tillary Street	AM and PM
3*	Flatbush Avenue Extension and DeKalb Avenue	AM, PM, Saturday
4	Flatbush Avenue Extension and Fulton Street	PM and Saturday
5	Schermerhorn Street and 3rd Avenue	Saturday
6	Flatbush Avenue and Lafayette Avenue	Midday and Saturday

* Intersections within a DAC census tract

NYC DOT is currently in the process of developing the Flatbush Avenue Bus Priority plan that would implement bus lanes along Flatbush Avenue between Livingston Street to the north and Grand Army Plaza to the south, portions of which fall within the traffic study area for the Proposed Project. As currently proposed, the plan would convert two Flatbush Avenue travel lanes to center-running bus lanes with the goals of improving bus speeds, reliability, and safety along the corridor; the plan would also implement concrete bus boarding islands and would extend the curb at selected locations to provide additional pedestrian spaces.

NYC DOT is also in preliminary planning stage for the DeKalb-Lafayette Avenues Bus and Safety Improvements project to improve bus service and street safety along the DeKalb Avenue and Lafayette Avenue corridors between Flatbush Avenue Extension and Broadway. Portions of the DeKalb Avenue corridor fall within the traffic study area for the Proposed Project. As preliminarily indicated, NYC DOT is exploring the feasibility of implementing bus priority measures, which might include curbside bus lanes similar to those that were temporarily implemented along DeKalb Avenue in the summer of 2024, and other improvements focused on improving safety for pedestrians and bicyclists.

If implemented, these preliminary plans have the potential to change future conditions, including travel patterns such as vehicle routing and mode choice, and may result in additional significant adverse impacts at traffic analysis locations due to the reduction in roadway capacity for general vehicle traffic. These changes could affect intersections along Flatbush Avenue between Livingston Street and Atlantic Avenue, DeKalb Avenue between Flatbush Avenue Extension and Ashland Place, and nearby upstream or downstream intersections.

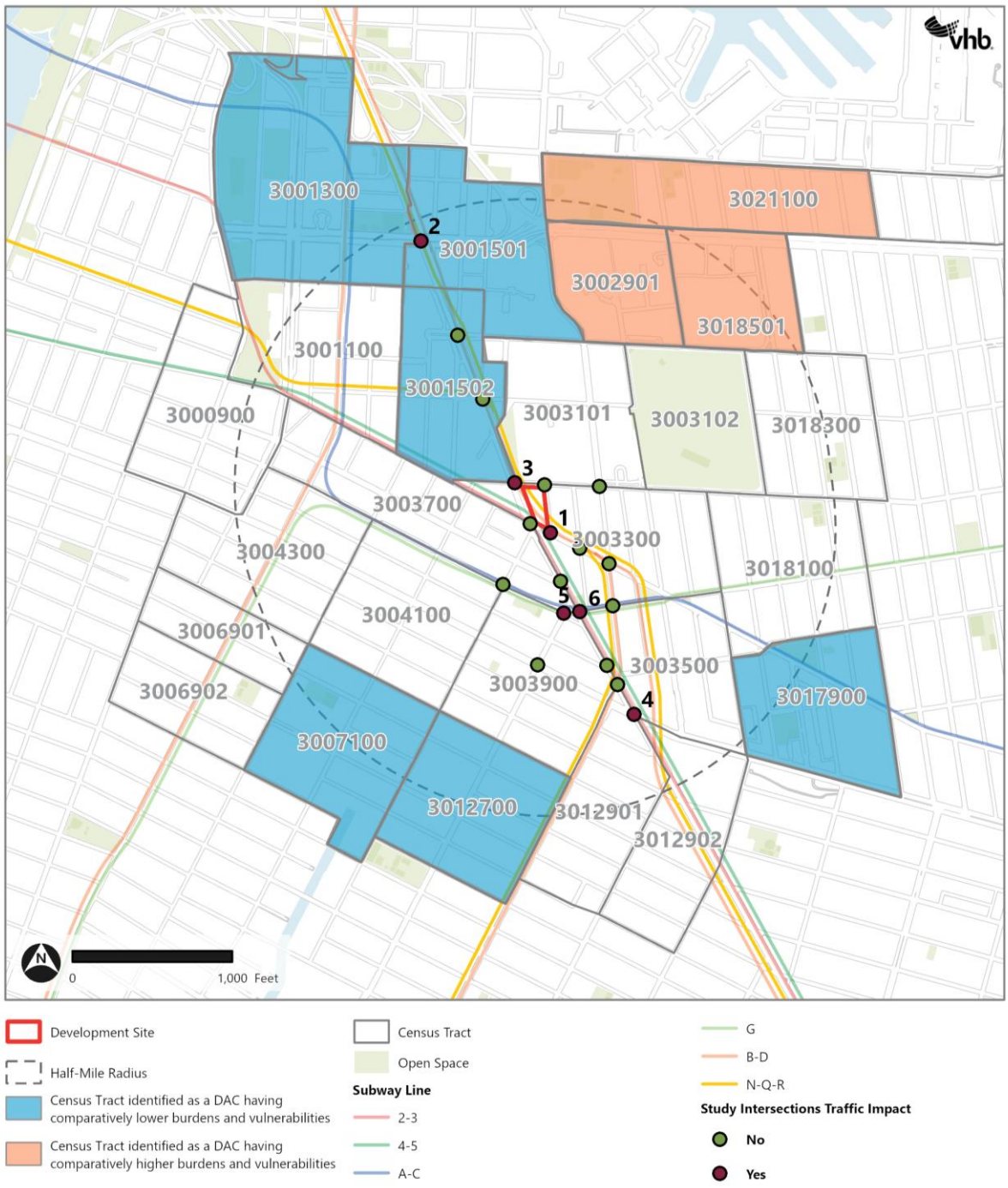
At the time of the publication of the Draft EIS, these two plans remain in development. As such, for the purposes of the traffic analysis, the Draft EIS uses the existing roadway configuration (e.g., number of travel lanes, parking lanes, etc.) and signal timing plans on the Flatbush Avenue and DeKalb Avenue corridors to model the future conditions by the Proposed Project's Analysis Year.

The proposed Flatbush Avenue Bus Priority project and DeKalb-Lafayette Avenues Bus and Safety Improvements project would be implemented at NYC DOT's discretion. Once the design of the aforementioned projects is complete, NYC DOT would conduct post-implementation monitoring studies to assess traffic conditions, which would include, but is not limited to monitoring vehicle speeds and traffic volumes for a defined period of time. Based on the findings of these studies, NYC DOT may refine components of the project to optimize roadway conditions.

As for the pedestrian impact, of the 13 pedestrian elements analyzed, the Proposed Actions would result in significant adverse impacts at one crosswalk element during the weekday PM peak hour and one crosswalk element during the Saturday peak hours. The pedestrian impact identified is unlikely to result in increased air pollution or noise.

Two unmitigated intersections (Flatbush Avenue Extension and Tillary Street, and Flatbush Avenue Extension and DeKalb Avenue) are located in DACs with comparatively lower burdens and vulnerabilities. While air and noise emissions associated with traffic may have the potential to create a pollution burden on a DAC, the air quality and noise assessments regarding mobile sources in this EIS concluded that the Proposed Actions would not result in significant adverse air quality or noise impacts on the surrounding sensitive receptors (see **Chapter 11, Air Quality** and **Chapter 12, Noise**). Therefore, none of the DACs within the half-mile radius would experience disproportionate impacts due to air quality pollution or increased noise from mobile sources.

Figure 16-2 Locations of Traffic Impact and DAC Census Tracts



Source: NYC DCP (2025); NYC Parks (2025), New York Department of Environmental Conservation (DEC) (2025)

Construction

Transportation

As discussed in **Chapter 17, Construction**, of the 18 intersections analyzed for potential significant traffic impacts during the construction traffic peak hours, significant adverse impacts were identified at eight intersections during the AM construction peak hour (6 AM to 7 AM) and four intersections during the PM construction peak hour (3 PM to 4 PM). These intersections are located in both non-DAC census tracts as well as DAC census tracts. Where impacts during construction may occur, traffic capacity improvements in the form of signal timing modifications were proposed to provide full mitigation at some intersections. Significant traffic impacts could be fully mitigated at four of the eight significantly impacted intersections during the AM construction peak hour (four intersections would remain unmitigated) and three of the four significantly impacted intersections during the PM construction peak hour (one intersection would remain unmitigated). The remainder of the intersections would remain as unmitigated significant adverse construction traffic impacts (see **Table 16-3** and **Figure 16-3**):

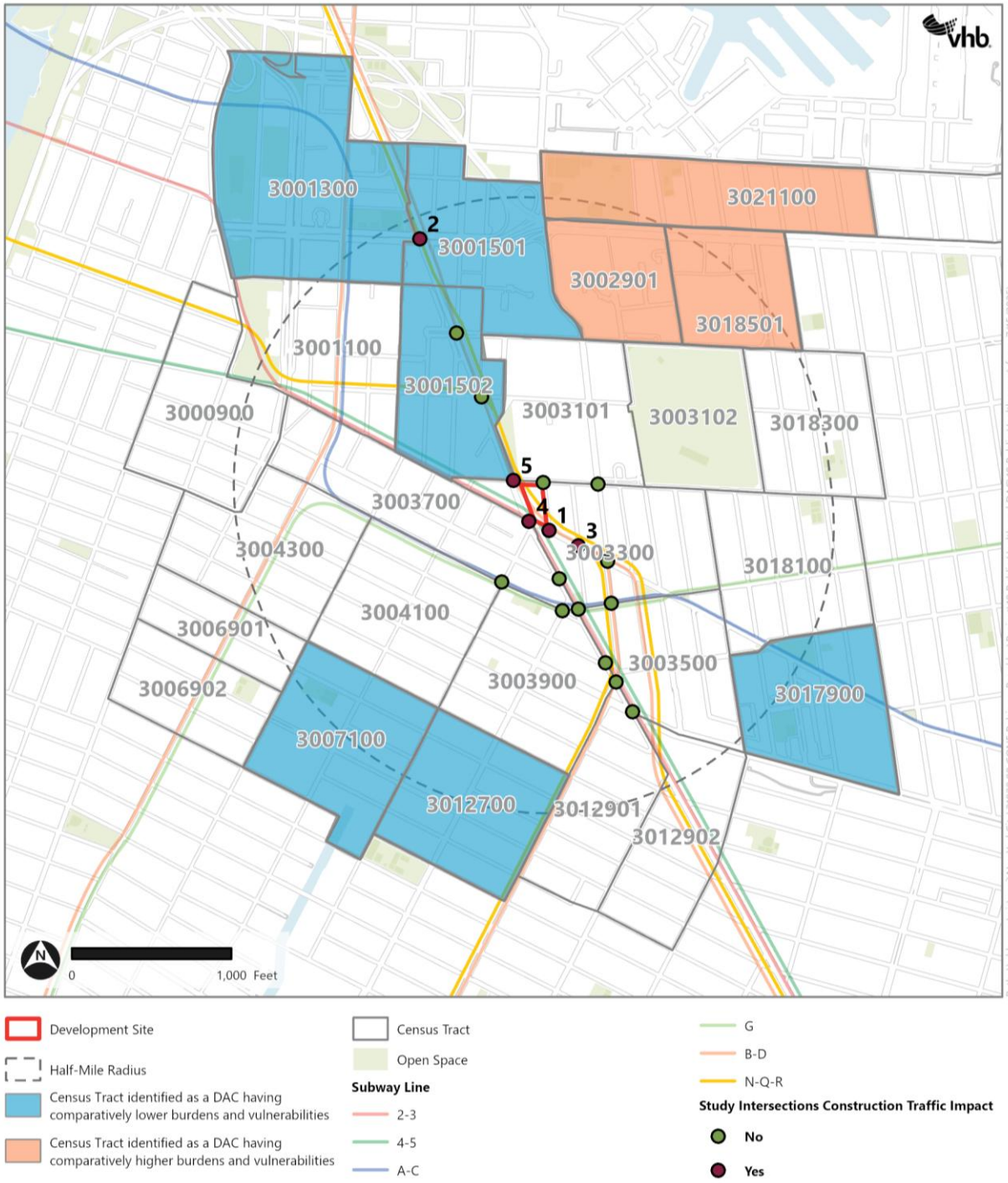
Table 16-3 Intersections with Unmitigated Construction Traffic Impacts

Map Key	Intersection	Construction Peak Hour
1	Fulton Street and Hudson Avenue	AM
2*	Flatbush Avenue Extension and Tillary Street	AM
3	Fulton Street and Rockwell Place	AM
4	Flatbush Avenue Extension and Fulton Street	AM
5*	Flatbush Avenue Extension and DeKalb Avenue	PM

* Intersections within a DAC census tract

Two unmitigated intersections (Flatbush Avenue Extension and Tillary Street, and Flatbush Avenue Extension and DeKalb Avenue) are located in DACs with comparatively lower burdens and vulnerabilities. As discussed in **Chapter 17, Construction**, the construction air quality analysis concluded that construction-related air emissions for both on-site and on-road sources would be below their corresponding *de minimis* thresholds or National Air Quality Ambient Standards (NAAQS), respectively. Additionally, while unmitigable pedestrian impacts were identified during the course of the construction activities as a result of sidewalk closure-related detours, pedestrian impacts would be unlikely to result in increased air or noise pollution. Therefore, the Proposed Project's construction activities would not result in disproportionate air pollution burdens from mobile sources on DACs.

Figure 16-3 Locations of Construction Traffic Impacts and DAC Census Tracts



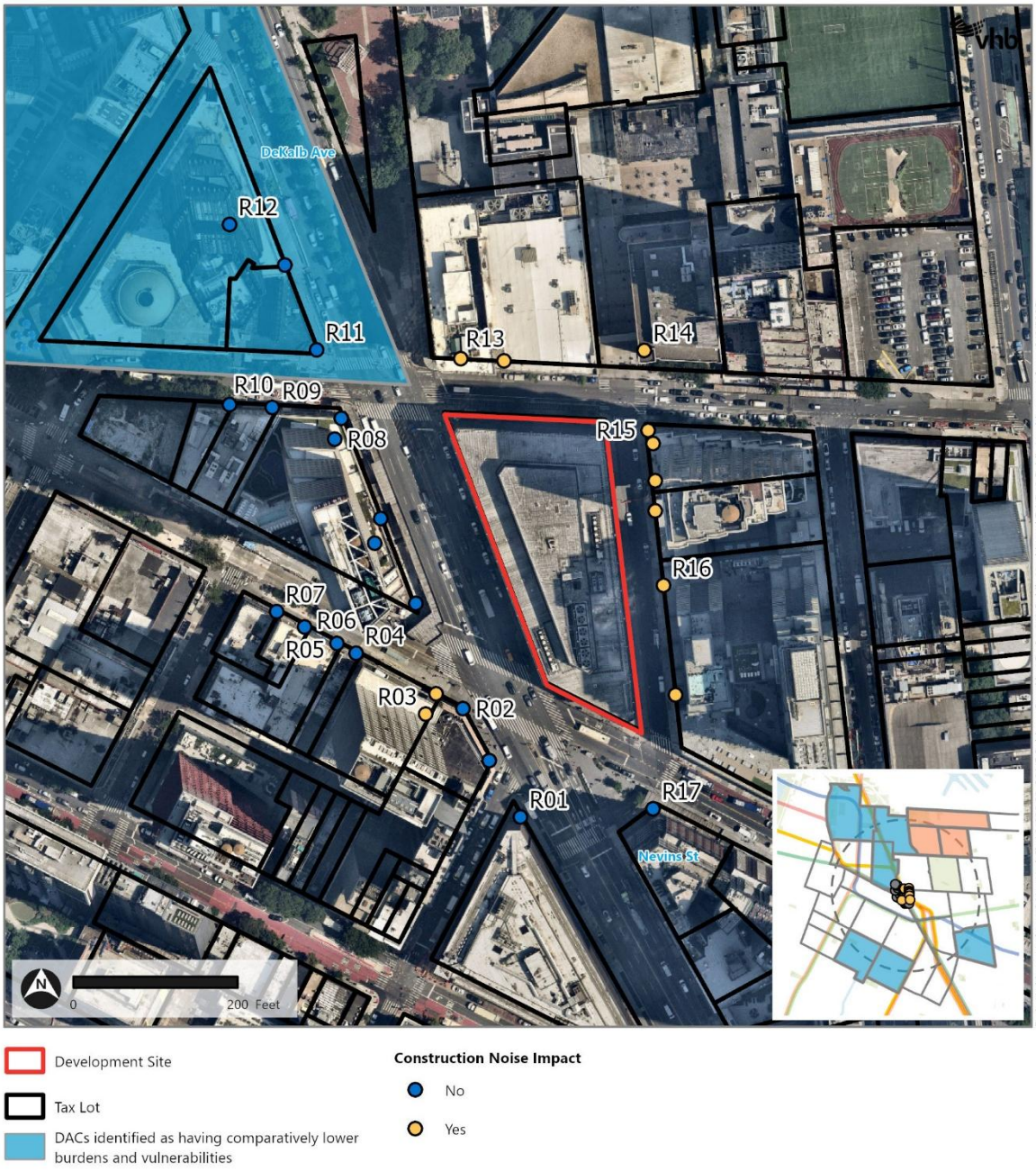
Source: NYC DCP (2025); NYC Parks (2025), New York Department of Environmental Conservation (DEC) (2025)

Noise

The Development Site is near existing residential, community facility, and commercial land uses, and the introduction of new off-site residences would occur throughout construction of the proposed development. As discussed in **Chapter 17, Construction**, since construction noise levels would exceed the thresholds identified in the *CEQR Technical Manual* for exterior increase in noise, and considering interior noise levels would be above the acceptable range at several adjacent sensitive receptors, there would be potential for the project to result in significant adverse construction noise impacts. All temporary construction noise impacts would occur at existing residential and/or community facility buildings located close to the Development Site, including the following sensitive receptors: R03, R13, R14, R15, and R16(see **Figure 16-4**). Interior noise levels at these receptors, which include a mix of residential and community facility receptors, would primarily experience an temporary exceedance of the CEQR interior noise level impact criteria during the demolition, excavation/foundation, and core and shell phases of construction. Notably, none of these receptors are situated in a DAC census tract, indicating that the potential construction noise impacts would not result in a disproportionate noise burden on DACs during construction.

Furthermore, as discussed in **Chapter 14, Public Health**, while noise level during the construction period would reach applicable *CEQR Technical Manual* impact thresholds at several receptors, these thresholds are based on quality-of-life considerations as opposed to public health considerations. Noise levels during the construction period would not be enough to constitute a public-health concern, and would only occur during the construction period. Although the Proposed Actions could result in significant adverse construction noise impacts on receptors in non-DAC census tracts that may remain unmitigated, the temporary nature of these noise levels during construction, coupled with the attenuation due to building conditions, would not result in a significant adverse public health impact on DACs.

Figure 16-4 Locations of Construction Noise Impact



Source: NYC DCP (2025); NYC Parks (2025), New York Department of Environmental Conservation (DEC) (2025)

Determination

Based on the technical analyses presented in the EIS pursuant to *CEQR Technical Manual* guidance, the Proposed Actions would result in significant adverse impacts on transportation (traffic and pedestrian) and construction (transportation and noise) in both non-DAC census tracts as well as

DAC census tracts with comparatively lower burdens and vulnerabilities. As discussed above, the anticipated operational traffic and pedestrian impacts would not result in additional mobile-source air-quality or noise impacts. Therefore, the DACs within the half-mile radius would not experience additional burden from increased air pollution or noise from mobile sources resulting from the Proposed Actions.

The construction of the Proposed Project would result in potential significant adverse traffic and pedestrian impacts located in both non-DAC census tracts and DAC census tracts with comparatively lower burdens and vulnerabilities, whereas the identified construction noise impacts would occur at receptors located in non-DAC census tracts. Of the identified construction transportation and noise impacts, some would remain unmitigated. Unmitigated traffic, pedestrian, and noise impacts from construction activities are also identified in both non-DAC census tracts and DAC census tracts. However, these impacts would be temporary, and there would be no traffic, pedestrian or noise impacts following completion of construction at the Development Site. Receptors that would experience a significant temporary increase in noise levels due to construction activities are located in non-DAC census tracts, and such an increase in noise levels would not constitute as a public health impact. Therefore, traffic, pedestrian, and noise impacts as a result of the Proposed Actions would not cause or increase a disproportionate pollution burden on a DAC, either alone or in conjunction with other technical areas.

Based on the foregoing analysis, the Proposed Actions would not result in significant adverse impacts related to their effects on disadvantaged communities.

17

Construction

Construction activities, although temporary in nature, can sometimes result in significant adverse impacts. A project's construction activities may affect a number of technical areas analyzed for the operational period, such as air quality, noise, and traffic. This chapter assesses the potential for the Proposed Actions to result in significant adverse impacts during construction.

Introduction

This chapter provides an assessment of the potential for construction of the Proposed Project to result in significant adverse impacts during the construction period. The Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with a new, approximately 1,552,605-gross-square-foot (gsf), 72-story, 840-foot-tall, mixed-use building. Under the With-Action condition, the building would include approximately 1,233,950 gsf of residential floor area, 129,000 gsf of retail space, and 88,500 gsf of office and/or community facility space that may be dedicated for future City use. The Proposed Project would also include public realm improvements, including an approximately 4,745-square-foot (sf) open space available to the public on the southern portion of the Development Site, an expanded sidewalk along the Development Site's Flatbush Avenue Extension frontage, and surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site.

Principal Conclusions

Governmental oversight of construction in New York City is extensive and involves a number of City, State, and Federal agencies, each with specific areas of responsibility. Construction at the Development Site would be subject to government regulations and oversight described below in

Construction Regulations and General Practices and would employ the general construction practices described below. The Proposed Project would also comply with the requirements of the New York City Noise Control Code.

Transportation

Traffic

The peak quarter for construction was identified as the third quarter of 2030 when a daily average of 638 construction workers and 49 trucks would be generated by construction activity. In this quarter, construction activities would generate 151 construction worker vehicle trips and 22 construction truck trips during the AM construction peak hour, and 151 construction worker vehicle trips and six construction truck trips during the PM construction peak hour. A detailed traffic analysis was performed for 18 key intersections for the AM and PM construction peak hours within the traffic study area. These analyses determined that nine of the 18 analysis intersections would be significantly impacted during the AM construction peak hour of 6 AM to 7 AM, and three of the 18 analysis intersections would be significantly impacted during the PM construction peak hour of 3 PM to 4 PM. The following intersections would be significantly impacted:

Flatbush Avenue Extension and Tillary Street (AM peak hour)

Flatbush Avenue Extension and DeKalb Avenue (PM peak hour)

Flatbush Avenue Extension and Fulton Street (AM peak hour)

Flatbush Avenue and Lafayette Avenue (AM peak hour)

Flatbush Avenue and 4th Avenue (PM peak hour)

Flatbush Avenue and Atlantic Avenue (AM peak hour)

Fulton Street and Hudson Avenue (AM and PM peak hours)

Fulton Street and Rockwell Place (AM peak hour)

DeKalb Avenue and Ashland Place (AM peak hour)

Fulton Street and Ashland Place (AM peak hour)

Schermerhorn Street and 3rd Avenue (AM peak hour)

Standard traffic capacity improvements typically implemented by New York City Department of Transportation (NYC DOT), such as signal timing modifications, would provide full mitigation at some of the significantly impacted intersections. Implementation of traffic improvement measures are subjected to NYC DOT's review and approval. Traffic capacity improvements were identified and could fully mitigate four of the nine significantly impacted intersections during the AM construction peak hour (five intersections would remain unmitigated) and two of the three significantly impacted intersections during the PM construction peak hour (one intersection would remain unmitigated).

Also, as described in further detail below, NYC DOT is currently in the process of developing the Flatbush Avenue Bus Priority plan and the DeKalb-Lafayette Avenues Bus and Safety Improvements project. If implemented, these preliminary plans have the potential to change future conditions, including travel patterns such as vehicle routing and mode choice, and may result in additional

significant adverse impacts at traffic analysis locations due to the reduction in roadway capacity for general vehicle traffic.

At the time of the publication of the Draft Environmental Impact Statement (DEIS), these two plans remain in development. As such, for the purposes of the traffic analysis, the DEIS uses the existing roadway configuration (e.g., number of travel lanes, parking lanes, etc.) and signal timing plans on the Flatbush Avenue and DeKalb Avenue corridors to model the future conditions by the Proposed Project's analysis year.

The proposed Flatbush Avenue Bus Priority project and DeKalb-Lafayette Avenues Bus and Safety Improvements project would be implemented at NYC DOT's discretion. Once the design of the aforementioned projects is complete, NYC DOT would conduct post-implementation monitoring studies to assess traffic conditions, which would include, but is not limited to, monitoring vehicle speeds and traffic volumes for a defined period of time. Based on the findings of these studies, NYC DOT may refine components of the project to optimize roadway conditions.

Parking

Construction workers would generate an estimated peak daily parking demand of 189 spaces during the third quarter of 2030, the peak construction quarter. This level of parking demand could be accommodated by available capacity at the three off-street parking facilities nearest the site. Overall, after accounting for construction parking demand and diversion of existing demand from the Development Site that would be relocated to other facilities, there would be approximately 1,403 spaces available for the public during the weekday overnight period and 463 spaces available during the weekday midday period in the off-street parking study area. Therefore, no parking shortfall would occur as a result of project-generated construction activity.

Transit and Pedestrians

Construction worker activities would be highest during the third quarter of 2030 and would generate approximately 225 construction worker transit trips during the AM and PM construction peak hours. These construction-related transit trips would occur outside of the peak periods of transit ridership and as the Development Site is located above the DeKalb Avenue subway station and the study area is well served by public transit, construction activities are not expected to result in transit impacts.

As multiple worker entrances will be provided around the Development Site, construction worker pedestrian trips are not expected to exceed the 200 pedestrian City Environmental Quality Review (CEQR) thresholds for detailed analysis. However, there is a potential for detours as a result of sidewalk closures. A level of service analysis was conducted for the north sidewalk of DeKalb Avenue between Flatbush Avenue Extension and Hudson Avenue. The level of service analysis, which was conducted for the peak commuter and midday periods—periods when pedestrian activity is highest during the day—concluded that there would be a potential for a significant adverse impact on this sidewalk as a result of sidewalk closure-related detours during the weekday AM and PM peak hours. These impacts would be unmitigable.

Air Quality

Measures required to reduce pollutant emissions during construction include all applicable laws, regulations, and the City's building codes. These include dust suppression measures, idling

restrictions, and the use of ultra-low sulfur diesel (ULSD) fuel. With the implementation of these emission reduction measures, the dispersion modeling analysis of construction-related air emissions for both on-site and on-road sources determined that particulate matter ($PM_{2.5}$ and PM_{10}), annual-average nitrogen dioxide (NO_2), and carbon monoxide (CO) concentrations would be below their corresponding *de minimis* thresholds or National Air Quality Ambient Standards (NAAQS), respectively. Therefore, construction of the Proposed Project would not result in significant adverse air quality impacts during construction.

Noise

Construction of the phased development would involve standard construction activities and practices for buildings in New York City. Foundation installation and superstructure phases of construction are typically when the noisiest activities occur. The exterior and interior fit-out phases of construction typically involve minimal exterior equipment and substantially quieter noise conditions. The Development Site is near existing residential, community facility, and commercial land uses, and the introduction of new residences would occur throughout construction of the Proposed Development. Based on the proximity of these noise-sensitive land uses, there is the potential for construction to cause significant adverse noise impacts.

To assess the potential for the Proposed Project to result in noise impacts during construction, a quantified noise analysis was conducted.

Construction noise from mobile sources was evaluated for the 6:00 AM to 7:00 AM peak period, when construction traffic would be greatest. Construction noise from mobile sources would not increase by 3 A-weighted decibels (dBA) or more, the applicable analysis threshold, and there would be no significant adverse noise impact due to construction mobile sources.

Construction noise from stationary sources was evaluated for seven phases of construction, since there would be overlapping activities for demolition, construction of the building foundation, construction of the core and shell, and interior phases of construction associated with the Proposed Project. Construction of the Proposed Project is predicted to result in elevated noise levels at several of the analyzed receptors during limited periods of time during the overall construction period. To the west of the Development Site, at the residential building (R03) located at 540 Fulton Street, construction is predicted to result in noise level increases up to approximately 13.6 dBA for up to 27 months. To the north of the Development Site, at the Long Island University (LIU) facilities (R13 and R14) along DeKalb Avenue, construction is predicted to result in noise level increases up to 17.7 dBA for up to 32 months. To the east of the Development Site, at the residential buildings (R15 and R16) along Hudson Avenue, construction is predicted to result in noise level increases of up to approximately 29.2 dBA over a 49-month period. To the south of the Development Site, at the residential buildings (R17) along Fulton Street located at 1 Flatbush Avenue, construction is predicted to result in noise level increases up to approximately 10.3 dBA over an 11-month period. Such exceedances may be intrusive but would be temporary and would typically occur during weekdays during construction activities. At each of these locations, since all of the buildings have central heating, ventilation and air conditioning (HVAC) systems or a similar closed-window condition, approximately 30 to 35 dBA attenuation (depending on the building) can be achieved with a closed-window condition resulting in interior noise levels that are close to or exceed the CEQR interior noise level threshold for these types of uses (i.e., 45 dBA (L_{10}) for residential and community facility uses and 50 dBA (L_{10}) for office or equivalent spaces).

Since noise level increases due to construction would exceed the CEQR exterior noise level thresholds at several existing sensitive receptors, and since the CEQR interior noise levels would also be exceeded at some of these receptors, construction of the Proposed Project would result in significant adverse construction noise impacts. All construction noise impacts would occur at existing residential and/or community facility buildings located close to the Development Site, including the following sensitive receptors: R03, R13, R14, R15, and R16. Interior noise levels at these receptors, which include a mix of residential and community facility receptors, would primarily experience an exceedance of the CEQR interior noise level impact criteria during the demolition, excavation/foundation, and core and shell phases of construction.

Therefore, the Proposed Actions would have the potential to result in a significant adverse noise impact that would remain unmitigated.

Vibration

Construction activities have the potential to generate ground-borne vibration that can potentially cause structural or architectural damage or annoy people in nearby vibration-sensitive spaces, such as residences. The most substantial sources of construction vibration are equipment associated with the excavation and foundation phase, such as pile drivers, drill rigs, bulldozers, and jack hammers.

There are no buildings within the Project Area listed by the New York City Landmarks Preservation Commission (LPC) or the State and/or National Register of Historic Places (S/NR) that would require special protection from potential damage due to vibration.

As the existing real estate of utility company (REUC) easement prevents pile driving too deep on the southern portion of the site due to the proximity to the Metropolitan Transit Authority (MTA) subway station, caisson rigs would be used instead if possible. Additionally, these construction activities would only occur for limited periods of time at any particular location, and there would be no significant adverse impact as a result of construction vibration.

Other Technical Areas

Land Use and Neighborhood Character

While construction of the new buildings under the Proposed Actions would cause temporary disruption, particularly related to traffic and noise, it is expected that such effects in any given area would be relatively short in duration and therefore would not create a neighborhood character impact. Therefore, no significant adverse construction impacts to land use and neighborhood character are expected.

Socioeconomic Conditions

Construction could, in some instances, temporarily affect pedestrian and vehicular access on street frontages immediately adjacent to the Development Site; however, long-term lane and/or sidewalk closures are not expected during construction and therefore would not restrict access to any existing or planned retail businesses. Utility service would also be maintained for all businesses, although there may be very short-term interruptions. Overall, construction of the Proposed Project is not expected to affect surrounding businesses or to result in any significant adverse impacts on socioeconomic conditions.

Community Facilities

The construction sites would be surrounded by construction fencing and barriers that would limit the potential for impacts of construction on nearby community facilities. Construction of the proposed buildings would not block or restrict access to facilities in the area and would not affect emergency response times of the New York City Police Department (NYPD) and New York City Fire Department (FDNY) given the geographic distribution of the police and fire facilities and their respective coverage areas. Therefore, construction impacts are not expected to result in any significant adverse impacts on community facilities.

Open Space

As described in **Chapter 5, Open Space**, there are no existing publicly accessible open spaces on the Development Sites. While University Place is located directly northwest of the Development Site, access to this publicly accessible open space would not be impeded during construction. In addition, measures would be implemented to control air emissions, dust, noise, and vibration on the construction site. Therefore, no significant adverse construction impacts to open space are expected.

Historic and Cultural Resources

As discussed in **Chapter 7, Historic and Cultural Resources**, the Development Site has no archaeological significance, nor are there any identified architectural resources located within 90 feet of the Development Site. Therefore, construction would not affect any archaeological or architectural resources.

Natural Resources

The Development Site does not contain and is not adjacent to any natural resources, as defined in the *2021 CEQR Technical Manual*. Therefore, no significant adverse impacts related to natural resources would occur during construction of the Proposed Project.

Hazardous Materials

As discussed in greater detail in **Chapter 9, Hazardous Materials**, the Proposed Actions would adhere to requirements of the existing (E)-Designation for hazardous materials (E-124), which was applied to Brooklyn Block 2093, Lot 1 as part of the 2004 Downtown Brooklyn Development project. The implementation of the remedial measures required under the (E)-Designation would reduce the potential for significant adverse hazardous materials impacts due to the Proposed Actions. Any testing and sampling required by the Office of Environmental Remediation (OER) for the Development Site would be followed in accordance with the requirements of the OER (E)-Designation process. In addition to the (E)-Designation on the Development Site, regulatory requirements pertaining to the disturbance and handling of any lead-based paint (LBP), asbestos-containing materials (ACM), and polychlorinated biphenyl (PCB)-containing building materials would be followed. As such, implementation of the Proposed Actions would not result in significant adverse impacts related to hazardous materials.

Water and Sewer Infrastructure

The Development Site is not adjacent to any water resources. Therefore, construction of the Proposed Project would not have an impact on water quality. During construction, the Applicants would comply with all applicable regulations governing on-site stormwater management and disposal into the sewer system, including the NYC Construction Code, NYC Plumbing Code, Unified Stormwater Rule (USWR), and Local Law 97 of 2017. As described in **Section 3, Water and Sewer Infrastructure** of the Environmental Assessment Statement (EAS), the incorporation of the appropriate sanitary flow and stormwater source control storm management practices would reduce the overall volume of sanitary sewer discharge and stormwater runoff as well as the peak stormwater runoff rate from the Development Site. As such, construction associated with the Proposed Actions is not expected to result in a significant adverse impact on the city's water and sewer infrastructure.

Methodology

This construction assessment follows the guidelines set forth in the *CEQR Technical Manual* and the Final Scope of Work (FSOW). As discussed in **Chapter 1, Project Description** and above, the Proposed Project would be constructed following demolition of the existing building on Development Site (with the exception of several columns located over the MTA easement, which would be retained). Demolition and construction activities would occur at the Development Site over a total period of 60 months. The Proposed Project would be fully operational by the end of 2032, the build year.

Because construction activities would exceed a 2-year period and would involve the simultaneous construction of multiple buildings, an assessment of the potential for construction activities to result in adverse environmental effects was warranted to examine the potential construction effects in the areas of transportation, air quality, and noise and vibration.

Construction Regulations and General Practices

Construction Oversight

Governmental oversight of construction in New York City is extensive and involves a number of City, State, and Federal agencies, each with specific areas of responsibility, as follows.

The New York City Department of Buildings (DOB) has primary oversight of construction. DOB oversees compliance with the New York City Building Code to ensure that buildings are structurally, electrically, and mechanically safe. In addition, DOB enforces safety regulations to protect both workers and the general public during construction. Areas of oversight include installation and operation of equipment such as cranes and lifts, sidewalk sheds, safety netting, and scaffolding.

The New York City Department of Environmental Protection (DEP) enforces the New York City Noise Code and reviews and approves any needed Remedial Action Plans (RAPs) and associated Construction Health and Safety Plans (CHASPs) as well as the removal of fuel tanks and abatement of hazardous materials. DEP also regulates water disposal into the sewer system and reviews and approves any rerouting of wastewater flow.

FDNY has primary oversight of compliance with the New York City Fire Code and the installation of tanks containing flammable materials.

The New York City Department of Transportation Office of Construction Mitigation and Coordination (DOT OCMC) reviews and approves any traffic lane and sidewalk closures.

New York City Transit (NYCT) is responsible for bus stop relocations and subsurface construction within 200 feet of a subway, if needed.

LPC approves studies and testing to prevent loss of archaeological resources and to prevent damage to architectural resources.

The New York State Department of Environmental Conservation (NYSDEC) regulates disposal of hazardous materials, as well as construction, operation, and removal of bulk petroleum and chemical storage tanks. NYSDEC also regulates discharge of water into rivers and streams.

The New York State Department of Labor (DOL) licenses asbestos workers.

The New York State Department of Transportation (NYS DOT) reviews and approves any traffic lane closures on its roadways, should any be necessary.

The U.S. Environmental Protection Agency (EPA) has wide-ranging authority over environmental matters, including air emissions, noise, hazardous materials, and the use of poisons; however, much of its responsibility is delegated to the state level.

The Occupational Safety and Health Administration (OSHA) sets standards for work site safety and construction equipment.

Construction Hours

New York City regulates the hours of construction work through the New York City Noise Control Code, as amended in December 2005 and effective July 1, 2007. Construction is limited to weekdays between the hours of 7:00 AM and 6:00 PM, and noise limits are set for certain specific pieces of construction equipment. The City may permit work outside of these hours to accommodate:

Emergency conditions;

Public safety;

Construction projects by or on behalf of City agencies;

Construction activities with minimal noise impacts; and

Undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts, and/or financial considerations.

The DOB issues these work permits, and for new building construction, like the projected development, approval of a noise mitigation plan from the DEP under the City's Noise Code is also required.

In New York City, construction work typically occurs on weekdays and begins at 7:00 AM, with most workers arriving between 6:00 AM and 7:00 AM. Work typically ends at 3:30 PM or 4:00 PM, with some exceptions when certain critical tasks (e.g., finishing a concrete pour for a floor deck, completing the drilling of piles, or completing the bolting of a steel frame erected that day) require that the workday be extended beyond normal work hours. Any extended workdays generally last until approximately 5:30 PM or 6:00 PM and do not include all construction workers on-site, but only

those involved in the specific task requiring additional work time. For work outside of normal construction hours, work permits are obtained from DOB prior to such work commencing. The numbers of workers and pieces of equipment in operation for work outside normal hours is generally limited to those needed to complete the authorized task. Overall, the level of activity for any work outside of normal construction hours is less than a normal workday.

Construction Practices

Access, Deliveries, and Staging Area

Access to construction sites is controlled. Work areas are fenced off, and limited access points for workers and construction-related trucks are provided. Typically, worker vehicles are not allowed into the construction area, and workers or trucks without a need to be on the site are not allowed entry. After work hours, the gates are closed and locked. Security guards may patrol the construction site after work hours and over weekends to prevent unauthorized access.

Material deliveries to construction sites are controlled and scheduled. To aid in adhering to delivery schedules, as is normal for building construction in New York City, flaggers are employed at each of the construction site's access points. Flaggers are typically supplied by either the subcontractor on-site at the time or by the construction manager. The flaggers control trucks entering and exiting the project site so that they would not interfere with one another. In addition, they provide an additional traffic aid as trucks enter and exit the on-street traffic streams.

Lane and Walkway Closures

Temporary curb-lane and sidewalk closures are typical for construction projects in New York City. To manage such closures, a Maintenance and Protection of Traffic (MPT) plan is developed consistent with NYC DOT requirements. DOT OCMC reviews and approves MPT plans, and the implementation of the closures is also coordinated with DOT OCMC. In general, construction managers for major projects on adjacent sites also coordinate their activities to avoid delays and inefficiencies.

Public Safety

A variety of measures are employed to ensure public safety during construction at sites within New York City. Examples include the use of sidewalk bridges to provide overhead protection for pedestrians passing by the construction site and the employment of flaggers to control trucks entering and exiting the construction site, to provide guidance to pedestrians, and/or to alert or slow down the traffic. Other safety measures include following DOB requirements during the installation and operation of tower cranes to ensure safe operation of the equipment and the installation of safety nettings on the sides of the project as the superstructure advances upward to prevent debris from falling to the ground. These safety measures are required as part of a Site Safety Plan reviewed and approved by DOB.

Rodent Control

Construction projects in New York City typically include provisions for a rodent (i.e., mouse and rat) control program with provisions for this formalized in construction contracts for the development. Rodent control programs are typically carried out throughout construction, beginning with surveying and baiting appropriate areas prior to construction and providing for proper site sanitation and

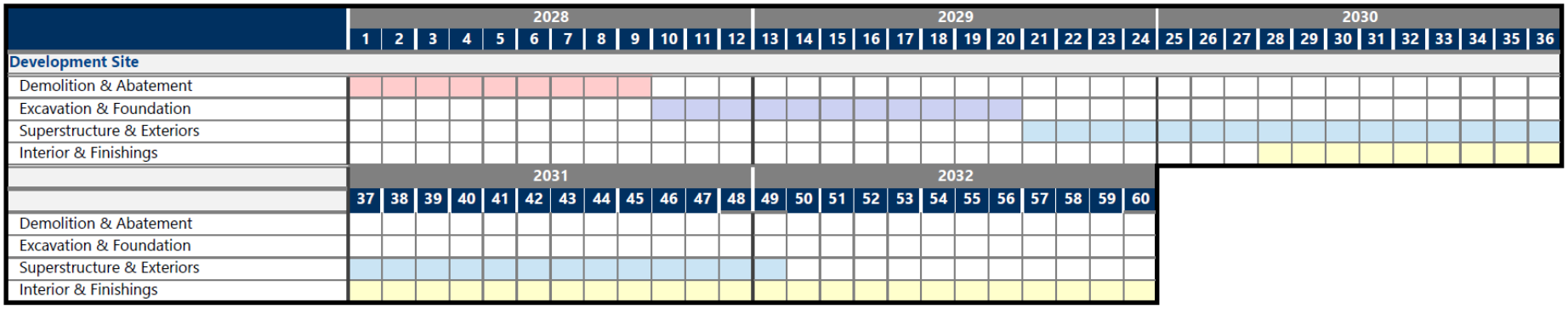
maintenance during construction. Signage is posted, and coordination is conducted with appropriate public agencies. Only EPA- and NYSDEC-registered rodenticides are permitted, and the contractor is required to implement the rodent control program in a manner that is not hazardous to the general public, domestic animals, and non-target wildlife.

Construction Description

Construction Schedule

Figure 17-1 shows the anticipated construction schedule for the Proposed Project as well as the sequencing of construction stages as currently anticipated. The details of the construction schedule are described further below.

Figure 17-1 Anticipated Construction Schedule



No-Action Condition

Absent the Proposed Actions, it is expected that the existing seven-story commercial office and retail building currently occupying the Development Site would remain as under existing conditions and be fully occupied No construction would occur under the No-Action Condition.

With-Action Condition

As discussed above and in **Chapter 1, Project Description**, in the future With-Action condition, the Proposed Actions would facilitate the redevelopment of the Development Site. The existing building would be replaced with a mixed-use building, the Proposed Project, consisting of residential, retail, office and/or community facility uses, as well as a publicly accessible open space area at the southern end of the Development Site block.

Construction Activities

For conservative analysis purposes it is assumed that no construction is proposed on-site in absence of the Proposed Actions—the existing space would continue to be tenanted. Construction of the Proposed Project would be subject to government regulations and oversight detailed above and would employ the general construction practices described above.

Demolition and Abatement

During the demolition and abatement phase of construction, the first step would be disconnection of existing utilities and demolition of the existing building to clear the site. Asbestos abatement would be the first part of demolition. These specialty tasks are strictly regulated in New York City to protect the health and safety of the construction workers and the public, including nearby residents and workers. Depending on the extent of the asbestos, either the whole building or portions of the building would be closed off by containment barriers made of either plastic or wood to prevent asbestos from leaving the containment area. Specially trained workers in protective clothing use hand tools to remove the asbestos. These asbestos-containing materials are sealed in bags and taken to licensed landfills for disposal. While the asbestos is being abated, air monitoring is performed by a licensed third-party inspector. After abatement is complete, an independent third-party inspector would certify that the building is asbestos free, and general demolition would begin. Depending on the amount of asbestos to be removed, about one or two closed or tarped truckloads of bagged materials could be removed per day.

The next step in general demolition is to remove any economically salvageable materials. Much of the reclaiming of salvageable materials is done on-site, and the materials are transported to recycling centers. Typical demolition requires solid temporary walls and overhead protection around the building to prevent accidental dispersal of building materials into areas accessible to the general public. In addition, dust suppression measures, such as wetting of materials, are used. An exposure assessment would be performed to determine appropriate dust control measures to manage any lead-based paint. After the structure is demolished, excavators or front-end loaders are used to load the debris into dump trucks. The demolition debris is taken to landfills for disposal. Depending on the size of the building demolished, about two to four truckloads of debris could be removed per hour. The general demolition is expected to last 9 months at the Development Site.

Excavation and Foundation

Excavation and Foundation is the next phase of construction. Regarding excavation activities, where necessary, sheeting is installed to stabilize soil around the excavation area and excavators are then used to excavate soil. The soil is loaded onto dump trucks with front-end loaders for transport to a licensed disposal facility or for reuse on any portion of the Development Site that needs fill.

Water from rain and snow collected in the excavation area during construction would be removed as necessary using a dewatering pump. If dewatering is required, testing would be performed to ensure compliance with DEP sewer discharge permit/approval requirements and, if necessary, pretreatment would be conducted prior to discharge to the sewer.

Alongside excavation, construction of the new building's foundation and below-grade elements begins. Foundation work would include pile driving and columns and concrete walls would be built to the grade level. As part of the foundation construction, concrete would be poured starting in select areas. Trucks would enter the site at the north and south ends of the street segment of Hudson Avenue that abuts the site. Access to the below-grade subway station would be maintained during construction. Excavation and foundation work is expected to last 11 months following completion of the demolition and abatement phase.

Superstructure and Exterior Construction (Core and Shell)

Construction of the core and shell involves construction of the building's framework, core, and exterior. The superstructure is the building's framework (beams and columns) and floor decks. Construction of the core, or interior structure, includes construction of the building's elevator shafts; vertical risers for mechanical, electrical, and plumbing systems; electrical and mechanical equipment rooms; core stairs; and restroom areas. Construction of the exterior involves the installation of the façade (exterior walls, windows, and cladding and the roof).

During this stage, concrete plank and block would be installed or all concrete would be poured for the core and the superstructure. The podium for each building would be cast in place or steel. Equipment used during this stage typically includes air compressors, generators, delivery and concrete trucks, concrete pumps, concrete trowels, welding equipment, and a variety of handheld tools. Space for concrete operations and other deliveries would be provided within the site with access from the north and south ends of the street segment of Hudson Avenue that abuts the site. A crane would also be brought into the site, and a temporary dual construction elevator (hoist) would be installed and operated to facilitate delivery of various materials and vertical movement of workers. Sidewalk sheds would be installed along the curb edge around the site where needed. A crane would be needed in each construction phase for superstructure activities.

Superstructure and exterior construction are expected to last 29 months following completion of the excavation and foundation phase.

Interiors and Finishing

Interior fit-out activities include the construction of interior partitions, installation of lighting fixtures and interior finishes (i.e., flooring, painting, etc.); mechanical and electrical work; and lobby finishes. In addition, final cleanup and touchup of the proposed building and final building systems (i.e., electrical system, fire alarm, plumbing, etc.) testing and inspections are part of this stage of construction.

Equipment used during interior construction typically includes exterior hoists, compressors, delivery trucks, and a variety of small handheld tools. This stage of construction is typically the quietest and does not generate fugitive dust as this work occurs within the building after the façades would have been substantially completed.

This stage of construction is also when the construction protection measures (fencing, sidewalk enclosures, bridges, temporary sidewalks, remaining scaffolding, etc.) around the construction site would be removed. This stage of construction would also include punch list completion activities, which are typically small tasks that were not completely finished, and project commissioning to ensure compliance with contract requirements. The interior and finishings phase of construction is expected to commence approximately 8 months following the start of the superstructure and exterior phase, and is expected to last 33 months, resulting in approximately 22 months of overlap between the superstructure/exterior and interior/finishes phases.

Number of Construction Workers and Material Deliveries

Construction is labor intensive, and the number of workers varies with the general construction task and/or building size. Likewise, material deliveries and removals generate truck trips, and the number also varies depending on the task and/or the building size. **Table 17-1** shows the estimated number of daily workers and trucks to the Development Site per quarter (i.e., 3-month period) of each calendar year for the duration of construction activities. These represent the average number of daily workers and trucks within each quarter. During construction, the average number of workers would be approximately 250 workers per day, with a peak of 638 workers per day occurring in the third quarter of 2030. An average of 26 trucks per day is anticipated, and a maximum of 52 trucks per day are anticipated during the second quarter of 2030.

Table 17-1 Average Number of Daily Construction Workers and Trucks by Quarter

Year	2028				2029				2030			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Workers	14	15	15	61	145	186	254	488	557	616	638	468
Trucks	8	12	12	31	35	28	34	47	46	52	49	30

Year	2031				2032			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Workers	463	357	279	209	134	66	33	10
Trucks	22	20	18	18	14	12	12	10

Assessment of Project Construction

In accordance with the *CEQR Technical Manual* guidelines, this preliminary assessment evaluates the effects associated with the Proposed Project's construction related activities—including transportation, air quality, noise, vibration, and natural resources—on sensitive receptors located near the area of construction, as well as the construction related effects on the Development Site's existing nearby natural resources.

Land Use and Neighborhood Character

While construction of the new buildings under the Proposed Actions would cause temporary disruption, particularly related to traffic and noise, it is expected that such effects in any given area would be relatively short in duration and therefore would not create a neighborhood character impact. Therefore, no significant adverse construction impacts to land use and neighborhood character are expected.

Socioeconomic Conditions

Construction could, in some instances, temporarily affect pedestrian and vehicular access on street frontages immediately adjacent to the Development Site; however, long-term lane and/or sidewalk closures are not expected during construction and therefore would not restrict access to any existing or planned retail businesses. Utility service would also be maintained for all businesses, although there may be very short-term interruptions. Overall, construction of the Proposed Project is not expected to affect surrounding businesses or to result in any significant adverse impacts on socioeconomic conditions.

Community Facilities

The construction sites would be surrounded by construction fencing and barriers that would limit the potential for impacts of construction on nearby community facilities. Construction of the proposed buildings would not block or restrict access to facilities in the area and would not affect emergency response times of the NYPD and FDNY given the geographic distribution of the police and fire facilities and their respective coverage areas. Therefore, construction impacts are not expected to result in any significant adverse impacts on community facilities.

Open Space

As described in **Chapter 5, Open Space**, there are no existing publicly accessible open spaces on the Development Sites. While University Place is located directly northwest of the Development Site, access to this publicly accessible open space would not be impeded during construction. In addition, measures would be implemented to control air emissions, dust, noise, and vibration on the construction site. Therefore, no significant adverse construction impacts to open space are expected.

Historic and Cultural Resources

As discussed in **Chapter 7, Historic and Cultural Resources**, the Development Site has no archaeological significance, nor are there any identified architectural resources located within 90 feet of the Development Site. Therefore, construction would not affect any archaeological or architectural resources.

Natural Resources

The Development Site does not contain and is not adjacent to any natural resources, as defined in the *CEQR Technical Manual*. Therefore, no significant adverse impacts related to natural resources would occur during construction of the Proposed Project.

Hazardous Materials

As discussed in greater detail in **Chapter 9, Hazardous Materials**, the Proposed Actions would adhere to requirements of the existing (E)-Designation for hazardous materials (E-124), which was applied to Brooklyn Block 2093, Lot 1 as part of the 2004 Downtown Brooklyn Development project. The implementation of the remedial measures required under the (E)-Designation would reduce the potential for significant adverse hazardous materials impacts due to the Proposed Actions. Any testing and sampling required by OER for the Development Site would be followed in accordance with the requirements of the OER (E)-Designation process. In addition to the (E)-Designation on the Development Site, regulatory requirements pertaining to the disturbance and handling of any LBP, ACM, and PCB-containing building materials would be followed. As such, implementation of the Proposed Actions would not result in significant adverse impacts related to hazardous materials.

Water and Sewer Infrastructure

The Development Site is not adjacent to any water resources. Therefore, construction of the Proposed Project would not have an impact on water quality. During construction, the Applicants would comply with all applicable regulations governing on-site stormwater management and disposal into the sewer system, including the NYC Construction Code, NYC Plumbing Code, Unified Stormwater Rule (USWR), and Local Law 97 of 2017. As described in **Section 3, Water and Sewer Infrastructure** of the EAS, the incorporation of the appropriate sanitary flow and stormwater source control storm management practices would reduce the overall volume of sanitary sewer discharge and stormwater runoff as well as the peak stormwater runoff rate from the Development Site. As such, construction associated with the Proposed Actions is not expected to result in a significant adverse impact on the city's water and sewer infrastructure.

Transportation

Construction activity would extend from 2028 through 2032 and would generate construction-worker and truck traffic. Because of the lengthy duration of these activities, an evaluation of construction sequencing and worker and truck projections were completed in order to identify potential construction traffic impacts. Construction trip projections were developed and assigned through the study area through key access routes to the Development Site. A detailed traffic analysis was performed for 18 key intersections for the AM and PM construction peak hours within the traffic study area. A detailed pedestrian analysis was conducted for one sidewalk to determine the potential for an impact due to sidewalk closure-generated pedestrian detours. The conclusions of these analyses are presented below.

Construction Worker Modal Splits

The number of projected construction vehicles per day were developed for the construction quarters based on surveys conducted of construction workers in 2006 for the Marriott Hotel at 350 Jay Street. The Proposed Project would be comparable in size to the Marriott Hotel which is also located in Downtown Brooklyn. Both projects are located above a subway station and are within transit rich environments with limited on-street parking availability. The results of the Marriott Hotel survey were also used as a reference to develop the construction worker modal split assumptions for the 2006 *Atlantic Yards Arena and Redevelopment FEIS*. Based on this information, it is anticipated that approximately 56 percent of construction workers would travel to the Development Site by personal

car with an average auto occupancy of 1.89 and the remaining 44 percent of construction workers would travel via bus or subway.

Construction Peak Quarter

Based on the above mode share and vehicle occupancy assumptions, the peak quarter for construction vehicle trips was identified. As shown in **Table 17-2**, the peak quarter of construction vehicle activity would be the third quarter of 2030 when construction activities would generate approximately 476 daily vehicle trips (574 daily passenger car equivalents [PCE] trips).[1]

Table 17-2 Average Number of Daily Construction Vehicles by Quarter

Year	2028				2029				2030			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Auto Trips	8	9	9	36	86	110	151	289	330	365	378	277
Truck Trips	15	24	24	63	71	57	67	94	92	104	98	60
Vehicle Trips	23	33	33	99	157	167	218	383	422	469	476	337
PCE Trips	38	57	57	162	228	224	285	477	514	573	574	397

Year	2031				2032			
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Auto Trips	274	211	165	124	79	39	19	6
Truck Trips	44	41	35	36	28	24	24	20
Vehicle Trips	318	252	200	160	107	63	43	26
PCE Trips	362	293	235	196	135	87	67	46

Traffic Analysis

Peak Hour Construction Worker Vehicle and Truck Trips

Construction activities would be expected to occur on weekdays beginning at 7 AM and ending at 3:30 PM. Auto trips by construction workers would typically occur during the hours before and after the daily work shift. Construction truck trips would typically be distributed throughout the day depending upon the specific types of construction activities taking place; most trucks would remain in the area for short durations. Each worker vehicle would arrive in the morning and depart in the evening, and each truck delivery was assumed to result in one "in" trip and one "out" trip during the same hour.

The estimated daily vehicle trips for the peak quarter of construction traffic were distributed throughout the workday based on projected arrival/departure patterns of construction workers, and the projected pattern of truck deliveries based on the types of construction activities that would occur during the peak quarters for the Proposed Project. For construction workers, typical arrival patterns show that most arrivals (approximately 80 percent) occur during the 6 AM to 7 AM hour (the hour before the beginning of a regular day shift), and the same percentage of departure trips occurs during the end of the shift (in the 3 PM to 4 PM hour). For trucks, deliveries are usually spread throughout

[1] As larger vehicles such as trucks typically make up a significant portion of construction traffic, a passenger car equivalent (PCE) factor is applied to these vehicles to account for their size difference. It is assumed that truck trips would be comprised of trucks with three axles, which per the *CEQR Technical Manual* is equivalent to two passenger cars.

the day, but the peak activity (approximately 25 percent) is anticipated to occur during the 6 AM to 7 AM hour.

The estimated number of vehicle trips generated by construction activities during the Q3 2030 peak quarter would be 173 vehicle trips (195 PCE trips) during the AM peak hour (6 AM to 7 AM) and 157 vehicle trips (163 PCE trips) during the PM peak hour (3 PM to 4 PM). The peak construction hourly trip projections for this peak quarter are summarized in **Table 17-3**.

Table 17-3 Construction Vehicle Trips by Hour (Q3 2030)

	Auto Trips		Truck Trips		Total Vehicle Trips			Total PCE Trips		
Hour	In	Out	In	Out	In	Out	Total	In	Out	Total
6 AM – 7 AM	151	0	11	11	162	11	173	173	22	195
7 AM – 8 AM	38	0	4	4	42	4	46	46	8	54
8 AM – 9 AM	0	0	5	5	5	5	10	10	10	20
9 AM – 10 AM	0	0	5	5	5	5	10	10	10	20
10 AM – 11 AM	0	0	5	5	5	5	10	10	10	20
11 AM – 12 PM	0	0	5	5	5	5	10	10	10	20
12 PM – 1 PM	0	0	5	5	5	5	10	10	10	20
1 PM – 2 PM	0	0	3	3	3	3	6	6	6	12
2 PM – 3 PM	0	10	3	3	3	13	16	6	16	22
3 PM – 4 PM	0	151	3	3	3	154	157	6	157	163
4 PM – 5 PM	0	28	0	0	0	28	28	0	28	28

Construction Traffic Study Area

As noted above and as shown in **Table 17-3**, the construction peak hours would be 6 AM to 7 AM, and 3 PM to 4 PM. In accordance with *CEQR Technical Manual* guidance, detailed traffic analysis is generally warranted if the number of vehicle trips at an intersection exceeds the Level 1 50-vehicle trip threshold. A trip assignment of construction vehicle trips in passenger car equivalents (PCEs) was prepared and determined that 11 intersections during the AM peak hour and eight intersections during the PM peak hour would exceed the screening threshold. As shown in **Table 17-4**, 14 total intersections would exceed the screening threshold in 1 or more peak hours and were identified for detailed analysis. In addition, the intersection of Flatbush Avenue Extension and Willoughby Street is also included in the analysis as construction-related trips at this intersection is close to the screening threshold.

Table 17-4 Level 1 Intersection Screening

Intersection	AM Peak Hour (6 – 7 AM)	PM Peak Hour (3 – 4 PM)
Flatbush Avenue Extension at DeKalb Avenue	X	X
Flatbush Avenue Extension at Fulton Street	X	X
Flatbush Avenue at Livingston Street		X
Flatbush Avenue at Lafayette Avenue	X	X
Flatbush Avenue at State Street	X	X
Flatbush Avenue at 4th Avenue	X	X
Flatbush Avenue at Atlantic Avenue	X	X
DeKalb Avenue at Hudson Avenue		X
Fulton Street at Hudson Avenue	X	
Fulton Street at Rockwell Place	X	
DeKalb Avenue at Ashland Place	X	
Fulton Street at Ashland Place	X	
Lafayette Avenue at Ashland Place	X	

"X" indicates an exceedance of the Level 1 screening threshold of 50 or more vehicles in PCEs during the applicable peak hour

There may be temporary closures of travel or parking lanes during periods of construction for construction staging, or for protection of pedestrian traffic. On DeKalb Avenue, which consists of two travel lanes, a bike lane, and parking on the north side of the road, construction activities may result in the blockage of the parking lane and travel lane along the south side of the roadway. In order to maintain two westbound travel lanes, parking on the north side of the roadway would be closed during construction. Additionally, the sidewalk on the south side of DeKalb Avenue, the bike lane, and Citi Bike docking location would be closed and bicyclists would need to share the road approaching Flatbush Avenue Extension. On Hudson Avenue, the section of two-way traffic near DeKalb Avenue would be converted into one-way northbound only traffic and the overall width of the roadway would be temporarily narrowed to facilitate construction staging. Intersections affected by these temporary closures (Flatbush Avenue Extension at DeKalb Avenue, and DeKalb Avenue at Hudson Avenue) were included in the construction traffic analysis study area during both the AM and PM peak hours.

Additionally, it is possible that significant traffic impacts identified in the operational analysis would occur even as the number of construction-related vehicle trips do not exceed the screening thresholds at the particular intersection. Per NYC DOT guidance, where such conditions apply, a detailed analysis of the intersections would be warranted for the AM and PM peak hours of the peak construction quarter.

Based on the above assessment, and in coordination with NYC DOT, the following intersections were identified for inclusion in the detailed traffic analysis (analysis intersections not exceeding the Level 1 screening threshold but that were identified as impacted in one or more peak hours in the operational traffic analysis are denoted by "*"):

Flatbush Avenue Extension at Tillary Street*

Flatbush Avenue Extension at Myrtle Avenue*

Flatbush Avenue Extension at Willoughby Street

Flatbush Avenue Extension at DeKalb Avenue

Flatbush Avenue Extension at Fulton Street

Flatbush Avenue at Livingston Street

Flatbush Avenue at Lafayette Avenue

Flatbush Avenue at State Street

Flatbush Avenue at 4th Avenue

Flatbush Avenue at Atlantic Avenue

DeKalb Avenue at Hudson Avenue

Fulton Street at Hudson Avenue

Fulton Street at Rockwell Place

DeKalb Avenue at Ashland Place

Fulton Street at Ashland Place

Lafayette Avenue at Ashland Place

Schermerhorn Street at 3rd Avenue*

Schermerhorn Street at Nevins Street*

Existing Conditions

As described above, 18 intersections were selected for detailed traffic level of service analysis. Existing traffic volumes were determined based on turning movement counts and Automatic Traffic Recorder counts conducted primarily in November 2024 and supplemented with data collected in the first half of 2025. Traffic conditions at the analyzed intersections were reviewed to determine if the intersection capacities would be consistent between the AM and PM construction peak hours and the AM and PM operational peak hours. At signalized intersections, signal timing plans were confirmed to be consistent between the AM construction and operational peak hours, and between the PM construction and operational peak hours. The number of travel lanes would also remain unchanged at all approaches between the construction and operational peak hours.

The existing conditions traffic volumes for the AM and PM construction peak hours are shown in **Figure 17-2** through **Figure 17-5**. Detailed traffic levels of service are provided in **Figure 17-6Table 17-5**. During the AM construction peak hour, 16 intersections were found to operate at an overall acceptable level of service (LOS D or better)—the intersection of Fulton Street at Hudson Avenue operates at LOS E, and the intersection of Schermerhorn Street at 3rd Avenue operates at LOS F. During the PM construction peak hour, 17 intersections were found to operate at an overall acceptable level of service—the intersection of Schermerhorn Street at 3rd Avenue operates at LOS F. Of the 74 movements analyzed in the AM construction peak hour, 11 movements operate at unacceptable levels of service (i.e., LOS E or F). Of the 77 movements analyzed in the PM construction peak hour, 17 movements operate at unacceptable levels of service (i.e., LOS E or F).

Figure 17-2 Construction Existing Traffic Volumes – AM Peak Hour (North Study Area)

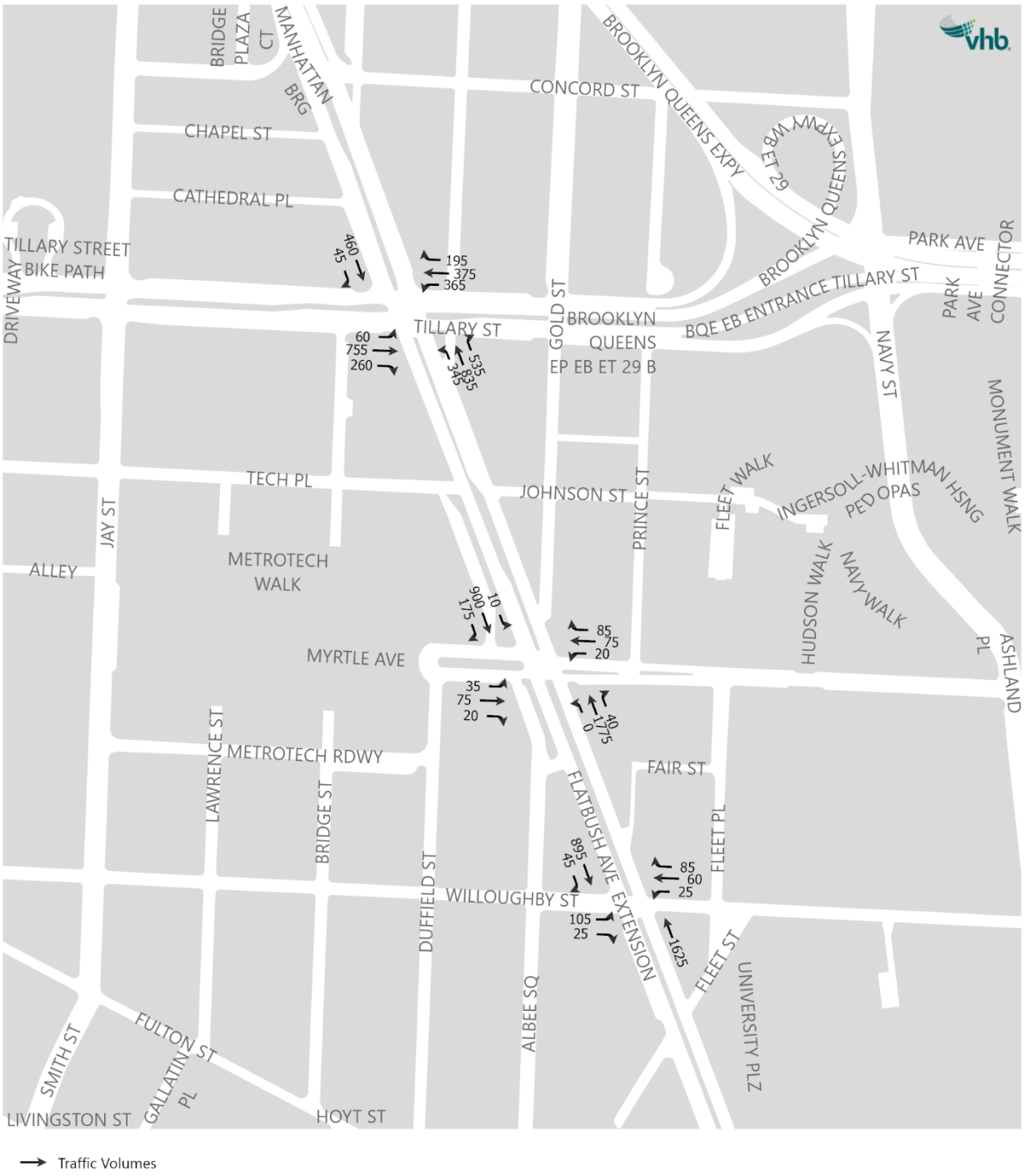


Figure 17-3 Construction Existing Traffic Volumes – AM Peak Hour (South Study Area)

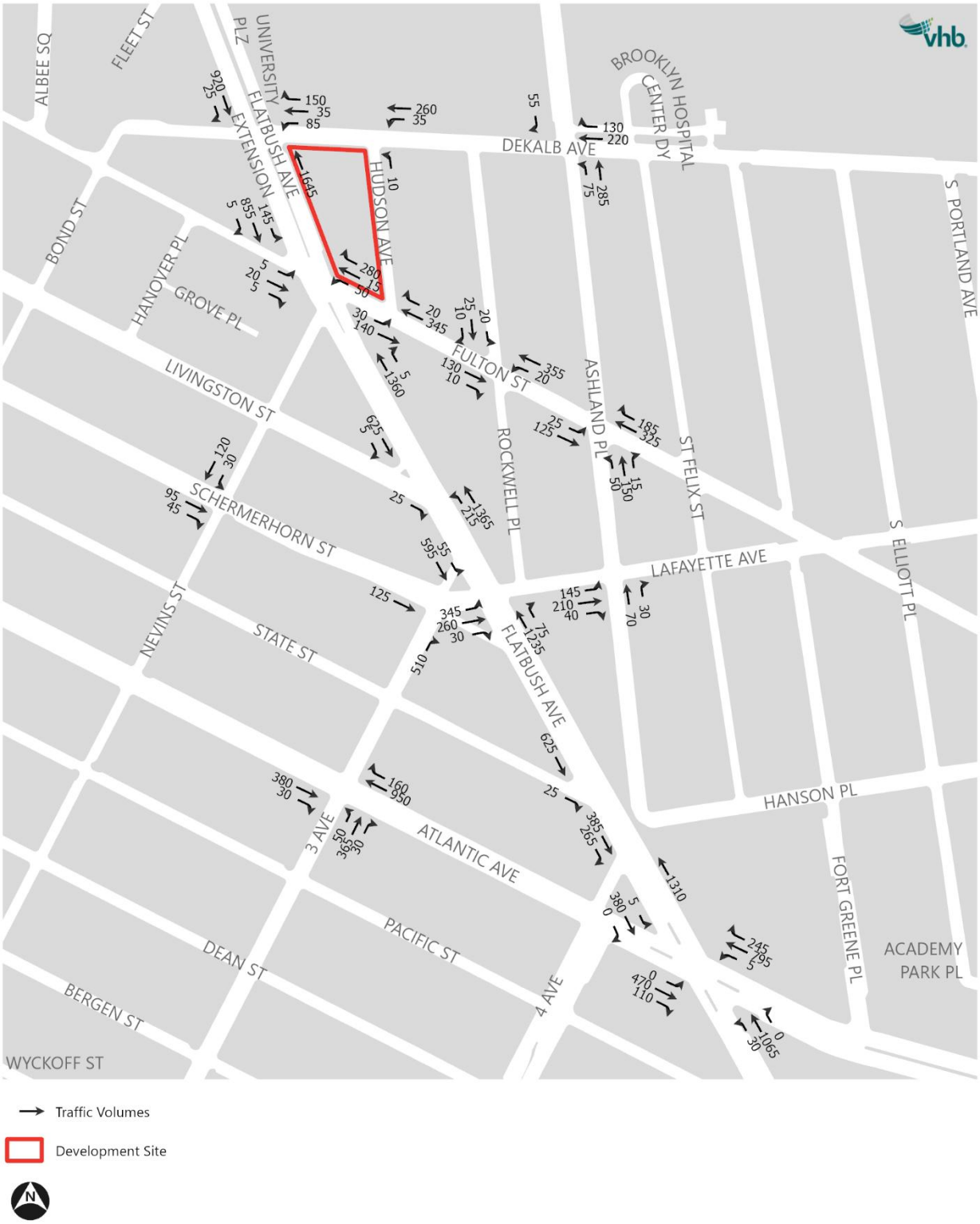


Figure 17-4 Construction Existing Traffic Volumes – PM Peak Hour (North Study Area)

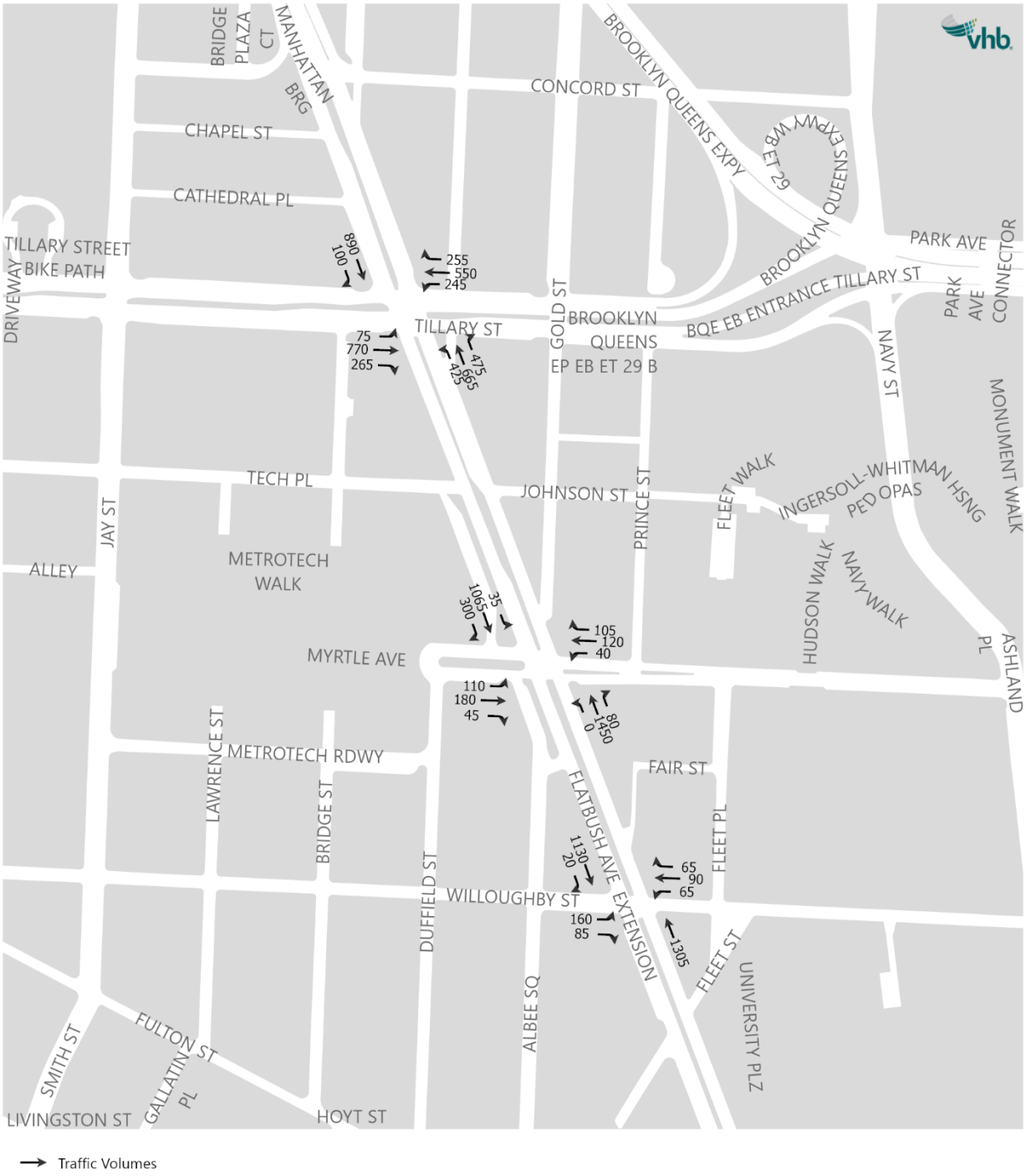


Figure 17-5 Construction Existing Traffic Volumes – PM Peak Hour (South Study Area)

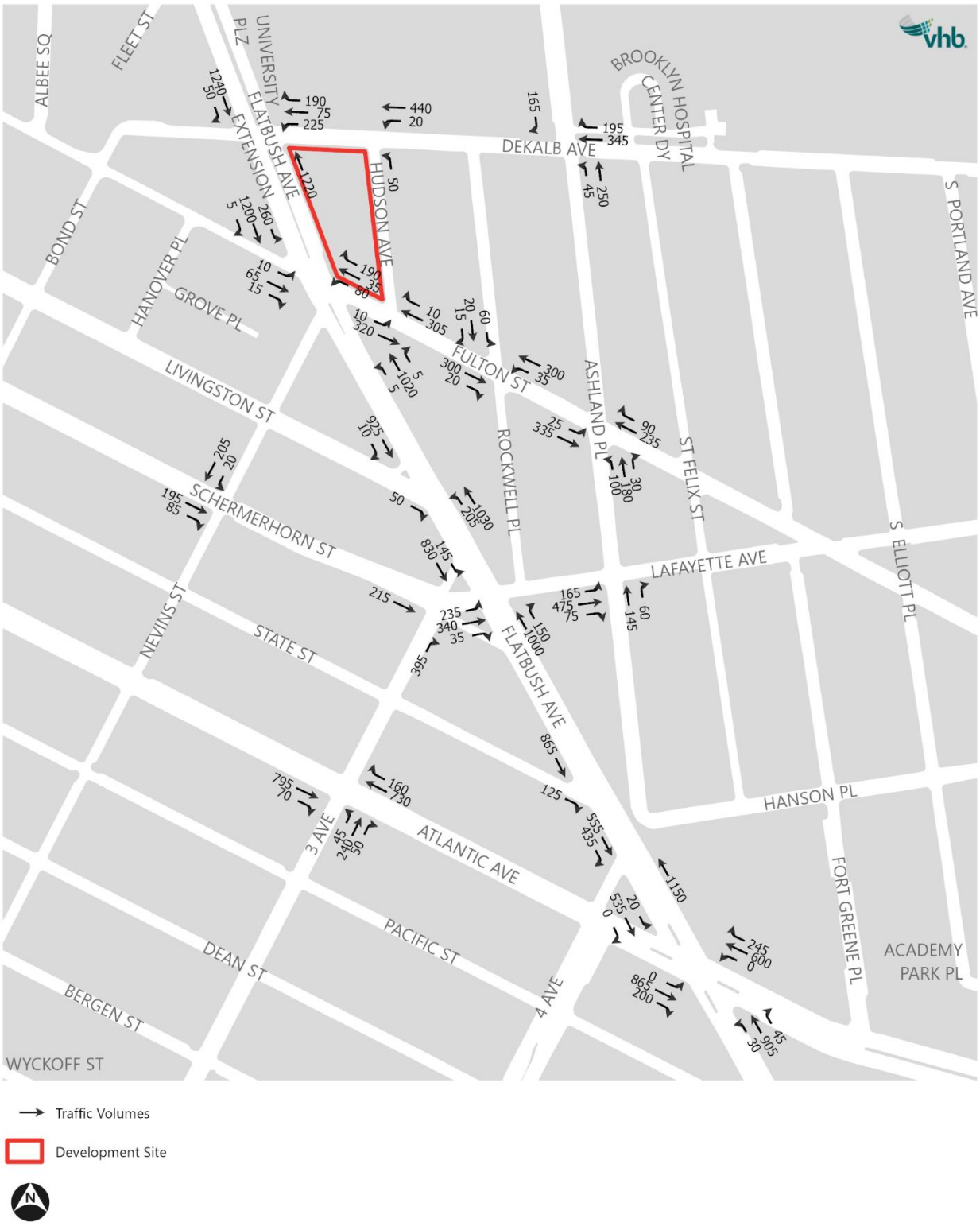


Table 17-5 Construction Existing Traffic Levels of Service

Intersection & Approach		AM Peak Hour				PM Peak Hour			
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS
Flatbush Avenue Extension and Tillary Street									
Flatbush Avenue Extension	NB	L	1.05	95.2	F	L	1.05	88.7	F
	NB	T	0.75	46.4	D	T	0.60	42.1	D
	NB	R	0.45	1.2	A	R	0.42	0.7	A
	SB	T	0.50	37.7	D	T	0.89	51.9	D
	SB	R	0.12	17.9	B	R	0.28	20.7	C
Tillary Street	EB	L	0.39	54.1	D	L	0.48	56.4	E
	EB	T	1.00	73.8	E	T	1.02	78.6	E
	EB	R	0.69	36.4	D	R	0.80	45.9	D
	WB	L	1.05	109.5	F	L	0.70	59.3	E
	WB	T	0.61	41.4	D	T	0.81	48.8	D
	WB	R	0.75	58.6	E	R	0.93	82.9	F
Overall Intersection		-	-	**53.3**	**D**	-	-	**53.7**	**D**
Flatbush Avenue Extension and Myrtle Avenue									
Flatbush Avenue Extension	NB	TR	1.01	29.3	C	TR	0.83	31.2	C
	SB	L	0.14	51.0	D	L	0.50	78.5	E
	SB	TR	0.55	15.0	B	TR	0.67	7.8	A
Myrtle Avenue	EB	L	0.24	40.1	D	L	0.99	123.6	F
	EB	TR	0.35	40.6	D	TR	0.80	60.6	E
	WB	L	0.12	36.9	D	L	0.43	51.2	D
	WB	TR	0.61	49.1	D	TR	0.93	82.4	F
Overall Intersection		-	-	**26.0**	**C**	-	-	**31.3**	**C**
Flatbush Avenue Extension and Willoughby Street									
Flatbush Avenue Extension	NB	T	0.86	37.8	D	T	0.70	16.5	B
	SB	TR	0.54	24.8	C	TR	0.67	10.1	B
Willoughby Street	EB	L	0.37	34.1	C	L	0.67	47.3	D
	EB	R	0.07	27.4	C	R	0.25	30.5	C
	WB	LTR	0.44	34.3	C	LTR	0.55	37.5	D
Overall Intersection		-	-	**33.0**	**C**	-	-	**17.8**	**B**

Table 17-5 Construction Existing Traffic Levels of Service

Intersection & Approach		AM Peak Hour Mvt	AM Peak Hour V/C	AM Peak Hour Ctrl Delay[1]	AM Peak Hour LOS	PM Peak Hour Mvt	PM Peak Hour V/C	PM Peak Hour Ctrl Delay[1]	PM Peak Hour LOS
Flatbush Avenue Extension and DeKalb Avenue									
Flatbush Avenue Extension	NB	T	1.02	65.9	E	T	0.68	44.6	D
	SB	TR	0.65	47.3	D	TR	0.72	4.6	A
DeKalb Avenue	WB	LT	0.34	11.8	B	LT	0.94	55.2	E
	WB	R	0.49	16.7	B	R	0.86	51.7	D
Overall Intersection		-	-	**54.2**	**D**	-	-	**28.7**	**C**
Flatbush Avenue Extension and Fulton Street									
Flatbush Avenue Extension	NB	LTR	0.90	15.7	B	LTR	0.90	17.5	B
	SB	L	0.80	87.6	F	L	1.05	105.2	F
	SB	TR	0.45	13.0	B	TR	0.56	5.9	A
Fulton Street	EB	LTR	0.13	34.5	C	LTR	0.43	41.8	D
	WB	LT	0.29	20.3	C	LT	0.68	24.9	C
	WB	R	0.70	8.4	A	R	0.41	3.9	A
Overall Intersection		-	-	**18.3**	**B**	-	-	**20.7**	**C**
Flatbush Avenue and Livingston Street									
Flatbush Avenue	NB	L	0.29	3.2	A	L	0.36	14.6	B
	NB	T	0.76	20.3	C	T	0.59	7.1	A
	SB	TR	0.35	1.4	A	TR	0.54	4.5	A
Livingston Street	EB	R	0.09	22.2	C	R	0.16	22.9	C
Overall Intersection		-	-	**13.6**	**B**	-	-	**7.1**	**A**
Flatbush Avenue and Lafayette Avenue									
Flatbush Avenue	NB	TR	0.84	39.4	D	TR	0.81	28.8	C
	SB	L	0.31	17.8	B	L	0.61	101.0	F
	SB	T	0.34	7.1	A	T	0.41	1.8	A
Schermerhorn Street	EB	L	0.92	84.7	F	L	0.98	107.5	F
	EB	TR	0.43	71.6	E	TR	0.60	79.5	E
Overall Intersection		-	-	**41.0**	**D**	-	-	**39.0**	**D**

Table 17-5 Construction Existing Traffic Levels of Service

Intersection & Approach		AM Peak Hour Mvt	AM V/C	AM Ctrl Delay[1]	AM LOS	PM Peak Hour Mvt	PM V/C	PM Ctrl Delay[1]	PM LOS
Flatbush Avenue and State Street									
Flatbush Avenue	NB	T	0.73	3.8	A	T	0.64	3.1	A
	SB	T	0.49	25.8	C	T	0.69	22.8	C
State Street	EB	R	0.05	21.3	C	R	0.25	24.3	C
Overall Intersection		-	-	**11.0**	**B**	-	-	**12.6**	**B**
Flatbush Avenue and 4th Avenue									
Flatbush Avenue	NB	T	0.69	8.7	A	T	0.64	8.8	A
	SB	TR	0.47	4.3	A	TR	0.68	10.7	B
	SB	R	0.46	6.5	A	R	0.76	27.3	C
Overall Intersection		-	-	**7.4**	**A**	-	-	**12.1**	**B**
Flatbush Avenue and Atlantic Avenue									
Flatbush Avenue	NB	LTR	0.77	30.5	C	LTR	0.77	31.1	C
	SB	LTR	0.38	4.9	A	LTR	0.60	4.9	A
Atlantic Avenue	EB	LT	0.48	25.0	C	LT	0.73	31.3	C
	EB	R	0.34	33.7	C	R	0.64	43.6	D
	WB	LT	0.73	31.2	C	LT	0.51	25.3	C
	WB	R	0.76	51.4	D	R	0.88	66.5	E
Overall Intersection		-	-	**28.4**	**C**	-	-	**29.2**	**C**
DeKalb Avenue and Hudson Avenue									
Hudson Avenue	NB	L	0.02	14.9	B	L	0.10	15.4	B
DeKalb Avenue	WB	LT	0.31	22.1	C	LT	0.46	28.9	C
Overall Intersection		-	-	**21.8**	**C**	-	-	**27.5**	**C**
Fulton Street and Hudson Avenue									
Fulton Street	EB	LT	0.31	6.3	A	LT	0.46	8.9	A
	WB	TR	0.94	115.5	F	T	0.69	73.8	E
	WB	-	-	-	-	R	0.07	28.7	C
Overall Intersection		-	-	**79.4**	**E**	-	-	**40.3**	**D**

Table 17-5 Construction Existing Traffic Levels of Service

Intersection & Approach		AM Peak Hour Mvt	AM V/C	AM Ctrl Delay[1]	AM LOS	PM Peak Hour Mvt	PM V/C	PM Ctrl Delay[1]	PM LOS
Fulton Street and Rockwell Place									
Rockwell Place	SB	LTR	0.13	19.9	B	LTR	0.25	21.9	C
Fulton Street	EB	TR	0.26	13.3	B	T	0.46	18.6	B
	EB	-	-	-	-	R	0.07	11.6	B
	WB	LT	0.61	8.3	A	LT	0.56	12.9	B
Overall Intersection		-	-	**10.8**	**B**	-	-	**16.3**	**B**
DeKalb Avenue and Ashland Place									
Ashland Place	NB	LT	0.95	54.2	D	LT	0.67	24.7	C
	SB	R	0.17	14.3	B	R	0.52	20.8	C
DeKalb Avenue	WB	TR	0.51	18.0	B	TR	0.91	39.8	D
Overall Intersection		-	-	**34.8**	**C**	-	-	**32.3**	**C**
Fulton Street and Ashland Place									
Ashland Place	NB	L	0.15	23.7	C	L	0.36	27.9	C
	NB	TR	0.44	28.5	C	TR	0.56	31.9	C
Fulton Street	EB	LT	0.32	10.5	B	LT	0.58	13.0	B
	WB	TR	1.05	76.6	E	T	0.39	16.1	B
	WB	-	-	-	-	R	0.28	15.7	B
Overall Intersection		-	-	**53.2**	**D**	-	-	**19.7**	**B**
Lafayette Avenue and Ashland Place									
Ashland Place	NB	TR	0.31	33.7	C	TR	0.64	47.2	D
Lafayette Avenue	EB	LTR	0.38	10.3	B	LTR	0.58	14.2	B
Overall Intersection		-	-	**15.0**	**B**	-	-	**21.6**	**C**
Schermerhorn Street and 3rd Avenue									
3rd Avenue	NB	R	1.05	112.6	F	R	0.88	108.7	F
Schermerhorn Street	EB	T	0.25	24.4	C	T	0.49	38.8	D
Overall Intersection		-	-	**94.9**	**F**	-	-	**85.3**	**F**
Nevins Street and Schermerhorn Street									
Nevins Street	SB	LT	0.47	28.0	C	LT	0.58	28.2	C
Schermerhorn Street	EB	TR	0.31	18.8	B	TR	0.67	29.4	C
Overall Intersection		-	-	**23.6**	**C**	-	-	**28.9**	**C**

Note: Overall intersection v/c ratio is the critical lane groups' v/c ratio.
[1] Control delay is measured in seconds per vehicle.

No-Action without Construction Conditions

An annual growth rate of 0.25 percent per year was assumed for the first 5 years (years 2024 to 2029) and a growth rate of 0.125 percent per year was assumed for one subsequent years (year 2029 to 2030) as per the *CEQR Technical Manual* in order to estimate the background volumes for the 2030 No-Action without Construction condition. Vehicle trips for No-Action background development sites discussed in **Chapter 10, Transportation,** expected to be developed in the area and occupied by year 2030, were assigned to the roadway network.

Roadway Improvements

NYC DOT is currently in the process of developing the Flatbush Avenue Bus Priority plan that would implement bus lanes along Flatbush Avenue between Livingston Street to the north and Grand Army Plaza to the south, portions of which fall within the traffic study area for the Proposed Project. As currently proposed, the plan would convert two Flatbush Avenue travel lanes to center-running bus lanes with the goals of improving bus speeds, reliability, and safety along the corridor; the plan would also implement concrete bus-boarding islands and would extend the curb at selected locations to provide additional pedestrian spaces.

NYC DOT is also in preliminary planning stage for the DeKalb-Lafayette Avenues Bus and Safety Improvements project to improve bus service and street safety along the DeKalb Avenue and Lafayette Avenue corridors between Flatbush Avenue Extension and Broadway. Portions of the DeKalb Avenue corridor fall within the traffic study area for the Proposed Project. As preliminarily indicated, NYC DOT is exploring the feasibility of implementing bus priority measures, which might include curbside bus lanes similar to those that were temporarily implemented along DeKalb Avenue in the summer of 2024, and other improvements focused on improving safety for pedestrians and bicyclists.

If implemented, these preliminary plans have the potential to change future conditions, including travel patterns such as vehicle routing and mode choice, and may result in additional significant adverse impacts at traffic analysis locations due to the reduction in roadway capacity for general vehicle traffic. These changes could affect intersections along Flatbush Avenue between Livingston Street and Atlantic Avenue, DeKalb Avenue between Flatbush Avenue Extension and Ashland Place, and nearby upstream or downstream intersections.

At the time of the publication of the DEIS, these two plans remain in development. As such, for the purposes of the traffic analysis, the DEIS uses the existing roadway configuration (e.g., number of travel lanes, parking lanes, etc.) and signal timing plans on the Flatbush Avenue and DeKalb Avenue corridors to model the future conditions by the Proposed Project's analysis ear.

The proposed Flatbush Avenue Bus Priority project and DeKalb-Lafayette Avenues Bus and Safety Improvements project would be implemented at NYC DOT's discretion. Once the design of the aforementioned projects is complete, NYC DOT would conduct post-implementation monitoring studies to assess traffic conditions, which would include, but is not limited to, monitoring vehicle speeds and traffic volumes for a defined period of time. Based on the findings of these studies, NYC DOT may refine components of the project to optimize roadway conditions.

No-Action Traffic Volumes and Levels of Service

The No-Action condition traffic volumes for the AM and PM construction peak hours are shown in **Figure 17-6** through **Figure 17-9**. Detailed traffic levels of service are provided in **Table 17-6**. Under

future No-Action conditions in year 2030, three intersections would operate at unacceptable overall levels of service (LOS E and/or LOS F) during the AM construction peak hour, compared to two in existing conditions. During the PM construction peak hour, four intersections would operate at unacceptable levels of service, compared to one in existing conditions. Of the 74 movements analyzed during the AM construction peak hour, 13 movements would operate at unacceptable levels of service, compared to 11 in existing conditions. Of the 77 movements analyzed during the PM construction peak hour, 26 movements would operate at unacceptable levels of service, compared to 17 movements in existing conditions.

Figure 17-6 Construction No-Action Traffic Volumes – AM Peak Hour (North Study Area)

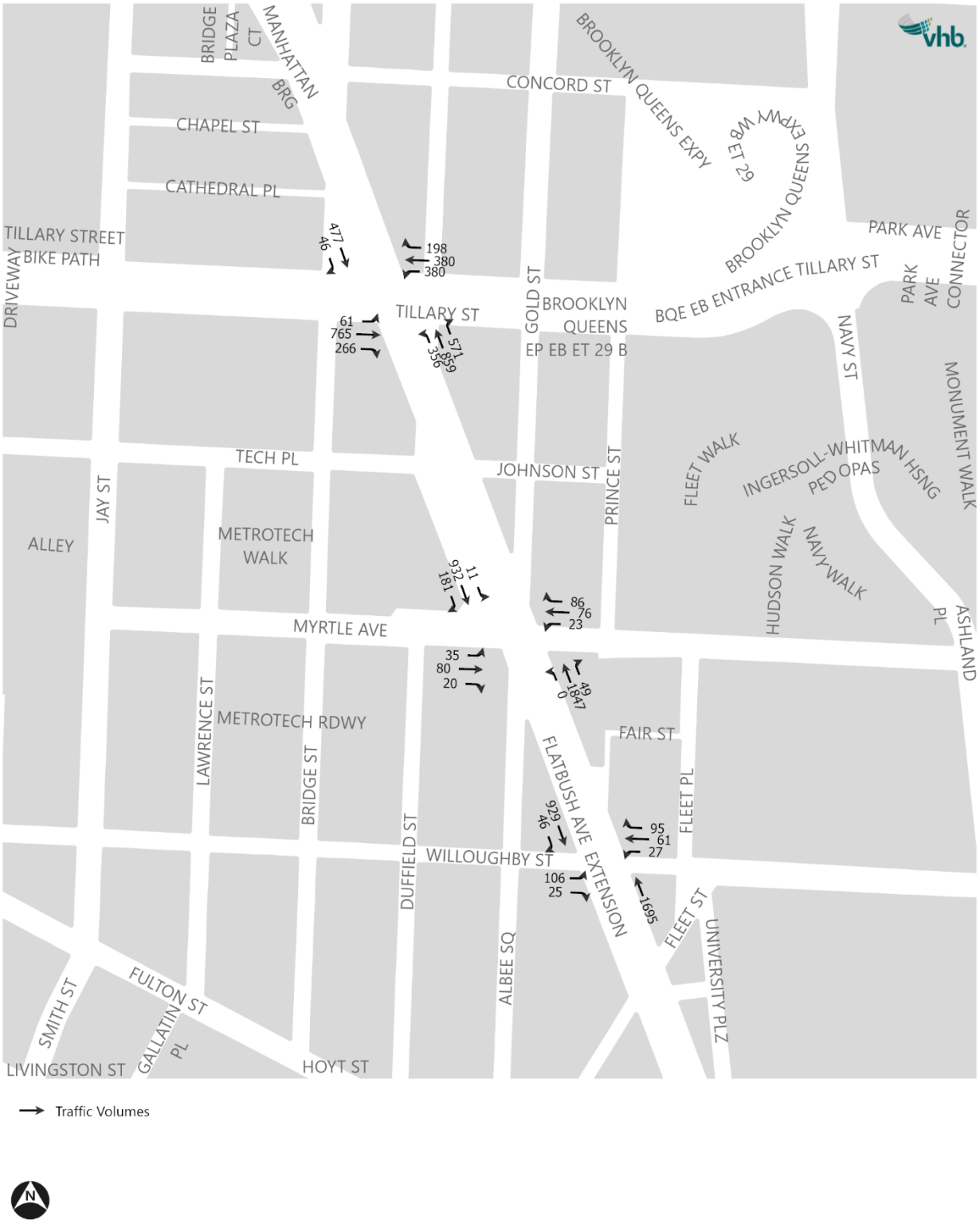


Figure 17-7 Construction No-Action Traffic Volumes – AM Peak Hour (South Study Area)

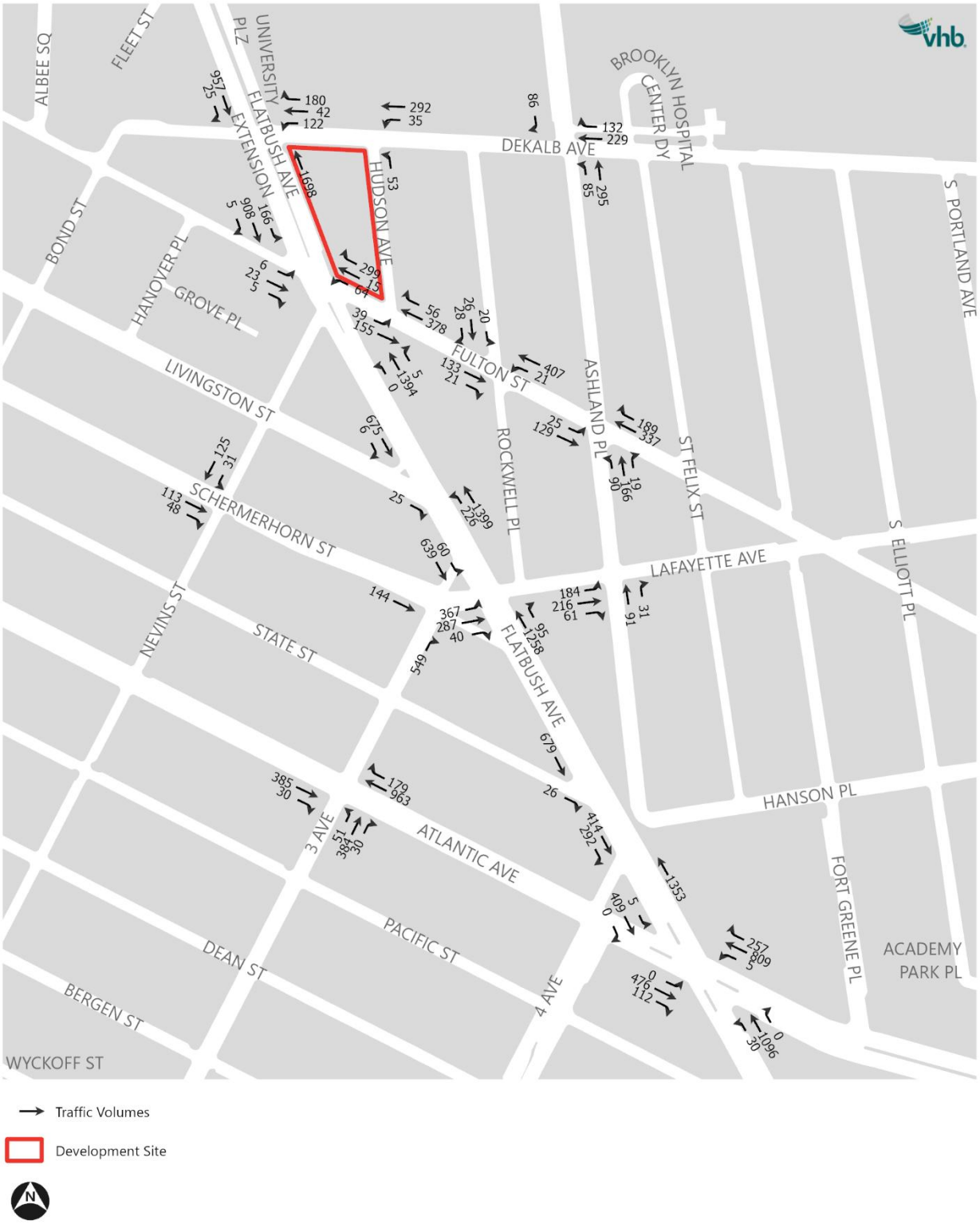


Figure 17-8 Construction No-Action Traffic Volumes – PM Peak Hour (North Study Area)

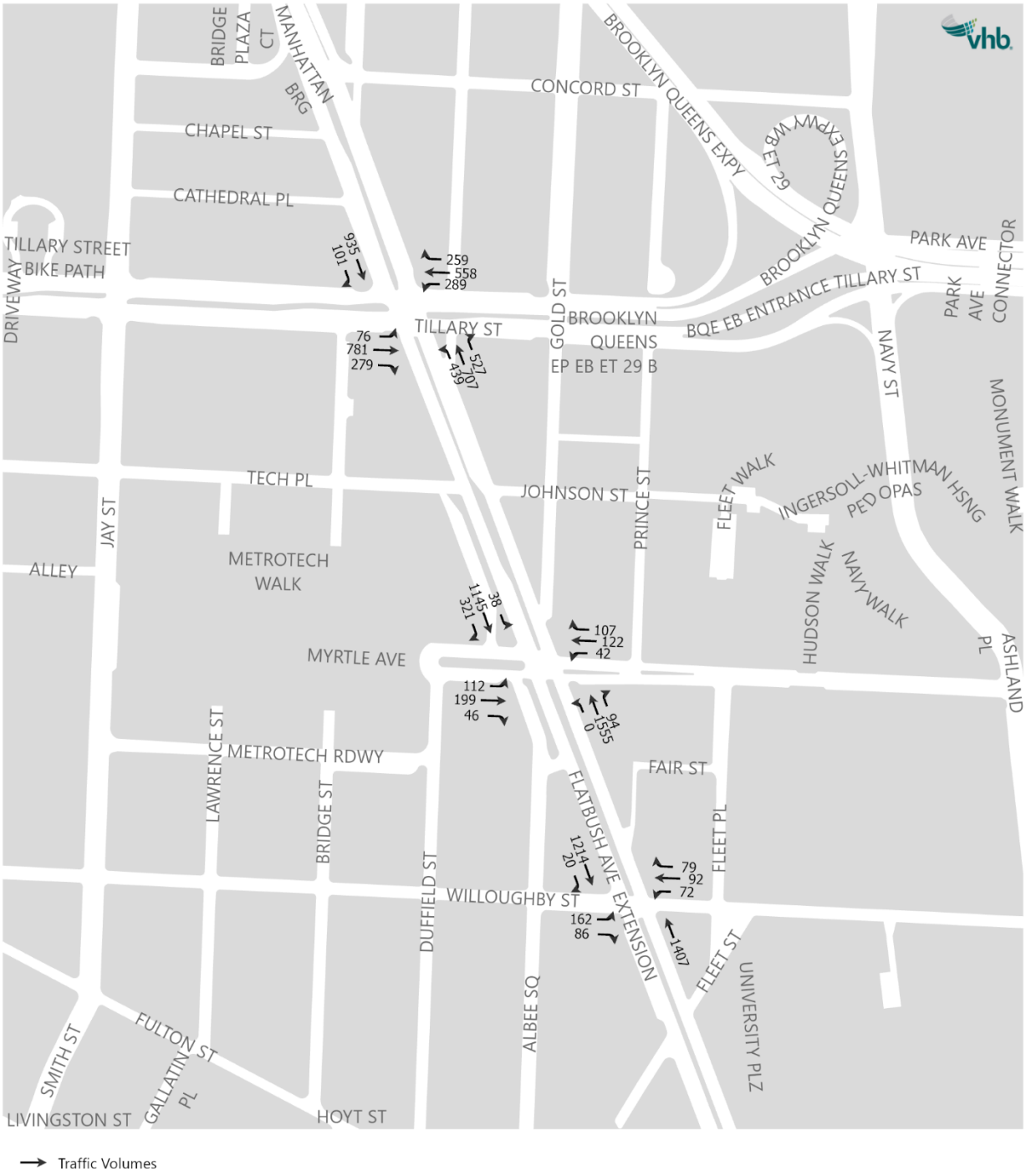


Figure 17-9 Construction No-Action Traffic Volumes – PM Peak Hour (South Study Area)

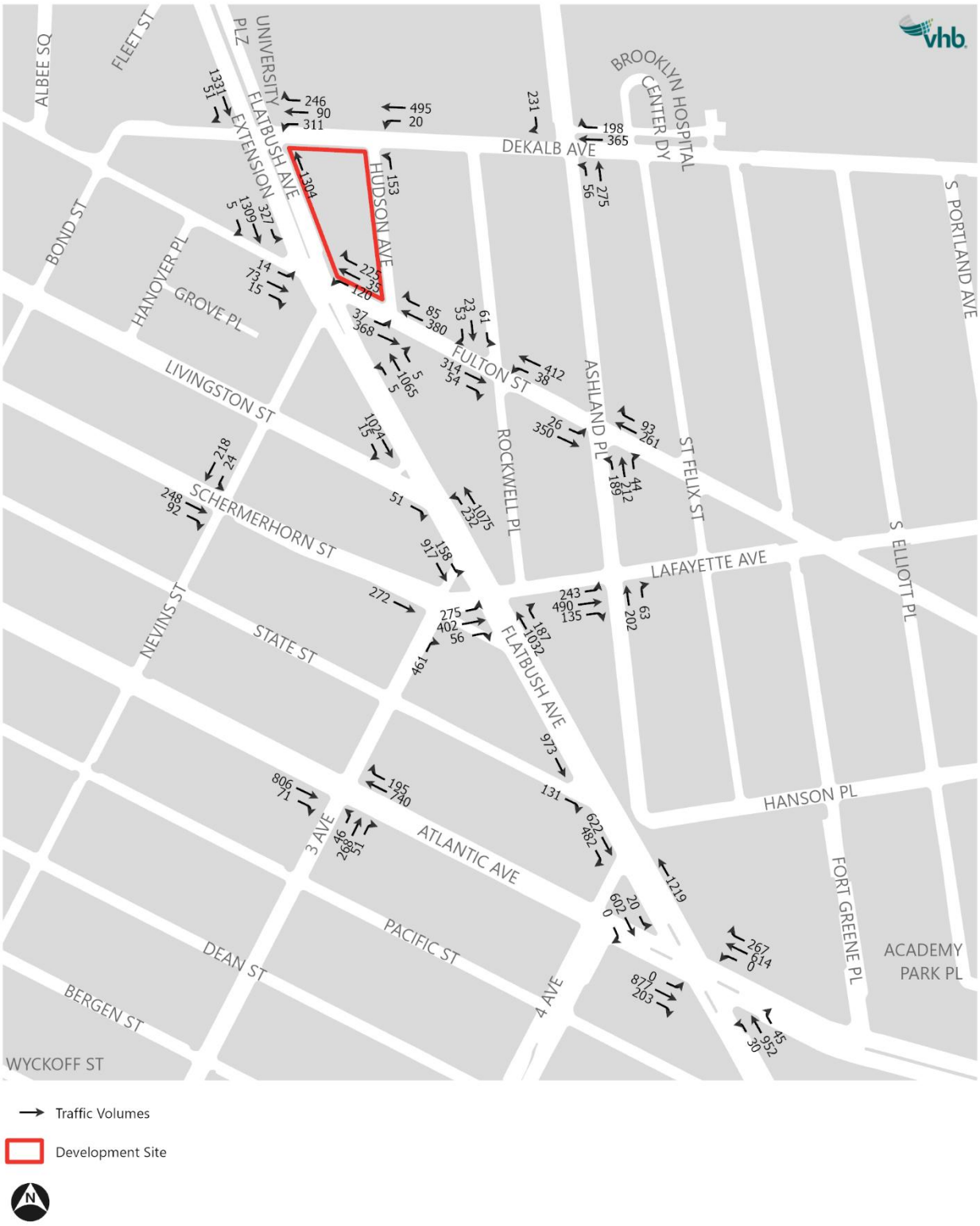


Table 17-6 Construction No-Action Traffic Levels of Service

Intersection & Approach		AM Peak Hour Mvt	AM Peak Hour V/C	AM Peak Hour Ctrl Delay[1]	AM Peak Hour LOS	PM Peak Hour Mvt	PM Peak Hour V/C	PM Peak Hour Ctrl Delay[1]	PM Peak Hour LOS
Flatbush Avenue Extension and Tillary Street									
Flatbush Avenue Extension	NB	L	1.09	97.0	F	L	1.08	94.6	F
	NB	T	0.77	46.0	D	T	0.64	41.5	D
	NB	R	0.48	1.7	A	R	0.47	1.2	A
	SB	T	0.52	38.1	D	T	0.93	57.0	E
	SB	R	0.12	17.9	B	R	0.28	20.8	C
Tillary Street	EB	L	0.40	54.3	D	L	0.48	56.6	E
	EB	T	1.01	76.6	E	T	1.04	82.5	F
	EB	R	0.71	37.3	D	R	0.84	50.4	D
	WB	L	1.10	121.9	F	L	0.82	67.9	E
	WB	T	0.62	41.6	D	T	0.82	49.5	D
	WB	R	0.76	59.2	E	R	0.95	86.8	F
Overall Intersection		-	-	**54.9**	**D**	-	-	**56.3**	**E**
Flatbush Avenue Extension and Myrtle Avenue									
Flatbush Avenue Extension	NB	TR	1.06	45.2	D	TR	0.89	27.2	C
	SB	L	0.15	51.0	D	L	0.55	77.2	E
	SB	TR	0.57	15.2	B	TR	0.72	8.9	A
Myrtle Avenue	EB	L	0.24	40.2	D	L	1.03	134.2	F
	EB	TR	0.37	41.0	D	TR	0.86	67.8	E
	WB	L	0.14	37.4	D	L	0.50	58.1	E
	WB	TR	0.62	49.4	D	TR	0.95	85.8	F
Overall Intersection		-	-	**34.8**	**C**	-	-	**30.9**	**C**
Flatbush Avenue Extension and Willoughby Street									
Flatbush Avenue Extension	NB	T	0.90	51.7	D	T	0.76	76.3	E
	SB	TR	0.56	25.1	C	TR	0.72	10.6	B
Willoughby Street	EB	L	0.38	34.6	C	L	0.71	50.6	D
	EB	R	0.07	27.4	C	R	0.25	30.5	C
	WB	LTR	0.48	35.2	D	LTR	0.62	39.8	D
Overall Intersection		-	-	**40.8**	**D**	-	-	**44.2**	**D**

Table 17-6 Construction No-Action Traffic Levels of Service

Intersection & Approach		AM Peak Hour Mvt	AM Peak Hour V/C	AM Peak Hour Ctrl Delay[1]	AM Peak Hour LOS	PM Peak Hour Mvt	PM Peak Hour V/C	PM Peak Hour Ctrl Delay[1]	PM Peak Hour LOS
Flatbush Avenue Extension and DeKalb Avenue									
Flatbush Avenue Extension	NB	T	1.04	64.3	E	T	0.72	45.0	D
	SB	TR	0.67	47.3	D	TR	0.77	29.2	C
DeKalb Avenue	WB	LT	0.49	23.4	C	LT	1.30	182.3	F
	WB	R	0.64	30.4	C	R	1.15	132.8	F
Overall Intersection		-	-	**54.0**	**D**	-	-	**61.6**	**E**
Flatbush Avenue Extension and Fulton Street									
Flatbush Avenue Extension	NB	LTR	0.93	24.7	C	LTR	0.94	46.0	D
	SB	L	0.92	100.5	F	L	1.32	193.0	F
	SB	TR	0.48	13.7	B	TR	0.61	8.4	A
Fulton Street	EB	LTR	0.17	35.4	D	LTR	0.50	45.3	D
	WB	LT	0.44	23.3	C	LT	1.02	75.1	E
	WB	R	0.86	18.4	B	R	0.52	7.2	A
Overall Intersection		-	-	**24.9**	**C**	-	-	**44.3**	**D**
Flatbush Avenue and Livingston Street									
Flatbush Avenue	NB	L	0.31	4.7	A	L	0.42	23.1	C
	NB	T	0.78	30.3	C	T	0.61	7.6	A
	SB	TR	0.38	1.5	A	TR	0.60	4.6	A
Livingston Street	EB	R	0.09	22.2	C	R	0.17	23.0	C
Overall Intersection		-	-	**19.7**	**B**	-	-	**8.1**	**A**
Flatbush Avenue and Lafayette Avenue									
Flatbush Avenue	NB	TR	0.87	57.6	E	TR	0.87	31.1	C
	SB	L	0.35	20.5	C	L	0.69	108.1	F
	SB	T	0.37	6.9	A	T	0.46	1.9	A
Schermerhorn Street	EB	L	0.97	83.6	F	L	1.14	116.3	F
	EB	TR	0.49	72.1	E	TR	0.75	81.2	F
Overall Intersection		-	-	**49.7**	**D**	-	-	**42.5**	**D**

Table 17-6 Construction No-Action Traffic Levels of Service

Intersection & Approach		AM Peak Hour Mvt	AM V/C	AM Ctrl Delay[1]	AM LOS	PM Peak Hour Mvt	PM V/C	PM Ctrl Delay[1]	PM LOS
Flatbush Avenue and State Street									
Flatbush Avenue	NB	T	0.75	4.1	A	T	0.68	3.3	A
	SB	T	0.53	27.3	C	T	0.78	26.1	C
State Street	EB	R	0.06	21.6	C	R	0.30	25.5	C
Overall Intersection		-	-	**12.0**	**B**	-	-	**14.5**	**B**
Flatbush Avenue and 4th Avenue									
Flatbush Avenue	NB	T	0.71	8.9	A	T	0.68	10.1	B
	SB	TR	0.51	4.7	A	TR	0.76	14.7	B
	SB	R	0.50	7.2	A	R	0.85	56.3	E
Overall Intersection		-	-	**7.7**	**A**	-	-	**18.5**	**B**
Flatbush Avenue and Atlantic Avenue									
Flatbush Avenue	NB	LTR	0.79	31.4	C	LTR	0.81	33.0	C
	SB	LTR	0.41	5.4	A	LTR	0.67	7.6	A
Atlantic Avenue	EB	LT	0.49	25.1	C	LT	0.74	31.7	C
	EB	R	0.34	33.8	C	R	0.65	44.2	D
	WB	LT	0.74	31.7	C	LT	0.58	27.0	C
	WB	R	0.80	54.4	D	R	0.96	82.4	F
Overall Intersection		-	-	**29.0**	**C**	-	-	**31.3**	**C**
DeKalb Avenue and Hudson Avenue									
Hudson Avenue	NB	L	0.12	22.4	C	L	0.31	11.2	B
DeKalb Avenue	WB	LT	0.35	22.2	C	LT	0.52	28.7	C
Overall Intersection		-	-	**22.2**	**C**	-	-	**24.6**	**C**
Fulton Street and Hudson Avenue									
Fulton Street	EB	LT	0.41	14.2	B	LT	0.62	22.9	C
	WB	TR	1.23	163.0	F	T	0.86	108.1	F
	WB	-	-	-	-	R	1.41	280.7	F
Overall Intersection		-	-	**115.4**	**F**	-	-	**88.6**	**F**

Table 17-6 Construction No-Action Traffic Levels of Service

Intersection & Approach		AM Peak Hour Mvt	AM Peak Hour V/C	AM Peak Hour Ctrl Delay[1]	AM Peak Hour LOS	PM Peak Hour Mvt	PM Peak Hour V/C	PM Peak Hour Ctrl Delay[1]	PM Peak Hour LOS
Fulton Street and Rockwell Place									
Rockwell Place	SB	LTR	0.21	21.3	C	LTR	0.42	25.7	C
Fulton Street	EB	TR	0.30	13.7	B	T	0.49	19.4	B
	EB	-	-	-	-	R	0.20	13.6	B
	WB	LT	0.70	18.7	B	LT	0.74	19.5	B
Overall Intersection		-	-	**17.8**	**B**	-	-	**20.1**	**C**
DeKalb Avenue and Ashland Place									
Ashland Place	NB	LT	1.01	67.7	E	LT	0.75	29.6	C
	SB	R	0.27	15.8	B	R	0.74	31.4	C
DeKalb Avenue	WB	TR	0.53	18.3	B	TR	0.94	44.6	D
Overall Intersection		-	-	**40.8**	**D**	-	-	**37.6**	**D**
Fulton Street and Ashland Place									
Ashland Place	NB	L	0.27	25.6	C	L	0.69	40.9	D
	NB	TR	0.50	29.8	C	TR	0.69	37.3	D
Fulton Street	EB	LT	0.34	10.6	B	LT	0.61	12.9	B
	WB	TR	1.10	92.8	F	T	0.43	17.0	B
	WB	-	-	-	-	R	0.31	16.5	B
Overall Intersection		-	-	**61.0**	**E**	-	-	**24.4**	**C**
Lafayette Avenue and Ashland Place									
Ashland Place	NB	TR	0.37	35.0	C	TR	0.82	58.9	E
Lafayette Avenue	EB	LTR	0.44	11.5	B	LTR	0.78	20.1	C
Overall Intersection		-	-	**16.4**	**B**	-	-	**29.1**	**C**
Schermerhorn Street and 3rd Avenue									
3rd Avenue	NB	R	1.14	121.9	F	R	1.03	115.5	F
Schermerhorn Street	EB	T	0.29	25.3	C	T	0.62	79.1	E
Overall Intersection		-	-	**101.4**	**F**	-	-	**102.7**	**F**
Nevins Street and Schermerhorn Street									
Nevins Street	SB	LT	0.49	28.6	C	LT	0.63	30.3	C
Schermerhorn Street	EB	TR	0.36	19.5	B	TR	0.80	37.8	D
Overall Intersection		-	-	**24.0**	**C**	-	-	**34.7**	**C**

Note: Overall intersection v/c ratio is the critical lane groups' v/c ratio.
[1] Control delay is measured in seconds per vehicle.

Construction With-Action Condition

Construction activities would generate 151 construction worker vehicle trips and 22 construction truck trips during the AM construction peak hour, and 151 construction worker vehicle trips and six construction truck trips during the PM construction peak hour. Construction trucks would be required to use NYC DOT-designated truck routes within the study area and would then use local streets to access the construction site's staging and loading areas anticipated to be along the DeKalb Avenue and Hudson Avenue site frontages. The projected construction-related vehicle trips during the AM and PM construction peak hours are shown in **Figure 17-10** through **Figure 17-13**.

With-Action traffic volumes under construction conditions were developed by adding these construction-generated vehicles to the No-Action volumes. In addition, the With-Action traffic volume network reflects the displacement and diversion of vehicles trip as a result of the demolition of the existing building and parking garage on the Development Site. These With-Action with Construction condition traffic volumes for the AM and PM construction peak hours are shown in **Figure 17-10** through **Figure 17-17.**

As indicated in **Table 17-7** and **Table 17-8**, nine of the 18 analysis intersections would be significantly impacted during the AM construction peak hour, and three of the 18 analysis intersections would be significantly impacted during the PM construction peak hour. The following intersections would be significantly impacted:

Flatbush Avenue Extension and Tillary Street (AM peak hour)

Flatbush Avenue Extension and DeKalb Avenue (PM peak hour)

Flatbush Avenue Extension and Fulton Street (AM peak hour)

Flatbush Avenue and Lafayette Avenue (AM peak hour)

Flatbush Avenue and 4th Avenue (PM peak hour)

Flatbush Avenue and Atlantic Avenue (AM peak hour)

Fulton Street and Hudson Avenue (AM and PM peak hours)

Fulton Street and Rockwell Place (AM peak hour)

DeKalb Avenue and Ashland Place (AM peak hour)

Fulton Street and Ashland Place (AM peak hour)

Schermerhorn Street and 3rd Avenue (AM peak hour)

Detailed descriptions of the Construction No-Action and With-Action conditions traffic levels of service and traffic mitigation measures are presented in **Table 17-7** and **Table 17-8** for the AM and PM construction peak hours, respectively. Standard traffic capacity improvements typically implemented by NYC DOT, such as signal timing modifications, would provide full mitigation at some of the significantly impacted intersections. Traffic capacity improvements identified could fully mitigate four of the nine significantly impacted intersections during the AM construction peak hour (five intersections would remain unmitigated) and two of the three significantly impacted intersections during the PM construction peak hour (one intersection would remain unmitigated). Implementation of traffic improvements measures are subjected to NYC DOT's review and approval. If, prior to implementation, NYC DOT determines that any of the identified mitigation measures are

infeasible, and no other alternative and equivalent mitigation measures could be advanced, then the impacts would be unmitigated.

Figure 17-10 Construction Increment Traffic Volumes – AM Peak Hour (North Study Area)

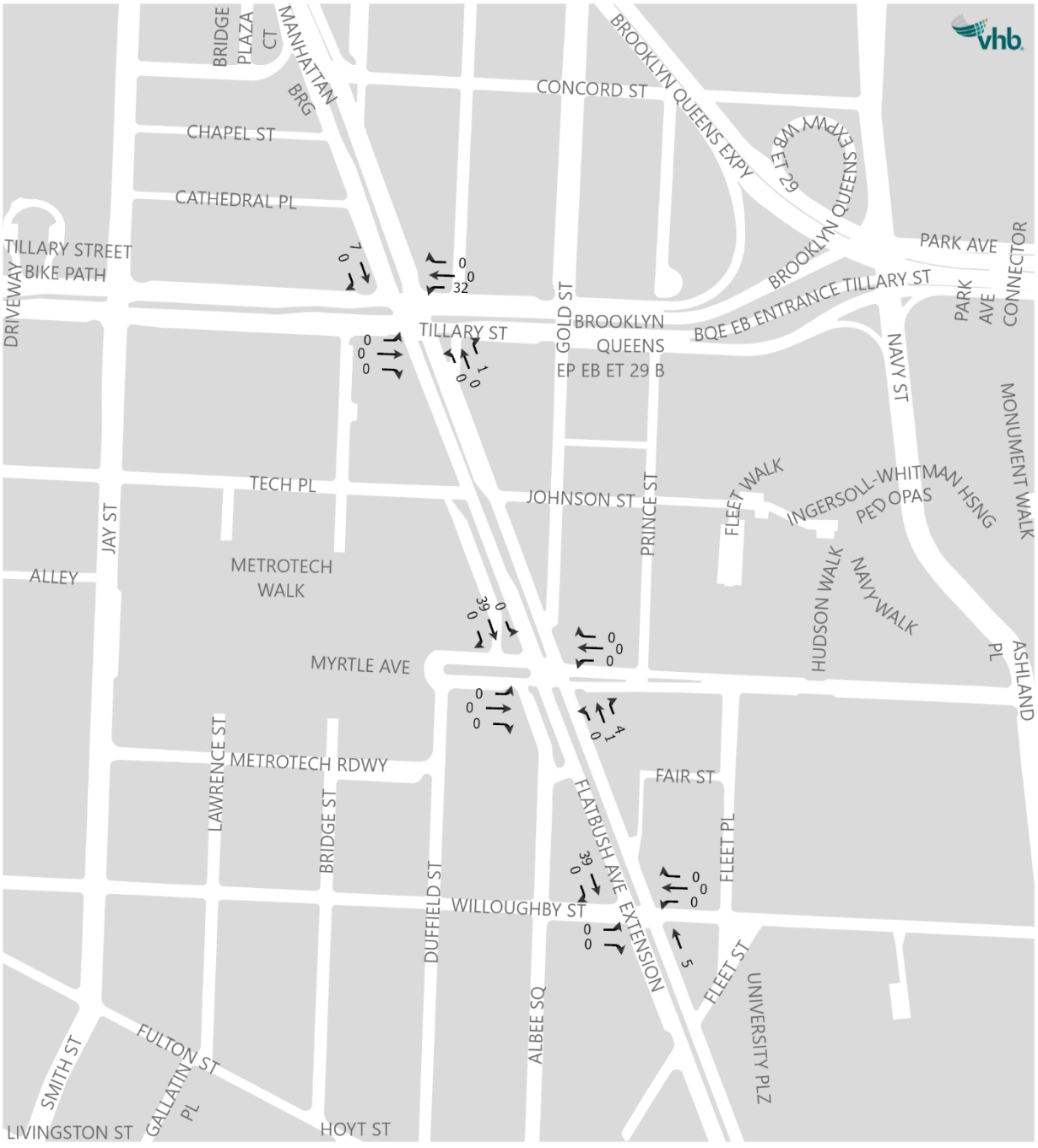


Figure 17-11 Construction Increment Traffic Volumes – AM Peak Hour (South Study Area)

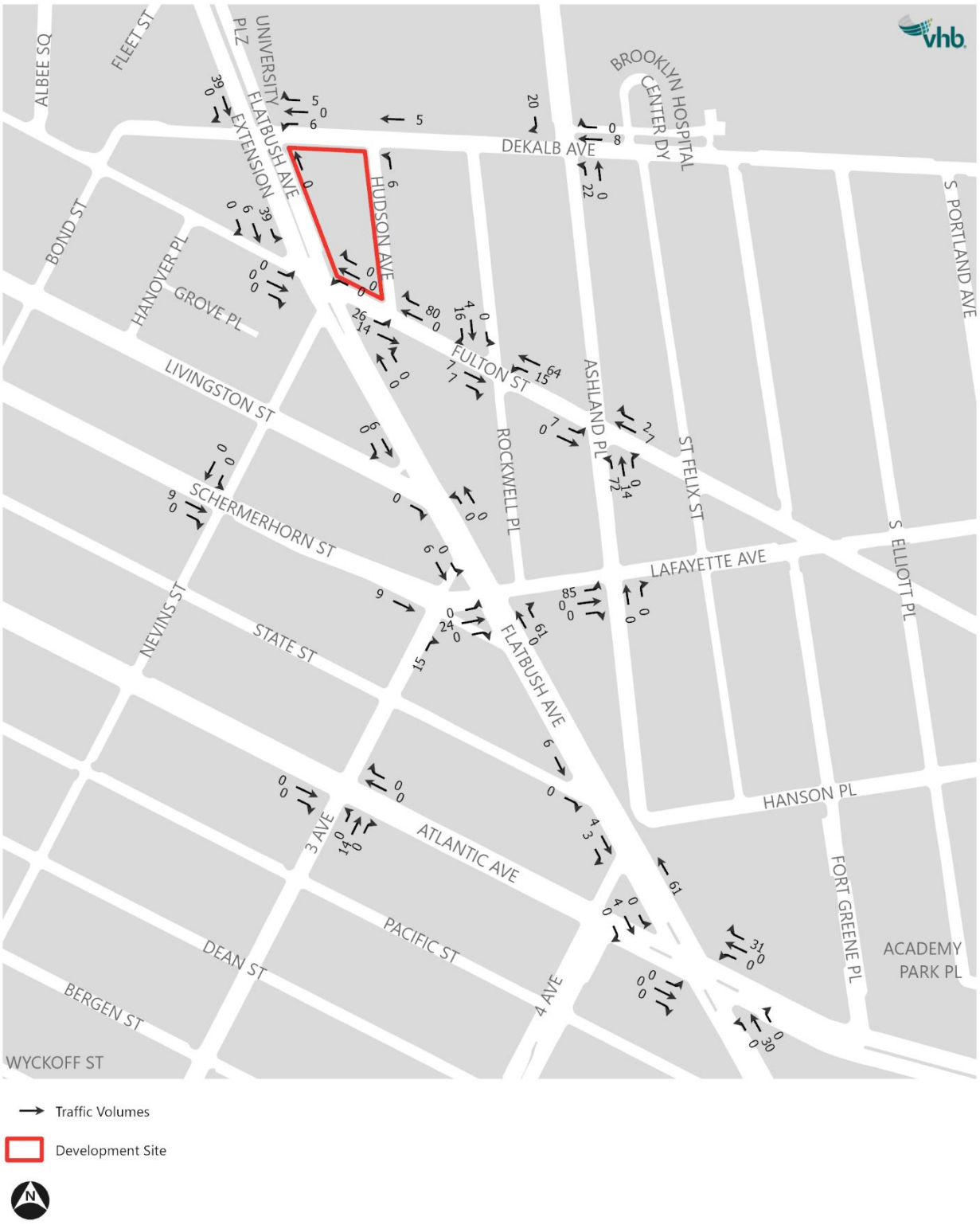


Figure 17-12 Construction Increment Traffic Volumes – PM Peak Hour (North Study Area)



Figure 17-13 Construction Increment Traffic Volumes – PM Peak Hour (South Study Area)

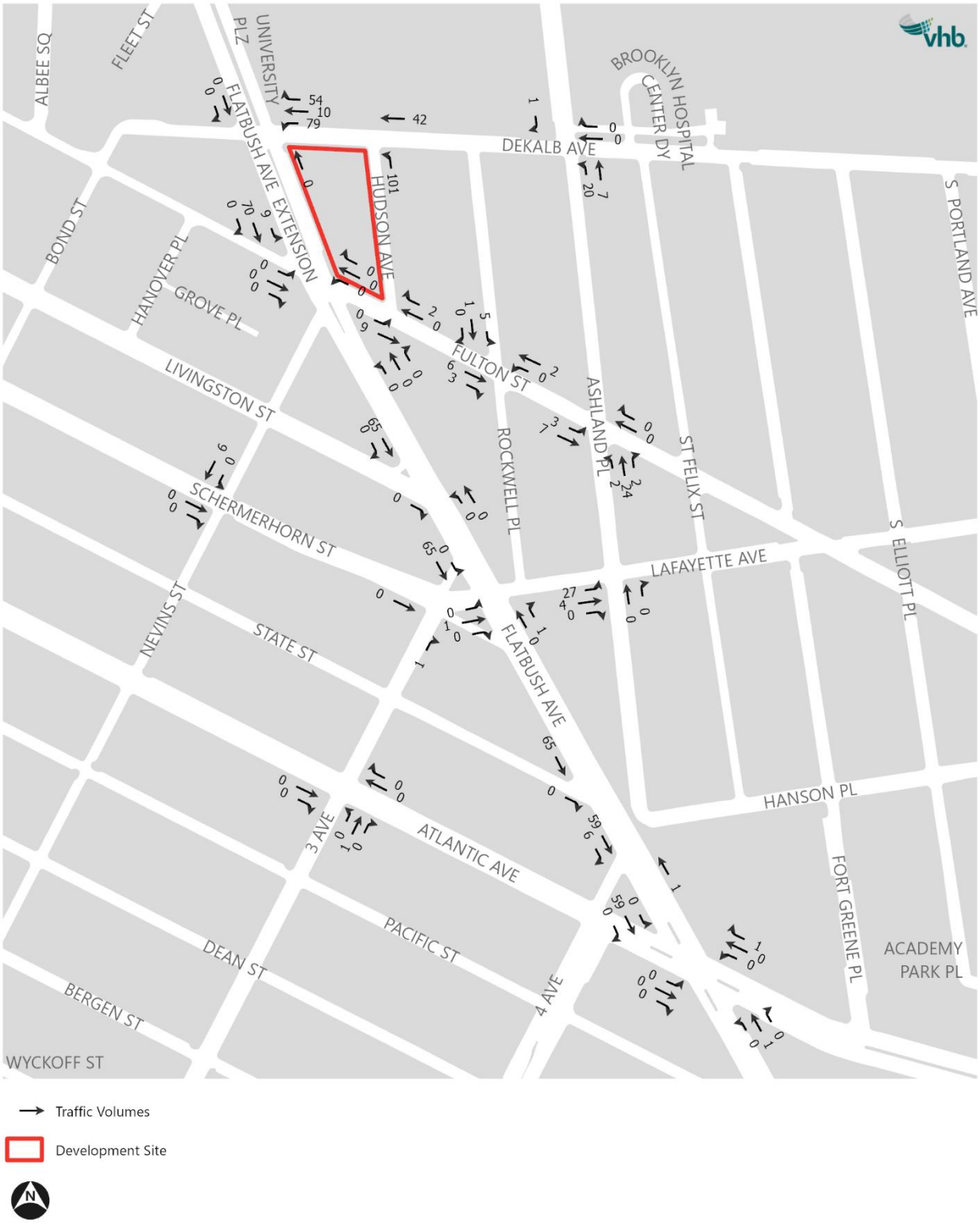


Figure 17-14 Construction With-Action Traffic Volumes – AM Peak Hour (North Study Area)T

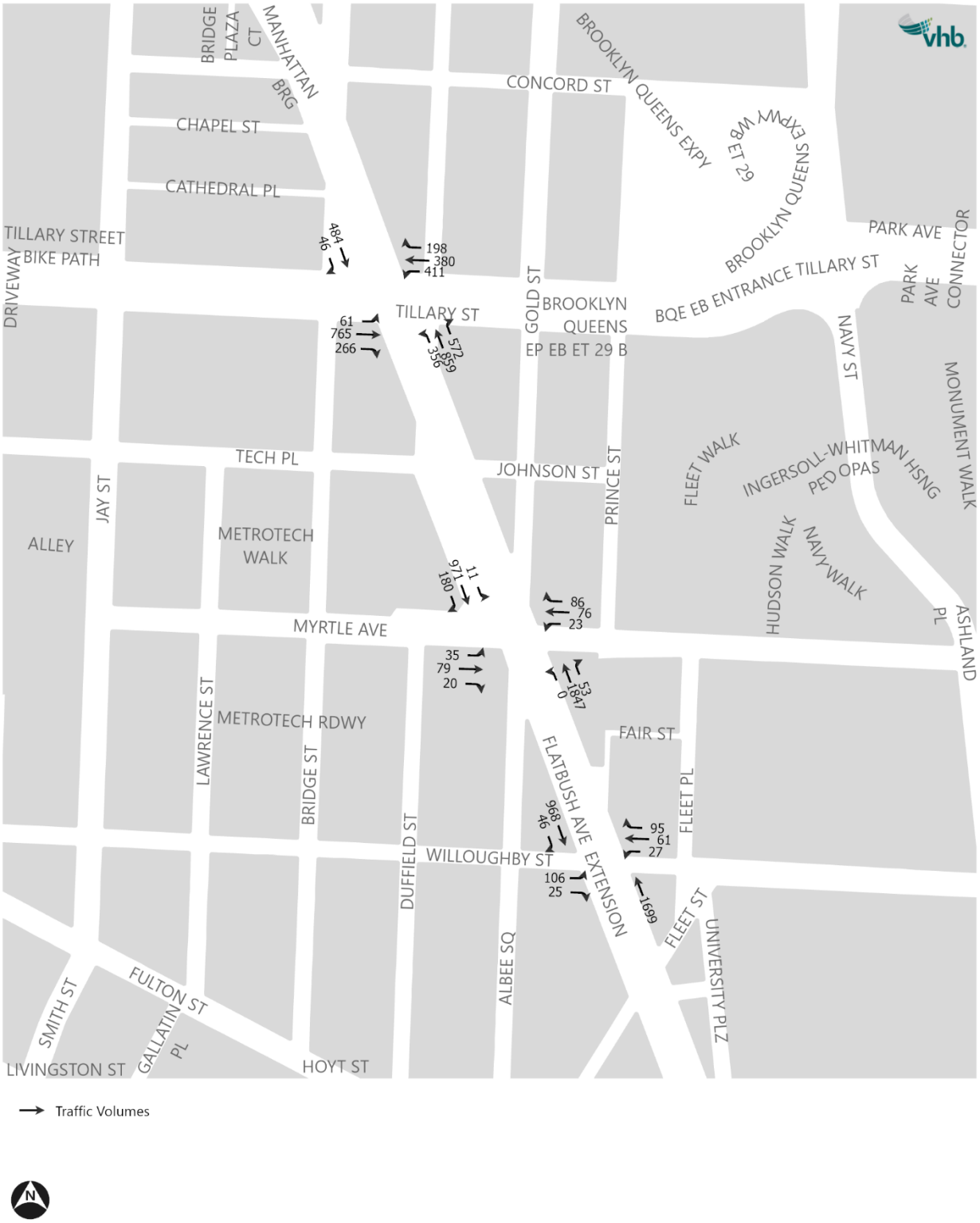


Figure 17-15 Construction With-Action Traffic Volumes – AM Peak Hour (South Study Area)

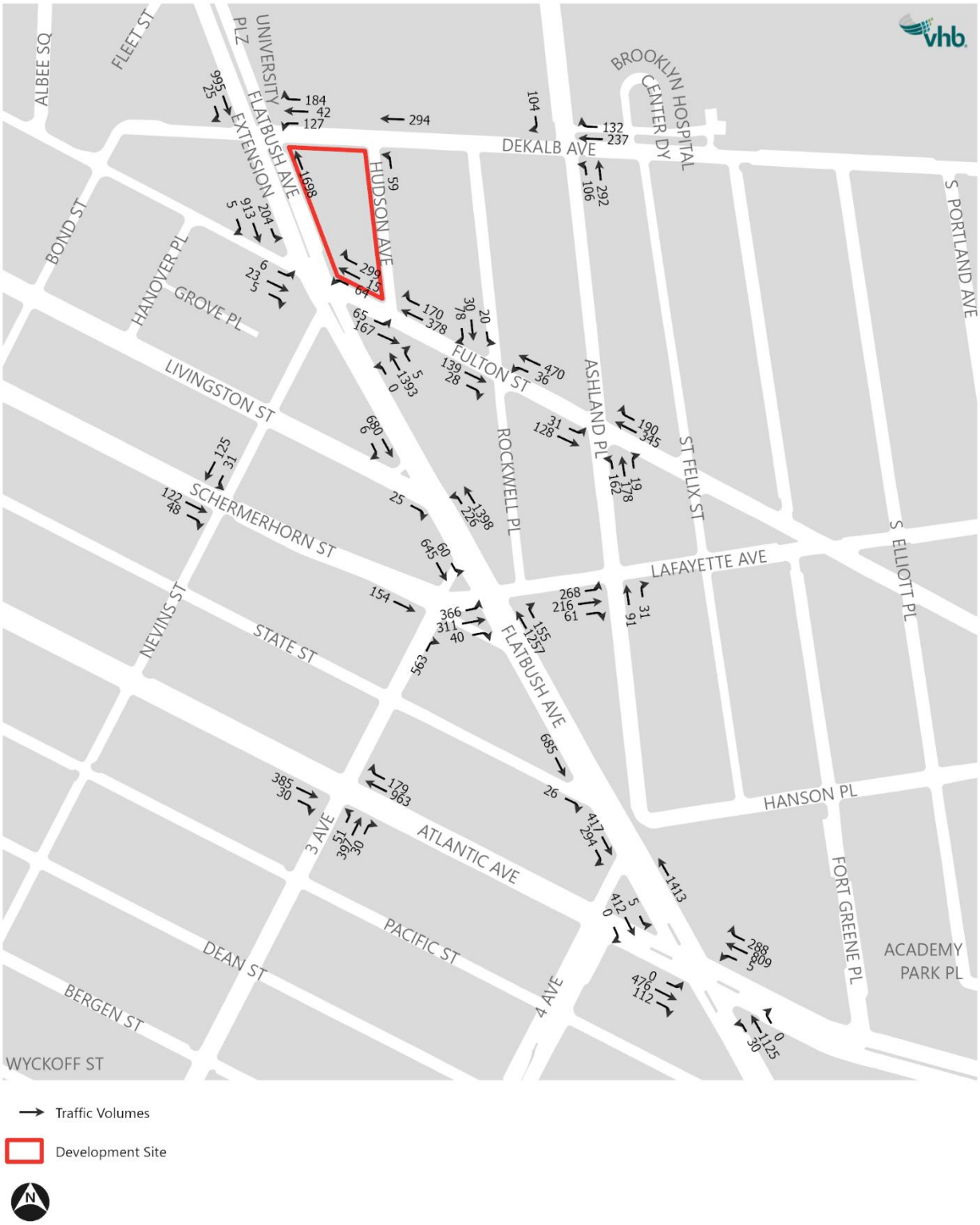


Figure 17-16 Construction With-Action Traffic Volumes – PM Peak Hour (North Study Area)



Figure 17-17 Construction With-Action Traffic Volumes – PM Peak Hour (South Study Area)

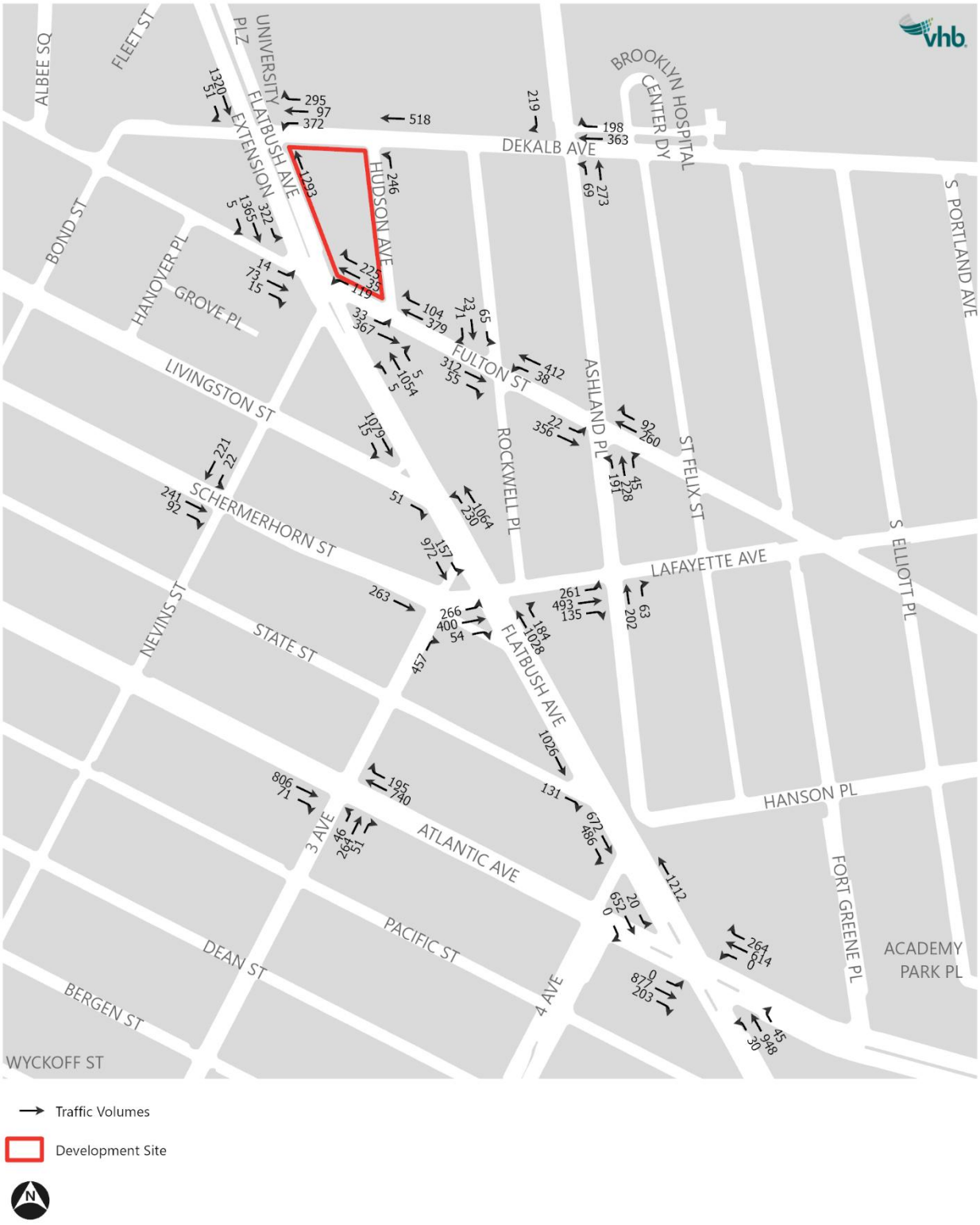


Table 17-7 Construction With-Action Traffic Levels of Service – AM Peak Hour

		No-Action				With-Action				Mitigation				
Intersection & Approach		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measure
Flatbush Avenue Extension and Tillary Street														
Flatbush Avenue Extension	NB	L	1.09	97.0	F	L	1.09	97.0	F	L	1.09	97.0	F	**Unmitigable**
	NB	T	0.77	46.0	D	T	0.77	46.0	D	T	0.77	46.0	D	
	NB	R	0.48	1.7	A	R	0.48	1.7	A	R	0.48	1.7	A	
	SB	T	0.52	38.1	D	T	0.52	38.3	D	T	0.52	38.3	D	
	SB	R	0.12	17.9	B	R	0.12	17.9	B	R	0.12	17.9	B	
Tillary Street	EB	L	0.40	54.3	D	L	0.40	54.3	D	L	0.40	54.3	D	
	EB	T	1.01	76.6	E	T	1.01	76.6	E	T	1.01	76.6	E	
	EB	R	0.71	37.3	D	R	0.71	37.3	D	R	0.71	37.3	D	
	WB	L	1.10	121.9	F	L	1.19	151.6	F	L	1.19	151.6	F	
	WB	T	0.62	41.6	D	T	0.62	41.6	D	T	0.62	41.6	D	
	WB	R	0.76	59.2	E	R	0.76	59.2	E	R	0.76	59.2	E	
Overall Intersection		-	-	**54.9**	**D**	-	-	**58.1**	**E**	-	-	**58.1**	**E**	
Flatbush Avenue Extension and Myrtle Avenue														
Flatbush Avenue Extension	NB	TR	1.06	45.2	D	TR	1.06	46.9	D	TR	1.06	46.9	D	Mitigation not required.
	SB	L	0.15	51.0	D	L	0.15	49.6	D	L	0.15	49.6	D	
	SB	TR	0.57	15.2	B	TR	0.59	16.0	B	TR	0.59	16.0	B	
Myrtle Avenue	EB	L	0.24	40.2	D	L	0.24	40.2	D	L	0.24	40.2	D	
	EB	TR	0.37	41.0	D	TR	0.37	41.0	D	TR	0.37	41.0	D	
	WB	L	0.14	37.4	D	L	0.14	37.4	D	L	0.14	37.4	D	
	WB	TR	0.62	49.4	D	TR	0.62	49.4	D	TR	0.62	49.4	D	
Overall Intersection		-	-	**34.8**	**C**	-	-	**35.7**	**D**	-	-	**35.7**	**D**	

Table 17-7 Construction With-Action Traffic Levels of Service – AM Peak Hour

		No-Action				With-Action				Mitigation				
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mitigation Measure**
Flatbush Avenue Extension and Willoughby Street														
Flatbush Avenue Extension	NB	T	0.90	51.7	D	T	0.90	51.7	D	T	0.90	51.7	D	Mitigation not required.
	SB	TR	0.56	25.1	C	TR	0.58	24.8	C	TR	0.58	24.8	C	
Willoughby Street	EB	L	0.38	34.6	C	L	0.38	34.6	C	L	0.38	34.6	C	
	EB	R	0.07	27.4	C	R	0.07	27.4	C	R	0.07	27.4	C	
	WB	LTR	0.48	35.2	D	LTR	0.48	35.2	D	LTR	0.48	35.2	D	
Overall Intersection		-	-	**40.8**	**D**	-	-	**40.5**	**D**	-	-	**40.5**	**D**	
Flatbush Avenue Extension and DeKalb Avenue														
Flatbush Avenue Extension	NB	T	1.04	64.3	E	T	1.00	63.9	E	T	1.00	63.0	E	Mitigation not required.[2]
	SB	TR	0.67	47.3	D	TR	0.70	47.0	D	TR	0.70	47.0	D	
DeKalb Avenue	WB	LT	0.49	23.4	C	LT	0.50	26.0	C	LT	0.50	25.7	C	
	WB	R	0.64	30.4	C	R	0.58	29.1	C	R	0.58	28.8	C	
Overall Intersection		-	-	**54.0**	**D**	-	-	**53.6**	**D**	-	-	**53.0**	**D**	
Flatbush Avenue Extension and Fulton Street														
Flatbush Avenue Extension	NB	LTR	0.93	24.7	C	LTR	0.92	59.3	E	LTR	0.92	59.2	E	**Unmitigable** Modify offset to 13 seconds from 14 seconds
	SB	L	0.92	100.5	F	L	1.13	150.2	F	L	1.13	149.6	F	
	SB	TR	0.48	13.7	B	TR	0.48	14.2	B	TR	0.48	15.2	B	
Fulton Street	EB	LTR	0.17	35.4	D	LTR	0.17	35.7	D	LTR	0.17	35.7	D	
	WB	LT	0.44	23.3	C	LT	0.44	24.6	C	LT	0.44	26.5	C	
	WB	R	0.86	18.4	B	R	0.86	30.5	C	R	0.86	31.0	C	
Overall Intersection		-	-	**24.9**	**C**	-	-	**46.4**	**D**	-	-	**46.8**	**D**	

Table 17-7 Construction With-Action Traffic Levels of Service – AM Peak Hour

		No-Action				With-Action				Mitigation				
Intersection & Approach		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measure
Flatbush Avenue and Livingston Street														
Flatbush Avenue	NB	L	0.31	4.7	A	L	0.31	4.5	A	L	0.31	4.6	A	Mitigation not required.[2]
	NB	T	0.78	30.3	C	T	0.78	41.6	D	T	0.78	27.3	C	
	SB	TR	0.38	1.5	A	TR	0.39	1.5	A	TR	0.39	1.7	A	
Livingston Street	EB	R	0.09	22.2	C	R	0.09	22.2	C	R	0.09	22.2	C	
Overall Intersection		-	-	**19.7**	**B**	-	-	**26.6**	**C**	-	-	**17.9**	**B**	
Flatbush Avenue and Lafayette Avenue														
Flatbush Avenue	NB	TR	0.87	57.6	E	TR	0.92	77.6	E	TR	0.92	57.0	E	Modify offset to 2 seconds from 0 seconds.
	SB	L	0.35	20.5	C	L	0.37	22.9	C	L	0.37	20.8	C	
	SB	T	0.37	6.9	A	T	0.37	7.0	A	T	0.37	5.2	A	
Schermerhorn Street	EB	L	0.97	83.6	F	L	0.97	82.7	F	L	0.97	86.4	F	
	EB	TR	0.49	72.1	E	TR	0.52	72.4	E	TR	0.52	73.9	E	
Overall Intersection		-	-	**49.7**	**D**	-	-	**59.6**	**E**	-	-	**49.8**	**D**	
Flatbush Avenue and State Street														
Flatbush Avenue	NB	T	0.75	4.1	A	T	0.79	4.4	A	T	0.79	4.4	A	Mitigation not required.[2]
	SB	T	0.53	27.3	C	T	0.54	27.4	C	T	0.54	26.7	C	
State Street	EB	R	0.06	21.6	C	R	0.06	21.6	C	R	0.06	21.6	C	
Overall Intersection		-	-	**12.0**	**B**	-	-	**12.0**	**B**	-	-	**11.8**	**B**	

Table 17-7 Construction With-Action Traffic Levels of Service – AM Peak Hour

		No-Action				With-Action				Mitigation				
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mitigation Measure**
Flatbush Avenue and 4th Avenue														
Flatbush Avenue	NB	T	0.71	8.9	A	T	0.74	9.8	A	T	0.74	9.4	A	Mitigation not required.[2]
	SB	TR	0.51	4.7	A	TR	0.51	4.6	A	TR	0.51	4.7	A	
	SB	R	0.50	7.2	A	R	0.50	7.2	A	R	0.50	7.2	A	
Overall Intersection		-	-	**7.7**	**A**	-	-	**8.2**	**A**	-	-	**8.0**	**A**	
Flatbush Avenue and Atlantic Avenue														
Flatbush Avenue	NB	LTR	0.79	31.4	C	LTR	0.81	32.3	C	LTR	0.84	35.1	D	Shift 2 secs of green time from NB/SB phase to EB-TR/WB-TR phase. (NB/SB phase shifts from 61 secs to 59 secs; EB-TR/WB-TR phase shifts from 44 secs to 46 secs.)
	SB	LTR	0.41	5.4	A	LTR	0.41	5.6	A	LTR	0.43	9.4	A	
Atlantic Avenue	EB	LT	0.49	25.1	C	LT	0.49	25.1	C	LT	0.47	23.5	C	
	EB	R	0.34	33.8	C	R	0.34	33.8	C	R	0.33	32.0	C	
	WB	LT	0.74	31.7	C	LT	0.74	31.7	C	LT	0.71	29.5	C	
	WB	R	0.80	54.4	D	R	0.89	66.2	E	R	0.85	58.2	E	
Overall Intersection		-	-	**29.0**	**C**	-	-	**30.7**	**C**	-	-	**30.6**	**C**	
DeKalb Avenue and Hudson Avenue														
Hudson Avenue	NB	L	0.12	22.4	C	L	0.11	26.8	C	L	0.11	26.7	C	Mitigation not required.[2]
DeKalb Avenue	WB	LT	0.35	22.2	C	LT	0.30	21.0	C	LT	0.30	20.9	C	
Overall Intersection		-	-	**22.2**	**C**	-	-	**22.0**	**C**	-	-	**21.9**	**C**	
Fulton Street and Hudson Avenue														
Fulton Street	EB	LT	0.41	14.2	B	LT	0.80	97.6	F	LT	0.80	96.9	F	**Unmitigable[2]**
	WB	TR	1.23	163.0	F	TR	1.90	442.2	F	TR	1.90	442.2	F	
Overall Intersection		-	-	**115.4**	**F**	-	-	**337.4**	**F**	-	-	**337.1**	**F**	

Table 17-7 Construction With-Action Traffic Levels of Service – AM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS	Mitigation Mvt	Mitigation V/C	Mitigation Ctrl Delay[1]	Mitigation LOS	Mitigation Measure
Fulton Street and Rockwell Place														
Rockwell Place	SB	LTR	0.21	21.3	C	LTR	0.37	24.1	C	LTR	0.37	24.1	C	**Unmitigable**
Fulton Street	EB	TR	0.30	13.7	B	TR	0.32	15.1	B	TR	0.32	15.1	B	
	WB	LT	0.70	18.7	B	LT	0.85	69.5	E	LT	0.85	69.5	E	
Overall Intersection		-	-	**17.8**	**B**	-	-	**49.6**	**D**	-	-	**49.6**	**D**	
DeKalb Avenue and Ashland Place														
Ashland Place	NB	LT	1.01	67.7	E	LT	1.06	81.9	F	LT	1.01	67.2	E	Shift 1 sec of green time from WB phase to NB/SB phase. (WB phase shifts from 26 secs to 25 secs; NB/SB phase shifts from 27 secs to 28 secs.)
	SB	R	0.27	15.8	B	R	0.32	16.7	B	R	0.31	15.7	B	
DeKalb Avenue	WB	TR	0.53	18.3	B	TR	0.54	18.5	B	TR	0.57	19.8	B	
Overall Intersection		-	-	**40.8**	**D**	-	-	**47.3**	**D**	-	-	**41.0**	**D**	
Fulton Street and Ashland Place														
Ashland Place	NB	L	0.27	25.6	C	L	0.49	30.2	C	L	0.49	30.2	C	**Unmitigable**
	NB	TR	0.50	29.8	C	TR	0.53	30.7	C	TR	0.53	30.7	C	
Fulton Street	EB	LT	0.34	10.6	B	LT	0.39	11.0	B	LT	0.39	11.0	B	
	WB	TR	1.10	92.8	F	TR	1.12	100.7	F	TR	1.12	100.7	F	
Overall Intersection		-	-	**61.0**	**E**	-	-	**63.2**	**E**	-	-	**63.2**	**E**	
Lafayette Avenue and Ashland Place														
Ashland Place	NB	TR	0.37	35.0	C	TR	0.37	35.0	C	TR	0.37	35.0	C	Mitigation not required.[2]
Lafayette Avenue	EB	LTR	0.44	11.5	B	LTR	0.53	14.4	B	LTR	0.53	13.7	B	
Overall Intersection		-	-	**16.4**	**B**	-	-	**18.2**	**B**	-	-	**17.6**	**B**	

Table 17-7 Construction With-Action Traffic Levels of Service – AM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Schermerhorn Street and 3rd Avenue														
3rd Avenue	NB	R	1.14	121.9	F	R	1.16	132.0	F	R	1.13	119.6	F	Shift 1 sec of green time from EB phase to NB phase. (EB phase shifts from 55 secs to 54 secs; NB phase shifts from 39 secs to 40 secs.)
Schermerhorn Street	EB	T	0.29	25.3	C	T	0.31	25.7	C	T	0.32	26.5	C	
Overall Intersection		-	-	**101.4**	**F**	-	-	**108.7**	**F**	-	-	**99.2**	**F**	
Nevins Street and Schermerhorn Street														
Nevins Street	SB	LT	0.49	28.6	C	LT	0.49	28.6	C	LT	0.49	28.6	C	Mitigation not required.
Schermerhorn Street	EB	TR	0.36	19.5	B	TR	0.38	19.9	B	TR	0.38	19.9	B	
Overall Intersection		-	-	**24.0**	**C**	-	-	**24.1**	**C**	-	-	**24.1**	**C**	

Note: Overall intersection v/c ratio is the critical lane groups' v/c ratio.
[1] Control delay is measured in seconds per vehicle.
[2] Changes to delay results are due to mitigation measures proposed at nearby intersections.
Shading denotes a significant impact.

Table 17-8 Construction With-Action Traffic Level of Service – PM Peak Hour

		No-Action				With-Action				Mitigation				
Intersection & Approach		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measure
Flatbush Avenue Extension and Tillary Street														
Flatbush Avenue Extension	NB	L	1.08	94.6	F	L	1.08	94.3	F	L	1.08	94.3	F	Mitigation not required.
	NB	T	0.64	41.5	D	T	0.64	42.8	D	T	0.64	42.8	D	
	NB	R	0.47	1.2	A	R	0.47	1.2	A	R	0.47	1.2	A	
	SB	T	0.93	57.0	E	T	0.93	57.0	E	T	0.93	57.0	E	
	SB	R	0.28	20.8	C	R	0.28	20.8	C	R	0.28	20.8	C	
Tillary Street	EB	L	0.48	56.6	E	L	0.48	56.6	E	L	0.48	56.6	E	
	EB	T	1.04	82.5	F	T	1.04	82.5	F	T	1.04	82.5	F	
	EB	R	0.84	50.4	D	R	0.84	50.4	D	R	0.84	50.4	D	
	WB	L	0.82	67.9	E	L	0.81	66.9	E	L	0.81	66.9	E	
	WB	T	0.82	49.5	D	T	0.82	49.5	D	T	0.82	49.5	D	
	WB	R	0.95	86.8	F	R	0.95	86.8	F	R	0.95	86.8	F	
Overall Intersection		-	-	**56.3**	**E**	-	-	**56.4**	**E**	-	-	**56.4**	**E**	
Flatbush Avenue Extension and Myrtle Avenue														
Flatbush Avenue Extension	NB	TR	0.89	27.2	C	TR	0.92	37.8	D	TR	0.92	35.8	D	Mitigation not required.[2]
	SB	L	0.55	77.2	E	L	0.55	77.7	E	L	0.55	77.7	E	
	SB	TR	0.72	8.9	A	TR	0.72	8.8	A	TR	0.72	8.8	A	
Myrtle Avenue	EB	L	1.03	134.2	F	L	1.03	134.2	F	L	1.03	134.2	F	
	EB	TR	0.86	67.8	E	TR	0.86	67.0	E	TR	0.86	67.0	E	
	WB	L	0.50	58.1	E	L	0.50	57.5	E	L	0.50	57.5	E	
	WB	TR	0.95	85.8	F	TR	0.95	85.8	F	TR	0.95	85.8	F	
Overall Intersection		-	-	**30.9**	**C**	-	-	**35.2**	**C**	-	-	**34.3**	**C**	

Table 17-8 Construction With-Action Traffic Level of Service – PM Peak Hour

		No-Action				With-Action				Mitigation				
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mitigation Measure**
Flatbush Avenue Extension and Willoughby Street														
Flatbush Avenue Extension	NB	T	0.76	76.3	E	T	0.77	17.1	B	T	0.77	18.2	B	Mitigation not required.[2]
	SB	TR	0.72	10.6	B	TR	0.71	10.7	B	TR	0.71	10.7	B	
Willoughby Street	EB	L	0.71	50.6	D	L	0.71	50.5	D	L	0.71	50.5	D	
	EB	R	0.25	30.5	C	R	0.25	30.5	C	R	0.25	30.5	C	
	WB	LTR	0.62	39.8	D	LTR	0.60	39.0	D	LTR	0.60	39.0	D	
Overall Intersection		-	-	**44.2**	**D**	-	-	**18.5**	**B**	-	-	**19.0**	**B**	
Flatbush Avenue Extension and DeKalb Avenue														
Flatbush Avenue Extension	NB	T	0.72	45.0	D	T	0.61	41.7	D	T	0.64	46.4	D	Shift 2 secs of green time from NB/SB phase to WB phase. (NB/SB phase shifts from 65 secs to 63 secs; WB phase shifts from 45 secs to 47 secs.)
	SB	TR	0.77	29.2	C	TR	0.69	3.6	A	TR	0.71	3.8	A	
DeKalb Avenue	WB	LT	1.30	182.3	F	LT	1.38	213.9	F	LT	1.31	182.7	F	
	WB	R	1.15	132.8	F	R	1.09	110.3	F	R	1.03	90.2	F	
Overall Intersection		-	-	**61.6**	**E**	-	-	**56.1**	**E**	-	-	**51.9**	**D**	
Flatbush Avenue Extension and Fulton Street														
Flatbush Avenue Extension	NB	LTR	0.94	46.0	D	LTR	0.93	25.6	C	LTR	0.93	25.6	C	Mitigation not required.[2]
	SB	L	1.32	193.0	F	L	1.30	187.9	F	L	1.30	187.6	F	
	SB	TR	0.61	8.4	A	TR	0.63	9.4	A	TR	0.63	10.1	B	
Fulton Street	EB	LTR	0.50	45.3	D	LTR	0.50	45.1	D	LTR	0.50	48.1	D	
	WB	LT	1.02	75.1	E	LT	1.02	75.3	E	LT	1.02	75.3	E	
	WB	R	0.52	7.2	A	R	0.52	7.2	A	R	0.52	10.4	B	
Overall Intersection		-	-	**44.3**	**D**	-	-	**36.6**	**D**	-	-	**37.2**	**D**	

Table 17-8 Construction With-Action Traffic Level of Service – PM Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS	Mitigation Mvt	Mitigation V/C	Mitigation Ctrl Delay[1]	Mitigation LOS	Mitigation Measure
Flatbush Avenue and Livingston Street														
Flatbush Avenue	NB	L	0.42	23.1	C	L	0.43	24.0	C	L	0.43	24.1	C	Mitigation not required.[2]
	NB	T	0.61	7.6	A	T	0.61	7.5	A	T	0.61	7.5	A	
	SB	TR	0.60	4.6	A	TR	0.63	4.6	A	TR	0.63	4.0	A	
Livingston Street	EB	R	0.17	23.0	C	R	0.17	23.0	C	R	0.17	23.0	C	
Overall Intersection		-	-	**8.1**	**A**	-	-	**8.1**	**A**	-	-	**7.8**	**A**	
Flatbush Avenue and Lafayette Avenue														
Flatbush Avenue	NB	TR	0.87	31.1	C	TR	0.86	30.9	C	TR	0.86	31.1	C	Mitigation not required.[2]
	SB	L	0.69	108.1	F	L	0.68	106.8	F	L	0.68	106.4	F	
	SB	T	0.46	1.9	A	T	0.49	1.9	A	T	0.49	1.9	A	
Schermerhorn Street	EB	L	1.14	116.3	F	L	1.11	103.1	F	L	1.11	103.1	F	
	EB	TR	0.75	81.2	F	TR	0.74	80.9	F	TR	0.74	80.9	F	
Overall Intersection		-	-	**42.5**	**D**	-	-	**40.1**	**D**	-	-	**40.1**	**D**	
Flatbush Avenue and State Street														
Flatbush Avenue	NB	T	0.68	3.3	A	T	0.68	3.3	A	T	0.68	2.3	A	Mitigation not required.[2]
	SB	T	0.78	26.1	C	T	0.82	28.7	C	T	0.82	28.4	C	
State Street	EB	R	0.30	25.5	C	R	0.30	25.5	C	R	0.30	25.5	C	
Overall Intersection		-	-	**14.5**	**B**	-	-	**15.9**	**B**	-	-	**15.3**	**B**	

Table 17-8 Construction With-Action Traffic Level of Service – PM Peak Hour

		No-Action				With-Action				Mitigation				
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mitigation Measure**
Flatbush Avenue and 4th Avenue														
Flatbush Avenue	NB	T	0.68	10.1	B	T	0.67	9.6	A	T	0.67	10.2	B	Modify offset from 0 sec to 118 sec.
	SB	TR	0.76	14.7	B	TR	0.78	18.1	B	TR	0.78	13.2	B	
	SB	R	0.85	56.3	E	R	0.90	76.4	E	R	0.90	59.4	E	
Overall Intersection		-	-	**18.5**	**B**	-	-	**22.7**	**C**	-	-	**18.7**	**B**	
Flatbush Avenue and Atlantic Avenue														
Flatbush Avenue	NB	LTR	0.81	33.0	C	LTR	0.81	33.0	C	LTR	0.81	33.0	C	Mitigation not required.[2]
	SB	LTR	0.67	7.6	A	LTR	0.72	9.2	A	LTR	0.72	8.1	A	
Atlantic Avenue	EB	LT	0.74	31.7	C	LT	0.74	31.7	C	LT	0.74	31.7	C	
	EB	R	0.65	44.2	D	R	0.65	44.2	D	R	0.65	44.2	D	
	WB	LT	0.58	27.0	C	LT	0.52	25.6	C	LT	0.52	25.6	C	
	WB	R	0.96	82.4	F	R	0.96	79.6	E	R	0.96	79.6	E	
Overall Intersection		-	-	**31.3**	**C**	-	-	**31.2**	**C**	-	-	**31.0**	**C**	
DeKalb Avenue and Hudson Avenue														
Hudson Avenue	NB	L	0.31	11.2	B	L	0.42	18.0	B	L	0.42	18.0	B	Mitigation not required.[2]
DeKalb Avenue	WB	LT	0.52	28.7	C	LT	0.50	28.6	C	LT	0.50	28.4	C	
Overall Intersection		-	-	**24.6**	**C**	-	-	**25.1**	**C**	-	-	**25.0**	**C**	

Table 17-8 Construction With-Action Traffic Level of Service – PM Peak Hour

		No-Action				With-Action				Mitigation				
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mitigation Measure**
Fulton Street and Hudson Avenue														
Fulton Street	EB	LT	0.62	22.9	C	LT	0.60	20.9	C	LT	0.60	20.8	C	**Unmitigable[2]**
	WB	T	0.86	108.1	F	T	0.85	108.0	F	T	0.85	108.0	F	
	WB	R	1.41	280.7	F	R	1.73	407.5	F	R	1.73	407.5	F	
Overall Intersection		-	-	**88.6**	**F**	-	-	**109.8**	**F**	-	-	**109.8**	**F**	
Fulton Street and Rockwell Place														
Rockwell Place	SB	LTR	0.42	25.7	C	LTR	0.49	27.4	C	LTR	0.49	27.4	C	Mitigation not required.
Fulton Street	EB	T	0.49	19.4	B	T	0.48	19.3	B	T	0.48	19.3	B	
	EB	R	0.20	13.6	B	R	0.20	13.7	B	R	0.20	13.7	B	
	WB	LT	0.74	19.5	B	LT	0.74	19.6	B	LT	0.74	19.6	B	
Overall Intersection		-	-	**20.0**	**C**	-	-	**20.5**	**C**	-	-	**20.5**	**C**	
DeKalb Avenue and Ashland Place														
Ashland Place	NB	LT	0.75	29.6	C	LT	0.79	32.1	C	LT	0.79	32.1	C	Mitigation not required.
	SB	R	0.74	31.4	C	R	0.70	28.8	C	R	0.70	28.8	C	
DeKalb Avenue	WB	TR	0.94	44.6	D	TR	0.94	44.1	D	TR	0.94	44.1	D	
Overall Intersection		-	-	**37.6**	**D**	-	-	**37.5**	**D**	-	-	**37.5**	**D**	

Table 17-8 Construction With-Action Traffic Level of Service – PM Peak Hour

		No-Action				With-Action				Mitigation				
Intersection & Approach		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mitigation Measure
Fulton Street and Ashland Place														
Ashland Place	NB	L	0.69	40.9	D	L	0.70	41.3	D	L	0.70	41.3	D	Mitigation not required.
	NB	TR	0.69	37.3	D	TR	0.74	39.9	D	TR	0.74	39.9	D	
Fulton Street	EB	LT	0.61	12.9	B	LT	0.60	13.2	B	LT	0.60	13.2	B	
	WB	T	0.43	17.0	B	T	0.43	16.9	B	T	0.43	16.9	B	
	WB	R	0.31	16.5	B	R	0.31	16.5	B	R	0.31	16.5	B	
Overall Intersection		-	-	**24.4**	**C**	-	-	**25.3**	**C**	-	-	**25.3**	**C**	
Lafayette Avenue and Ashland Place														
Ashland Place	NB	TR	0.82	58.9	E	TR	0.82	58.9	E	TR	0.82	58.9	E	Mitigation not required.
Lafayette Avenue	EB	LTR	0.78	20.1	C	LTR	0.80	21.8	C	LTR	0.80	21.8	C	
Overall Intersection		-	-	**29.1**	**C**	-	-	**30.2**	**C**	-	-	**30.2**	**C**	
Schermerhorn Street and 3rd Avenue														
3rd Avenue	NB	R	1.03	115.5	F	R	1.02	115.8	F	R	1.02	115.8	F	Mitigation not required.
Schermerhorn Street	EB	T	0.62	79.1	E	T	0.59	69.2	E	T	0.59	69.2	E	
Overall Intersection		-	-	**102.7**	**F**	-	-	**99.7**	**F**	-	-	**99.7**	**F**	
Nevins Street and Schermerhorn Street														
Nevins Street	SB	LT	0.63	30.3	C	LT	0.63	30.3	C	LT	0.63	30.3	C	Mitigation not required.
Schermerhorn Street	EB	TR	0.80	37.8	D	TR	0.79	36.5	D	TR	0.79	36.5	D	
Overall Intersection		-	-	**34.7**	**C**	-	-	**33.9**	**C**	-	-	**33.9**	**C**	

Note: Overall intersection v/c ratio is the critical lane groups' v/c ratio.
[1] Control delay is measured in seconds per vehicle.
[2] Changes to delay results are due to mitigation measures proposed at nearby intersections.
Shading denotes a significant impact.

Deliveries

Construction trucks would be required to use NYC DOT-designated truck routes, including Flatbush Avenue Extension and DeKalb Avenue, and service the construction site at the designated loading zones. The DeKalb Avenue and Hudson Avenue site frontages would be the primary loading zones during the duration of construction. The Flatbush Avenue Extension frontage could potentially also be used for loading during the late periods of construction.

Curb Lane Closures and Staging

Short-term changes due to parking-lane and sidewalk closures and/or temporary sidewalk narrowing could occur along the sides of the Development Site during specific periods of construction. Specifically, portions of the sidewalk and parking along the east side of Flatbush Avenue Extension would be closed; however, temporary pedestrian access would still be maintained and would be at least 5 feet wide. Access to the DeKalb Avenue subway station would be maintained throughout the entirety of construction. Construction activities may also result in closures of the sidewalks along the southern portion of DeKalb Avenue between Flatbush Avenue Extension and Hudson Avenue; and the western portion of Hudson Avenue between DeKalb Avenue and Fulton Street along the frontages of the Development Site. Sidewalk and lane closures would be finalized as the MPT plans are developed and reviewed with NYC DOT. All lane and sidewalk closures during construction would require DOT's OCMC's review and approval.

Parking

As discussed in **Chapter 10, Transportation**, a parking utilization survey was conducted and determined that during peak construction there would be a total off-street parking capacity of 1,968 spaces within a quarter mile of the Development Site—this capacity reflects the displacement of the existing 140 space parking garage on the Development Site. Construction workers would generate an estimated peak daily parking demand of 189 spaces during the Q3 2030 peak construction quarter. This level of parking demand could be accommodated by available capacity at off-street parking facilities near the Development Site, specifically the 80 DeKalb Avenue garage located across the street from the Development Site, and the garages at 97-103 DeKalb Avenue and 66 Rockwell Place, which are located a short walking distance from the Development Site.

In the No-Action condition, off-street parking facilities within the study area would be 18 percent occupied during the weekday early-morning period (demand of 376 spaces) when workers would arrive at the Development Site (the occupancy rate was based on the weekday overnight parking survey information). During the weekday midday period, the peak background parking period, the off-street parking occupancy rate would be 62 percent (demand of 1,316 spaces).

In the Construction With-Action condition, there would be approximately 1,403 spaces available (29 percent occupancy) for the public during the weekday early-morning period, and 463 spaces available during the weekday midday period (76 percent occupancy). This availability accounts for the construction-worker demand and parking demand from the existing garage on the Development Site that would be relocated to other facilities (a parking demand of 25 spaces). Therefore, no parking shortfall would occur as a result of project-generated construction activity. **Table 17-9** summarizes the Construction With-Action condition parking demand and supply.

Table 17-9 Construction With-Action Parking Demand and Supply

	Peak Period	
	Weekday Early-Morning Period	Weekday Midday Period
No-Action Off-Street Parking Supply	2,108 spaces	
Change in Off-Street Parking Supply	-140 spaces	
Construction With-Action Off-Street Parking Supply	1,968 spaces	
No-Action Parking Demand (Percent Occupied)	376 spaces (18 percent)	1,316 spaces (62 percent)
Proposed Construction Demand	189 spaces	189 spaces
Construction With-Action Parking Demand (Percent Occupied)	565 spaces (29 percent)	1,505 spaces (76 percent)
Construction With-Action Condition Off-Street Parking Availability	1,403 spaces	463 spaces

Note:
Weekday early-morning period parking availability based on survey of parking conditions during the weekday overnight period.

Transit and Pedestrians

Based on the construction survey data from the Marriott Hotel at 350 Jay Street, it is anticipated that approximately 44 percent of construction workers would commute to the Development Site by public transportation. During the third quarter of 2030, when construction worker volumes would be highest, construction would be expected to generate 638 daily construction workers (281 workers would be expected to use public transportation). It is expected that a majority of construction workers (80 percent) would arrive during the AM construction peak hour and depart during the PM construction peak hour, and would generate approximately 225 construction worker trips by public transportation during the AM and PM construction peak hours. These construction-related transit trips would occur outside of the peak periods of transit ridership and would be distributed to the nearby transit facilities. Furthermore, the Development Site is located above the DeKalb Avenue subway station and the study area is well served by public transit. Within a one-quarter mile of the Development Site there are four other subway stations, and the Development Site is approximately a 10-minute walk from the Atlantic Terminal station (served by Long Island Rail Road). Several Brooklyn local bus routes and express bus routes also serve the study area. These trips would be distributed to the different transit options, and therefore, construction activities are not expected to result in transit impacts.

Construction workers would travel on foot to and from parking facilities, bus stops, and subway stations near the construction site. Multiple worker entrances would be provided around the Development Site, and therefore these worker pedestrian trips would not be expected to exceed the 200 pedestrian *CEQR Technical Manual* thresholds for detailed analysis and the increases in trips generated by construction activities are not expected to result in pedestrian impacts.

During construction, portions of the sidewalk and parking along the east side of Flatbush Avenue Extension would be closed; however, temporary pedestrian access would still be maintained and would be at least 5 feet wide. Access to the DeKalb Avenue subway station would be maintained throughout the entirety of construction. Construction activities may also result in closures of the sidewalks along the southern portion of DeKalb Avenue between Flatbush Avenue Extension and Hudson Avenue, and

the western portion of Hudson Avenue between DeKalb Avenue and Fulton Street along the frontages of the Development Site. As a result, pedestrian detours would occur during the closures of the DeKalb Avenue and Hudson Avenue frontage sidewalks.

Existing pedestrian volumes along the Hudson Avenue frontage sidewalk range from 200 to 245 pedestrian during the weekday AM, midday and PM commuter peak hours. Once these volumes are distributed to other north-south sidewalks such as the Hudson Avenue east sidewalk between DeKalb Avenue and Fulton Street, and along sidewalks at adjacent streets (e.g., Flatbush Avenue Extension and Rockwell Place), the increase in detour volumes at these sidewalks would be modest and would be below the *CEQR Technical Manual* pedestrian analysis screening thresholds of 200 pedestrian trips.

Existing pedestrian volumes along the DeKalb Avenue frontage sidewalk range from 330 to 375 pedestrians during the weekday AM, midday, and PM commuter peak hours. It is expected that most of these pedestrians would detour to the north sidewalk of DeKalb Avenue between Flatbush Avenue Extension and Hudson Avenue. As the increase in pedestrian volumes would be higher than 200 pedestrian trips, this sidewalk was identified for detailed level of service analyses to evaluate the potential of significant pedestrian impacts at this sidewalk during construction. The level of services analysis was conducted for the peak commuter periods when pedestrian volumes would be highest and as was identified for the operational analyses

Pedestrian Analysis

Existing Conditions

As shown in **Table 17-10**, the sidewalk analyzed would operate at acceptable LOS B during all peak hours analyzed.

Table 17-10 Existing Pedestrian Levels of Service

	Weekday AM Peak Hour				Weekday Midday Peak Hour			Weekday PM Peak Hour		
Sidewalk	**Effective Width, ft**	**Volume, ped/hr**	**Avg Ped Space, SF/P**	**Platoon LOS**	**Volume, ped/hr**	**Avg Ped Space, SF/P**	**Platoon LOS**	**Volume, ped/hr**	**Avg Ped Space, SF/P**	**Platoon LOS**
DeKalb Avenue, between Flatbush Avenue Extension and Hudson Avenue (north side)	4.8	351	185.0	B	372	168.3	B	332	188.7	B

No-Action without Construction Condition

As was similarly done for the operational pedestrian analyses presented in **Chapter 10, Transportation**, the No-Action condition pedestrian volumes were developed by applying background growth rates provided in the *CEQR Technical Manual* and by incorporating projected pedestrian trips for background development projects assumed to be completed in the future by 2030. As shown in **Table 17-11**, the sidewalk analyzed would operate at acceptable LOS B during all peak hours analyzed.

Table 17-11 No-Action Pedestrian Levels of Service

Sidewalk	Effective Width, ft	Weekday AM Peak Hour			Weekday Midday Peak Hour			Weekday PM Peak Hour		
		Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS
DeKalb Avenue, between Flatbush Avenue Extension and Hudson Avenue (north side)	4.8	478	135.6	B	437	143.2	B	501	124.8	B

Construction With-Action Condition

Under the Construction With-Action condition, the south sidewalk of DeKalb Avenue between Flatbush Avenue Extension and Hudson Avenue and the west sidewalk of Hudson Avenue between DeKalb Avenue and Fulton Street would be closed for much of the construction's duration. As a result, pedestrian detours to nearby sidewalks are anticipated. As described above, use of the north sidewalk of DeKalb Avenue between Flatbush Avenue Extension and Hudson Avenue is expected to be the preferred detour for the closure of the DeKalb Avenue frontage sidewalk. Detour volumes related to the closure of the Hudson Avenue frontage sidewalk would be modest and would be distributed to other north-south sidewalks such as the Hudson Avenue east sidewalk between DeKalb Avenue and Fulton Street, and along sidewalks at adjacent streets (e.g., Flatbush Avenue Extension and Rockwell Place). Once distributed, the increment of Hudson Avenue pedestrian detour volumes at each sidewalk would be modest (the increment per sidewalk would be below the *CEQR Technical Manual* pedestrian analysis screening thresholds of 200 pedestrian trips).

With-Action pedestrian volumes during peak construction along the sidewalk analyzed on DeKalb Avenue were developed by conservatively applying the No-Action pedestrian volumes along the south sidewalk of DeKalb Avenue that would normally be expected if no sidewalk closure took place. In addition, credit for the displacement of pedestrian trips generated by the existing building on the Development Site was not taken. Lastly, construction workers would not be expected to utilize the north sidewalk of DeKalb Avenue as it is not in direct route to the nearest parking garages, bus stops, or subway station entrances around the Development Site.

The level of service results for the analyzed sidewalk is presented in **Table 17-12**. As shown in **Table 17-12**, the north sidewalk of DeKalb Avenue between Flatbush Avenue Extension and Hudson Avenue would operate at LOS C during the weekday midday peak hour; however, this sidewalk would be significantly impacted during the weekday AM and PM peak hours (LOS D). While this sidewalk would be significantly impacted, there would be sufficient capacity at LOS D to accommodate all pedestrian users, albeit at more crowded conditions. Considering the temporary nature of the construction activities and resulting detours, and existing sidewalk and roadway constraints along DeKalb Avenue (i.e., there is a tree pit obstruction at the critical analysis point which impedes pedestrian flows), no feasible mitigation measure was identified and therefore, this significant impact would remain unmitigated during construction.

Table 17-12 No-Action vs. With-Action Pedestrian Levels of Service

	Weekday AM Peak Hour					Weekday Midday Peak Hour					Weekday PM Peak Hour				
	No-Action		With-Action			No-Action		With-Action			No-Action		With-Action		
Sidewalk	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS	Avg Ped Space, SF/P	Platoon LOS	Volume, ped/hr	Avg Ped Space, SF/P	Platoon LOS
DeKalb Avenue, between Flatbush Avenue Extension and Hudson Avenue (north side)	135.6	B	2,544	23.4	D	143.2	B	1,192	51.6	C	124.8	B	2,312	25.1	D

Air Quality

Construction impacts on air quality levels may occur because of particulate matter (fugitive dust) created by excavation, demolition, transfer of debris into trucks, emissions from on-site diesel equipment, and emissions from increased truck traffic to and from the construction site on local roadways. As discussed in the *CEQR Technical Manual,* the determination of whether it is sufficient to conduct a qualitative analysis of these emissions or whether a quantitative analysis is required should take into account factors such as duration of construction activities, location of the project site in relation to existing residential uses and residential land uses created by the project or other sensitive receptors, the intensity of the construction activity, and the extent to which the project incorporates commitments to appropriate emission control measures.

The most intense construction activities in terms of emissions are typically from demolition, excavation, and foundation stages, since it is during these stages that the largest number of large, non-road diesel engines are employed, which combined with the fugitive dust from debris moving operations result in the highest levels of air emissions. The other stages of construction, including superstructure, exterior façades, interior finishes, and site work, typically result in lower air emissions since they require fewer pieces of heavy-duty diesel equipment. Equipment used in the latter stages of construction generally involves use of small engines, with use of electric tools dispersed vertically throughout the building, resulting in very low concentration increments in adjacent areas. Additionally, the latter stages of construction do not involve soil disturbance activities and therefore result in significantly lower fugitive dust emissions. Construction activities associated with interior finishes are shielded from nearby sensitive receptors by the proposed structures themselves.

For the Proposed Project, the overall construction period would exceed 2 years. Given that multiple buildings would be constructed in each phase and the construction would occur within close proximity to sensitive receptors, a detailed quantitative analysis of construction air quality impacts was undertaken.

Introduction

Emissions from on-site construction equipment, on-road construction vehicles, and dust generating construction activities all have the potential to affect air quality. The analysis of potential construction air quality impacts included both on-site and on-road sources of air emissions, and the combined impact of both sources, where applicable.

In general, much of the heavy equipment used in construction is powered by diesel engines that have the potential to produce relatively high levels of nitrogen oxides (NO_x) and particulate matter (PM) emissions. Fugitive dust generated by construction activities is also a source of PM. Gasoline engines produce relatively high levels of carbon monoxide (CO). Since the EPA mandates the use of ULSD fuel for all highway and non-road diesel engines, sulfur oxides (SO_x) emitted from the Proposed Actions' construction activities would be negligible. Therefore, the pollutants analyzed for the construction period are NO_2 particles with an aerodynamic diameter of less than or equal to 10 micrometers (PM_{10}), particles with an aerodynamic diameter of less than or equal to 2.5 micrometers ($PM_{2.5}$), and CO. These pollutants and averaging periods are shown in **Table 17-13**.

Table 17-13 Pollutants for Analysis and Averaging Periods

Pollutant	Averaging Period
$PM_{2.5}$	24-hour
	Annual
PM_{10}	24-hour
NO_2	1-hour
	Annual
CO	1-hour
	8-hour

Pollutants of Concern: $PM_{2.5}$, PM_{10}, NO_2, and CO

Concentrations were predicted using dispersion models to determine the potential for air quality impacts during on-site construction activities and due to construction-generated traffic on local roadways. Concentrations for each pollutant of concern due to construction activities at each sensitive receptor were predicted during the most representative worst-case time period. The potential for significant adverse impacts were determined by comparing modeled short-term PM_{10}, annual NO_2, and short-term CO concentrations to the NAAQS, and modeled short-term and annual $PM_{2.5}$ increments to applicable *de minimis* thresholds.

Chapter 11, Air Quality, contains a review of the air pollutants; applicable regulations, standards, and benchmarks; and general methodology for the air quality analyses. Additional details relevant to the construction air quality analysis methodology are discussed further below.

Emissions Reduction Measures

Construction activity in general, and large-scale construction in particular, has the potential to adversely affect air quality because of diesel emissions. Measures would be taken to reduce pollutant emissions during construction under the Proposed Actions in accordance with all applicable laws, regulations, and building codes. These include the use of clean fuel, dust suppression measures, idling restrictions, and diesel equipment reduction:

Clean Fuel. ULSD fuel would be used exclusively for all diesel engines throughout the development area.

Dust Control. To minimize dust emissions from construction activities, a dust control plan including a robust watering program would be required. For example, all trucks hauling loose material would be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the development site; water sprays would be used for all demolition, excavation, and transfer of soils so that materials would be dampened as necessary to avoid the suspension of dust into the air. Stockpiled soils or debris would be watered, stabilized with a chemical suppressing agent, or covered. All measures required by DEP's Construction Dust Rules regulating construction related dust emissions would be implemented.

Idling Restriction. Construction activities would adhere to the local law restricting unnecessary idling on roadways. Vehicle idle time would be restricted to 3 minutes for all equipment and vehicles that are not using their engines to operate a loading, unloading, or processing device (e.g., concrete-mixing trucks) or are otherwise required for the proper operation of the engine.

Diesel Equipment Reduction. In accordance with the New York City Noise Control Code as discussed below, under **Noise**, electrically powered equipment would be preferred over diesel-powered and gasoline-powered versions of that equipment to the extent practicable. Equipment that would use grid power in lieu of diesel engines include, but may not be limited to, hoists and small equipment (such as welders).

Overall, the emission control measures identified above are expected to reduce air pollutant emissions during construction under the Proposed Actions.

Air Quality Analysis Methodologies

On-Site Construction Impacts Analysis Methodologies

Based on a conceptual construction schedule developed for each phase of the project, the highest peak emissions months from construction of the Proposed Project were modeled for each applicable pollutant to estimate short-term impact and the highest rolling average annual emissions were used to estimate annual impact. Short-term impacts of construction were estimated for $PM_{2.5}$, PM_{10}, and CO; long-term impacts of construction were estimated for annual $PM_{2.5}$ and NO_2.

A dispersion analysis—which considers the PM_{10}, $PM_{2.5}$, NO_x, and CO emissions from on-site sources (construction equipment, fugitive dust and trucks idling, loading and unloading, and entering the site)—was performed to determine potential air quality effects during the peak emission construction phase.

The effects of the trucks approaching and departing the site on public or internal roadways were also included in the emission calculations for the analysis. For the dispersion analysis, roadway access (including the construction trucks and workers trips) was included as area sources, representing the approach and departure from the site. Additionally, impacts of construction traffic emissions at intersections and streets within the vicinity of the Development Site were considered separately using *CEQR Technical Manual* screening methodologies (see the **Off-Site Construction Impacts** subsection).

The following sections provide additional details relevant to the construction air quality analysis methodology. For a review of the applicable regulations, standards and criteria, and benchmarks for stationary and mobile source air quality analyses, refer to **Chapter 11, Air Quality**.

The analysis was performed following EPA and *CEQR Technical Manual* procedures and analytical tools. The estimated emission rates were then used as an input to the air quality dispersion model to determine potential impacts.

Emission Estimation Process

The construction analyses used an emission estimation method, and a modeling approach previously developed for evaluating air quality impacts of construction projects in New York City. Because the level and types of construction activities would vary from month to month, the approach includes a determination of the worst-case emission period based on an estimated monthly construction work schedule, the number of on-site construction equipment types and rated horsepower of each unit, quantities of materials to be excavated, and number of trucks arriving, working, and leaving the site.

The worst-case short-term emissions (e.g., maximum monthly emissions) and the maximum annual emissions (based on a 12-month rolling average) were determined based on the construction schedule, activities and equipment projected to be required for the construction period. The

assessment considered several main phases of construction: excavation/foundation, superstructure, exterior construction, interior fit-out, elevators and site work.

For NO_2 1-hour assessments, the emissions were determined based on the worst months of the 3 maximum construction annual emission years (2028–2030).

Emissions Reduction Measures Considered

Measures would be taken to reduce pollutant emissions during construction in the future with the Proposed Actions in accordance with the Air Emissions Reduction Program discussed above.

Engine Exhaust Emissions Estimation Process

The sizes, types, and number of units of construction equipment were estimated based on the construction activity schedule developed for the Proposed Actions. Emission rates for NO_2, CO, PM_{10}, and $PM_{2.5}$ from truck engines were developed using the EPA Motor Vehicle Emission Simulator (MOVES4) emission model. Emission factors for NO_2, CO, PM_{10}, and $PM_{2.5}$ from on-site construction engines were developed using the NONROAD emission module included in the MOVES4 emission model.

Fugitive Sources Emission Estimation Process

In addition to engine emissions, dust emissions from operations (e.g., excavation and transferring of excavated materials into dump trucks) were calculated based on EPA procedures delineated in AP-42 Table 13.2.3-1. Since construction is required to follow the New York City Air Pollution Control Code regarding construction-related dust emissions, a 50 percent reduction in particulate emissions from fugitive dust was conservatively assumed in the calculation (dust control methods such as wet suppression would often provide at least a 50 percent reduction in particulate emissions).

Dispersion Modeling—Source Simulation

Potential impacts from the Proposed Actions' construction sources were evaluated using a refined dispersion model: the EPA AERMOD dispersion model. AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain, and includes updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and handling of terrain interactions.

Receptor Locations

Receptors were placed at locations that would be publicly accessible, at residential and other sensitive uses at both ground-level and elevated locations (e.g., residential windows), at adjacent sidewalk locations, at publicly accessible open spaces, and at completed and occupied buildings within the vicinity of the Development Site where applicable. In addition, a ground-level receptor was placed to enable extrapolation of concentrations throughout the study area at locations more distant from construction activities.

For the $PM_{2.5}$ annual neighborhood analysis, the receptors were placed at an area of approximately 1 square kilometer, centered on the construction site.

Meteorological Data

All analyses were conducted using 5 consecutive years of meteorological data (2017–2021) provided by NYSDEC. Surface data were obtained from LaGuardia Airport and upper air data were obtained from Brookhaven station, New York.

Background Concentrations

To estimate the maximum expected total pollutant concentrations, the calculated impacts from the emission sources must be added to a background value that accounts for existing pollutant concentrations from other sources. The background levels are based on concentrations monitored from the representative monitoring stations and are consistent with the background concentrations to be used for the operational air quality analysis (See **Table 11-2** in **Chapter 11, Air Quality**).

Potential CO and $PM_{2.5}$ impacts are also assessed on an incremental basis and compared with the respective CO or $PM_{2.5}$ *de minimis* criteria. Based on the background concentrations, the 8-hour CO *de minimis* is 3.7 ppm; 24-hour $PM_{2.5}$ *de minimis* is 7.7 $\mu g/m^3$.

Off-Site Construction Impacts Analysis Methodologies

As outlined in the *CEQR Technical Manual*, in this area of the city, actions that would result in the generation of 160 or more peak-hour vehicle trips at an intersection may cause adverse air quality impacts and require a detailed air quality analysis for CO.

For $PM_{2.5}$, the screening procedure outlined in the *CEQR Technical Manual* is based on determining whether the projected number of peak hourly vehicle trips at an intersection exceeds thresholds based on heavy-duty diesel vehicle (HDDV) equivalents. The thresholds are as follows:

- 12 or more HDDV for paved roads with average daily traffic fewer than 5,000 vehicles;
- 19 or more HDDV for collector roads;
- 23 or more HDDV for principal and minor arterials; or
- 23 or more HDDV for expressways and limited-access roads.

To determine whether any of these thresholds are exceeded, the worksheet referenced in Section 201 of the *CEQR Technical Manual* is utilized to calculate the equivalent number of HDDV equivalents at intersections in the traffic study area. The worksheet uses vehicle classification information based on the traffic data collected for the project and assigns these classifications to vehicle categories using a table referenced in the *CEQR Technical Manual*. Roadway classifications are determined by corridor at each intersection, based on NYC DOT functional class criteria and generated truck trips and worker trips during construction phase.

Based on the screening analysis, the projected vehicle trips generated during construction of the Proposed Project would not exceed the CO threshold of 160 vehicles in a peak hour at any intersection. Therefore, CO mobile source detailed analysis is not warranted.

The maximum hourly traffic incremental increase of the two intersections due to construction of the Proposed Project would exceed the PM emission screening thresholds discussed above. Therefore, a detailed mobile source intersection analysis of PM emissions is required.

Based on the screening analysis, the intersection of Hudson Avenue and DeKalb Avenue, which is predicted to have the highest increment, was selected for a $PM_{2.5}$ mobile source detailed analysis.

Vehicle Emissions

Vehicular PM emission factors utilized in the dispersion modeling were computed using the latest version of the EPA's Motor Vehicle Emission Simulator (MOVES4) model. This emissions model is capable of calculating engine emission factors for various vehicle types, based on the fuel type (gasoline, diesel, or compressed natural gas), meteorological conditions, vehicle speeds, vehicle age, roadway types, number of starts per day, engine soak time, and various other factors that influence emissions, such as an inspection maintenance program.

MOVES input files (i.e., fuel data, county-specific hourly temperature and relative humidity data, inspection/maintenance coverage, etc.) for Kings County were obtained from NYSDEC. Source type age distribution data were obtained from NYSDEC and processed using the EPA's *Age Distribution Projection Tool for MOVES4*.[2]

Traffic Data

Traffic data for the intersection analysis were derived from existing traffic counts, projected future growth in traffic, and other information developed as part of the traffic analysis for the Proposed Project (see **Transportation Section** above). The periods analyzed were weekday morning (6:00 to 7:00 AM) and afternoon (3:00 to 4:00 PM) peak periods.

Fugitive Dust

In addition to exhaust, tire and brake-wear emission factors estimated by MOVES4 for particulate matter, fugitive dust emissions were estimated using EPA's Compilation of Air Emissions Factors (AP-42)[3] guidance for paved roads. Fugitive dust emissions were used in the short-term, 24-hour modeling of $PM_{2.5}$. An average weight of 22.5 tons and 3.0 tons was assumed for construction trucks and worker vehicles in the analyses, respectively.

Consistent with NYCDEP's conclusion that fugitive dust has insignificant contribution on the neighborhood scale, fugitive dust emissions were not used in the annual $PM_{2.5}$ modeling (i.e., neighborhood scale analysis).

Dispersion Model

The PM concentrations due to vehicular emissions adjacent to the analysis sites were predicted using the American Meteorological Society/Environmental Protection Agency Regulated Model (AERMOD) Version 24142.[4] AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain, including updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and handling of terrain interactions. Following USEPA guidelines, the analysis was performed using an area source representation of emission sources in order to simulate traffic-related air pollutant dispersion.[5] Hourly traffic volumes and

[2] EPA. Age Distribution Projection Tool for MOVES4: https://www.epa.gov/moves/tools-develop-or-convert-moves-inputs

[3] EPA. AP-42, chapter 13.2.1 Paved Roads. https://www.epa.gov/sites/production/files/2020-10/documents/13.2.1_paved_roads.pdf

[4] USEPA. User's Guide for the AMS/USEPA Regulatory Model (AERMOD). Office of Air Quality Planning and Standards. USEPA-454/B-19-027. Research Triangle Park, North Carolina. August 2019.

[5] USEPA. Project-Level Conformity and Hot-Spot Analyses, available at: https://www.epa.gov/state-and-local-transportation/project-levelconformity-and-hot-spot-analyses#pmguidance

associated emission factors were used to estimate hourly emission rates from each modeled roadway segment and predict traffic-related air pollutant concentrations at receptor locations.

Receptor Placement

Sensitive receptors near the intersection were placed at the existing sidewalks under No-Action and With-Action conditions at 1.8 meters above grade. For the assessment of short-term impacts, receptors were placed at the sidewalks around the intersection at approximately 6 to 7.5 feet (1.8 to 2.2 meters) from the curb. For compliance with the annual neighborhood PM2.5 criterion, receptors were placed 15 meters away from the curb.

Meteorological Data

Dispersion analysis used the latest available 5 years (2017–2021) of hourly meteorological observations from LaGuardia Airport National Weather Service station and upper air data obtained from Brookhaven station, New York.

Potential Impacts from Proposed Project Construction

This section provides a summary of the construction air quality results from the construction activities of the Proposed Project.

On-Site Construction Results

Table 17-14 presents the highest predicted total concentration (including background for appropriate pollutants) due to construction activities on the Development Site.

As indicated in **Table 17-14**, the highest predicted total concentrations of 1-hour CO, 8-hour CO, 1-hour and annual NO_2, and 24-hour PM_{10} would not result in any concentrations that exceed the NAAQS. The highest predicted 8-hour CO concentration is well below the City's *de minimis* criteria. The highest predicted 24-hour and annual $PM_{2.5}$ incremental concentration (for a discrete receptor locations) would not exceed the City's *de minimis* criteria of 7.6 µg/m^3, 0.3 µg/m^3 and 0.1 µg/m^3 respectively.

Table 17-14 Highest Predicted Total Concentrations for Construction Activities

Pollutant	Averaging Period	Highest Modeled Concentration	Background Concentration	Total Concentration	NAAQS/De Minimis
CO	1-Hour[1]	0.12 ppm	2.1 ppm	2.22 ppm	35 ppm
	8-Hour[1]	0.04 ppm	1.6 ppm	1.64 ppm	9 ppm/3.7 ppm
NO_2	1-Hour[1]	93.1 ppb			100 ppb
	Annual[1]	2.6 ppb	14.2 ppb	16.8 ppb	53 ppb
PM_{10}	24-Hour	3.4 µg/m^3	38 µg/m^3	41.4 µg/m^3	150 µg/m^3
$PM_{2.5}$	24-Hour[2]	2.2 µg/m^3	19.8 µg/m^3	22.0 µg/m^3	35/7.6 µg/m^3
	Annual[3]	0.26 µg/m^3	7.5 µg/m^3	7.76 µg/m^3	9/0.3 µg/m^3
	Annual Neighborhood Receptors[4]	0.01 µg/m^3	7.5 µg/m^3	7.51 µg/m^3	9/0.1 µg/m^3

Notes:
[1] CO and NO_2 concentrations can be converted from ppm/ppb to µg/m^3 based on 1 ppm = 1145 µg/m^3 for CO and 1 ppb=1.88 µg/m^3 for NO_2.
[2] The 24-hour $PM_{2.5}$ background concentration is used to develop the *de minimis* criteria.
[3] Annual $PM_{2.5}$ impacts are compared with the $PM_{2.5}$ *de minimis* criteria of 0.3 µg/m^3, without considering the annual background.
[4] Annual $PM_{2.5}$ impacts are compared with the $PM_{2.5}$ *de minimis* criteria of 0.1 µg/m^3, without considering the annual background.

The results of this quantitative analysis indicate that the construction of the Proposed Project would not result in any concentrations of NO_2, PM_{10}, and CO that exceed NAAQS. In addition, the maximum predicted incremental concentrations of CO 8-hour and $PM_{2.5}$ would not exceed the City's *de minimis* criteria. No significant adverse air quality impacts are anticipated from the off-site mobile source emissions due to construction.

Off-Site Construction Results

A microscale (detailed) analysis of the impacts of the construction-generated trips was conducted at the intersection of Hudson Avenue and DeKalb Avenue. Emissions of $PM_{2.5}$ (24-hour and annual) at all links were estimated using MOVES4 model using traffic data developed for the Proposed Project and the NYSDEC inputs for Brooklyn.

The intersection analysis was conducted using the latest version of the AERMOD dispersion model and incorporated microscale receptors for the PM 24-hour impacts, as well as neighborhood scale receptors for the annual $PM_{2.5}$ impacts. The results of this analysis are presented in **Table 17-15**.

Table 17-15 Mobile Source Analysis Results

Pollutant	Averaging Period	Background Concentration	Increment/Total Concentration	Impact Threshold (*de Minimis*/ NAAQS)
$PM_{2.5}$	24-hour[1]	19.8 µg/m^3	0.12/19.92 µg/m^3	7.6/35 µg/m^3
$PM_{2.5}$	Annual[2]	7.5 µg/m^3	0.0007/7.5007µg/m^3	0.1/9.0 µg/m^3

Notes:
[1] The 24-hour $PM_{2.5}$ background concentration is used to develop the *de minimis criteria*.
[2] Annual $PM_{2.5}$ impacts are compared with the $PM_{2.5}$ *de minimis criteria* of 0.1 µg/m^3, without considering the annual background.

As **Table 17-14** shows, the $PM_{2.5}$ 24-hour, and annual impacts would be below their corresponding *de minimis* thresholds or NAAQS, respectively.

Conclusions

Measures would be taken to reduce pollutant emissions during construction in accordance with all applicable laws, regulations, and building codes. These include dust suppression measures, idling restrictions, and the use of ULSD fuel. With the implementation of these emission reduction measures, the dispersion modeling analysis of construction-related air emissions for on-site and off-site sources determined that $PM_{2.5}$, PM_{10}, annual-average NO_2, and CO concentrations would be below their corresponding *de minimis* thresholds or NAAQS, respectively. Therefore, construction of the Proposed Project in the future with the Proposed Actions would not result in significant adverse air quality impacts.

Noise

Construction activities have the potential to affect the noise conditions of receptors near the Development Site. Construction noise can vary widely depending on the phase of construction (e.g., demolition, excavation, foundation, steel and concrete erection, mechanical and interior fit out) and the specific equipment and methods being used. The most significant construction noise sources at a construction site are generally back-up alarms, and equipment such as excavators, drill rigs, and cranes. The noisiest phase of construction is typically during demolition, excavation, and foundation work. The superstructure phase of construction can also have higher noise levels associated with concrete trucks and cranes. Similar to air emissions, interior fit out typically results in lower noise emissions, since it requires fewer pieces of heavy-duty diesel equipment.

As discussed in the *CEQR Technical Manual,* the need to conduct a qualitative analysis of construction noise emissions or a quantitative analysis is considered based on factors such as the location of the Development Site in relation to existing residential uses or other sensitive receptors, the intensity of the construction activity, and the extent to which the project incorporates commitments to appropriate noise control measures.

For the Proposed Project, the overall construction period would be approximately 60 months; including the demolition/abatement, excavation/foundation, core and shell, interiors phases.

Noise Reduction Measures

Noise from construction activities and some construction equipment is regulated by the New York City Noise Control Code and by the EPA. The New York City Noise Control Code limits construction activities to weekdays between the hours of 7:00 AM and 6:00 PM, sets noise limits for specific pieces of construction equipment, and requires the implementation of a Construction Noise Mitigation Plan. The Construction Noise Mitigation Plan outlines project-specific noise control measures and identifies applicable noise source and noise path controls. Source noise controls are designed to mitigate noises at their origin, while path noise controls focus on the available route(s) between a noise source and any receptors.

As noted above, the determination whether it is sufficient to conduct a qualitative analysis of construction-period noise should consider the extent to which the project incorporates commitments to appropriate noise control measures. In terms of source controls (i.e., reducing noise

levels at the source or during the most sensitive time periods), the following measures would be mandated in accordance with the New York City Noise Code:

The contractor would self-certify that all construction tools and equipment have been maintained to not generate excessive or unnecessary noise and that the noise emissions would not exceed the levels specified in Subchapter 5 of the NYC Noise Control Code and Table 22-1 of the *CEQR Technical Manual*.

Where feasible, practical, and safe, the use of back-up alarms would be minimized and/or quieter back-up alarms would be installed in accordance with OSHA standards.

Vehicles would not be allowed to idle more than 3 minutes, in accordance with New York City Administrative Code §24-163.

The contractor would implement a training program to inform workers of methods that can minimize construction noise.

In terms of path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors), the following measures for construction would be implemented:

When the DOB regulations require a perimeter barrier or "construction fence" and the site is within 200 feet of a receptor, the barrier shall be constructed in a specific manner (as described in the New York City Noise Code) to provide sufficient sound attenuation. Section 3307.7 of the New York City Building Code requires that a solid 8-foot-tall wall made of wood or other suitable material is installed where a new building is being constructed, or a building is being demolished to grade. The project would include an 8-foot-tall perimeter wall surrounding the Development Site.

Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, could be located away from and shielded from sensitive receptor locations.

Should noise complaints occur during construction, the contractor would use path noise control measures such as temporary noise barriers, jersey barriers and/or portable noise enclosures for small equipment.

Construction Noise Code

As described in **Construction Regulations and General Practices**, the project would follow guidelines set forth by the NYCDEP Noise Code (Section 24-228). The DOB regulations require a perimeter barrier or "construction noise barrier" and when the site is within 200 feet of a receptor, the barrier shall be constructed in a specific manner (as described in the New York City Noise Code) to provide sufficient sound attenuation. Section 3307.7 of the New York City Building Code requires a solid perimeter noise barrier made from wood or other suitable material be constructed where a new building is being constructed or a building is being demolished to grade.

For the Proposed Project, a perimeter noise barrier 8 feet in height has been included surrounding each phase of construction.

Construction Noise Impact Criteria

The construction noise analysis methodology involves identifying noise-sensitive receptors, including residential, commercial office spaces, and community facilities near the Development Site assessing

the potential for construction noise impacts due to mobile sources (i.e., construction trucks and construction worker vehicles), and assessing potential stationary construction noise impacts by evaluating the noise emissions during each month of construction, identifying the loudest periods for each phase (i.e., demolition, excavation/foundation, superstructure, façade, and interior fit-out), predicting construction noise levels at each receptor location, assessing potential impacts according to applicable construction noise impact criteria, and evaluating whether noise mitigation is warranted, feasible, and effective.

The noise impact criteria described in Chapter 19, Section 410 of the *CEQR Technical Manual* serve as a screening-level threshold for potential construction noise impacts. As described in Chapter 19 (Noise), Section 410, there would be a significant noise impact from long-term operational conditions if ambient sound levels increase by 3 dBA (L_{eq}) or more and absolute levels would exceed 65 dBA L_{eq}, or, if existing ambient sound levels are 60 dBA L_{eq} or less, and noise levels would increase by 5 dBA (L_{eq}) or more. The significance of construction noise effects depends on the intensity and duration of construction activities. If construction of a proposed project would not result in any exceedances of these criteria at a given receptor, then that receptor would not have the potential to experience a construction noise impact. However, if construction would result in exceedances of these noise impact criteria, then further consideration of the intensity and duration of construction noise is warranted at that receptor to determine significant adverse construction noise impact.

Chapter 22, Section 100 of the *CEQR Technical Manual* breaks construction duration into "short-term" and "long-term" and states that construction noise is not likely to require analysis unless it "affects a sensitive receptor over a long period of time." Consequently, the construction noise analysis considers both the potential for construction of a project to create high noise levels (the "intensity"), and whether construction noise would occur for an extended period of time (the "duration") in evaluating potential construction noise effects.

Construction Noise Receptors

The Development Site is near existing residential and commercial land uses. Based on the proximity of these noise-sensitive land uses, there is the potential for construction noise levels to exceed the CEQR screening criteria. As shown in **Figure 17-18** and **Table 17-16**, the study area for construction noise includes 17 buildings (or building façades) with residential, commercial office, or community facility uses. Receptors were included on the closest portion of each building, or building façade, to the Development Site and on each floor of the buildings. Multiple receptors were included for any sensitive land uses immediately adjacent to the Development Site where there would be the greatest potential for construction noise impacts.

The outdoor-to-indoor noise reduction of the receptor buildings has been estimated based on a visual survey of the buildings' facades. Buildings with certain windows and central HVAC conditions were assessed using the following window/wall reduction assumptions:

25 dBA of attenuation for any window/wall condition; and

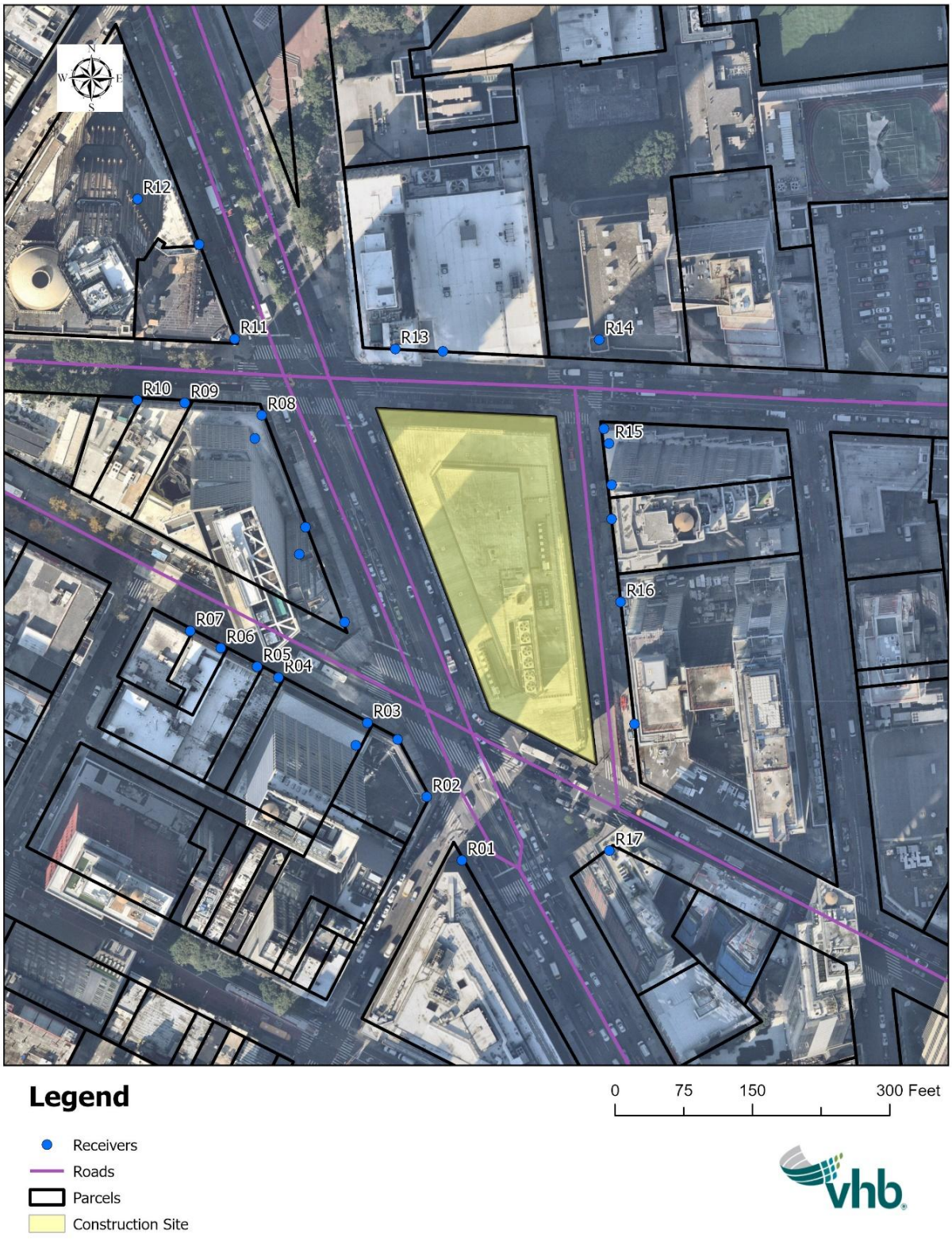
30 dBA of attenuation for insulated window with central HVAC.

Table 17-16 Receptors and Land Uses

Receptors	Address	Block	Lot	Land Use
R01	38 Flatbush Avenue	162	1	Commercial Office
R02	542 Fulton Street	161	43	Residential/Commercial
R03	540 Fulton Street	161	7502	Residential/Commercial
R04	530 Fulton Street	161	37	Residential/Commercial
R05	526 Fulton Street	161	27	Community Facility
R06	524 Fulton Street	161	33	Community Facility
R07	518 Fulton St	161	30	Commercial Office
R08	589 Fulton Street	149	14	Residential/Commercial
R09	563 Fulton St	149	26	Residential/Commercial
R10	559 Fulton St	149	28	Residential/Commercial
R11	33 DeKalb Ave	149	60	Commercial Office
R12	9 DeKalb Ave	149	7503	Residential/Commercial
R13	371 Flatbush Ave Ext	2085	7501	Community Facility
R14	75 DeKalb Avenue	2085	1	Community Facility
R15	80 DeKalb Avenue	2094	10	Residential/Commercial
R16	625 Fulton Street	2094	1	Residential/Commercial
R17	1 Flatbush Avenue	2106	26	Residential/Commercial

Source: VHB, 2025

Figure 17-18 Construction Noise Receptor Locations



Construction Noise Assessment Methodology

The detailed construction noise analysis includes both mobile and stationary construction noise sources. Stationary sources are based on typical equipment used during all phases of construction including demolition/abatement, excavation/foundation, core and shell, and interiors. There would be overlapping construction activities during core and shell and Interior activities.

Construction mobile sources include worker vehicles and trucks. Construction noise has been evaluated for the construction mobile source peak period from 6:00 AM to 7:00 AM. During this period, there would be no construction noise from stationary sources.

Construction Mobile Source Noise Assessment

The construction mobile source noise assessment evaluated sections of roadway along Flatbush Avenue Extension, DeKalb Avenue, Fulton Street, and Hudson Avenue during the 6:00 to 7:00 AM period. Traffic data was collected along with the noise measurements.

The potential for construction mobile sources to increase ambient sound conditions has been determined based on proportional modeling of noise PCEs. If construction mobile sources would result in a doubling or more of PCEs, it would result in a 3 dBA or greater increase in noise levels. If PCEs would not double during construction, there would not be a significant adverse vehicular noise impact, and no further mobile source noise analysis is warranted. The *CEQR Technical Manual* describes the process to determine PCEs. Vehicle classes are defined to have the following PCEs based on typical vehicles speeds:

Each automobile or light truck: 1 noise PCE

Each medium truck: 13 noise PCEs

Each bus: 18 noise PCEs

Each heavy truck: 47 noise PCEs

Increases in noise due to construction mobile sources are calculated using the following equation:

$$Sound\ Level\ Increase\ (Leq) = 10 * \log\left(\frac{Existing\ and\ Construction\ PCEs}{Existing\ PCEs}\right)$$

As described in the **Construction Traffic** section, the peak construction vehicle trips during the peak construction quarter (third quarter of 2030) would include 151 automobiles and 22 truck trips in the 6:00 AM to 7:00 AM period. These vehicle trips would be distributed throughout the study area.

As shown in **Table 17-17,** noise from construction mobile sources between 6:00 AM and 7:00 AM would typically have an increase of 0.1 dBA to 3.7 dBA compared to the No-Action condition.

Table 17-17 Construction Mobile Source Screening Analysis

	Intersection	Existing PCEs (6:00 to 7:00 AM)	No-Action PCEs (6:00 to 7:00 AM)	Construction PCEs (6:00 to 7:00 AM)	Construction Mobile Source Sound Increase (dBA)
1	DeKalb Avenue	1,016	1,277	1,787	1.5
2	Flatbush Avenue Extension	9,036	9,149	9,183	0.0
3	Fulton Street	2,462	2,706	2,743	0.1
4	Hudson Avenue	159	304	715	3.7

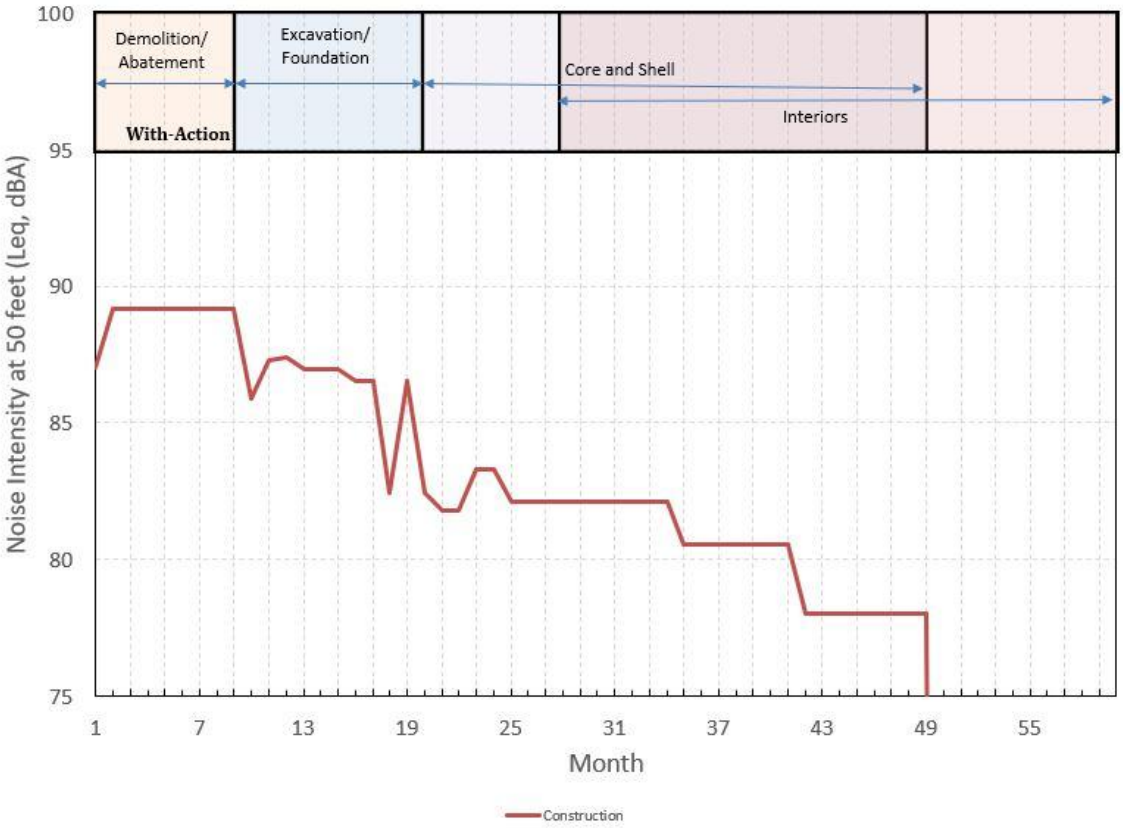
Source: VHB, 2025

Since the screening shows an increase of more than 3 dBA along Hudson Avenue, a detailed traffic noise analysis has been performed using the methodology described in **Chapter 15, Noise**. Multiple receptors have been modeled along Hudson Avenue. The detailed modeling shows that the maximum noise level increase would be 2.9 dBA. As the construction mobile source noise levels would not increase by 3 dBA or more, there would be no significant adverse noise impact related to mobile sources.

Construction Stationary Source Noise Modeling

Construction schedule was assessed based on the anticipated construction equipment. **Figure 17-19** presents the cumulative sound emissions from stationary construction equipment during the peak noise month of each phase for the construction conditions. The cumulative sound emissions represent the total energy-average (L_{eq}) level of all equipment operating at a distance of 50 feet. This sound emission is not the actual sound level that would exist at the Development Site since actual equipment is distributed throughout the site, but the cumulative emissions level indicates which periods of construction are expected to be the loudest and which months should be used for analysis.

Figure 17-19 Cumulative Sound Emissions from Stationary Equipment during Each Month



Construction noise from stationary sources has been evaluated for seven different phases of construction. At the Development Site there would be demolition/abatement, excavation/foundation, core and shell, and two separately assessed phases of interior fit-out, described further below. Construction noise from stationary sources has been evaluated for the following phases:

Phase A: The demolition and abatement phase of the Development Site would occur. Demolition of the Development Site would have a duration of 9 months. Demolition/abatement noise has been evaluated during Month 7. The peak noise intensity would be in the high-80s dBA.

Phase B: The excavation/foundation phase of the Development Site would occur. Excavation/foundation of the Development Site would have a duration of 11 months. Construction has been evaluated based on Month 12 as this period has the highest construction sound emissions. The peak noise intensity would be in the high-80s dBA.

Phase C: The core and shell phase just starts. Core and shell of the Development Site would have a duration of 29 months. Construction has been evaluated based on Month 21 for the beginning and site preparation for core and shell phase. The peak noise intensity would be in the low-80s dBA.

Phase D: The core and shell phase would reach its peak. Core and shell of the Development Site would have a duration of 29 months. Construction has been evaluated based on Month 24 for the core and shell phase as this period has the highest construction sound emissions. The peak noise intensity would be in the mid-80s dBA.

Phase E: The interiors phase would occur starting Month 28 and would have a duration of 33 months. Construction has been evaluated based on Month 34 for the overlapping 14 months of core and shell and interiors phases as this period has the highest construction sound emissions for the first 7 overlapping months. The peak noise intensity would be in the low-80s dBA.

Phase F: The interiors phase would continue while the core and shell would slow down. Construction has been evaluated based on Month 35 for the second 7 overlapping months. The peak noise intensity would be in the low-80s dBA.

Phase G: The interiors phase would continue. However, the equipment associated with the core and shell phase would be reduced. Construction has been evaluated based on Month 42 for the overlapping 8 months of core and shell and interiors phases as this period has the highest construction sound emissions. The peak noise intensity would be in the high-70s dBA.

Table 17-18 presents the type of equipment, the maximum sound level at 50 feet, the utilization factors (percentage of time the equipment is operating at full power), and the number of each piece of equipment that is used during the loudest month of each phase of construction based on the *CEQR Technical Manual*. These equipment assumptions are based on conceptual site plans and construction schedules. Therefore, these represent a worst-case condition regarding the number of pieces of construction equipment and the duration of construction activities. This table does not include trucks at the Development Site such as box trucks, pickup trucks, tractor trailers, packer trucks, container trucks, and dump trucks since they are not allowed to idle more than 3 minutes in accordance with New York City Administrative Code §24-163.

Table 17-18 Sound Levels and Maximum Numbers of the Construction Equipment

			Number of Construction Pieces of Equipment						
Equipment[1]	**Maximum Sound Level at 50 feet (dBA, L_{max})**	**Utilization Factor (%)**	**Phase A (M7)**	**Phase B (M12)**	**Phase C (M21)**	**Phase D (M24)**	**Phase E (M34)**	**Phase F (M35)**	**Phase G (M42)**
Concrete Mixer Truck	85	40	0	2	8	8	8	0	0
Concrete Pump Truck	82	20	0	3	6	6	6	0	0
Compressor	75	40	1	3	0	0	0	0	0
Excavator	85	40	4	3	0	0	0	0	0
Front End Loader	80	40	4	0	0	0	0	0	0
Brocks	85	50	1	0	0	0	0	0	0
Generator	70	50	0	2	0	0	0	0	0
Caisson Rig	84	20	0	2	0	0	0	0	0
Crane	85	16	0	0	2	2	1	1	0
Hoist	75	50	0	0	0	4	4	4	4

Source: VHB, 2025.

[1] Since dump trucks and pickup trucks are not allowed to idle more than 3 minutes in accordance with New York City Administrative Code §24-163, they have been excluded from the construction noise predictions.

Existing Ambient Sound Levels

The model is considered validated using Computer Aided Noise Abatement (CadnaA) software by comparing measured noise levels to computed noise levels using counted traffic as input to the model, when the differences between the measured versus modeled noise levels are within +/- 3 dB(A). Measurements were conducted between 12 PM to 1 PM at all four locations adjacent to the Development Site.

The existing ambient sound levels at all receptor locations have been determined based on measurements conducted in the study area and CadnaA modeling of the traffic noise conditions for the 12 PM to 1 PM hour, since the measured noise levels during this period are relatively low among all construction hours (from 7 AM to 3 PM). See **Table 17-19** for a range of existing ambient noise levels at each receptor building.

Table 17-19 Background Noise Level (dBA, L_{eq})

Receptors	Address	Block	Lot	Land Use	Background Noise Level (dBA, L_{eq})[1]
R01	38 Flatbush Avenue	162	1	Commercial Office	68.3 - 69.5
R02	542 Fulton Street	161	43	Residential/Commercial	69.2 - 70.9
R03	540 Fulton Street	161	7502	Residential/Commercial	61.9 - 69.3
R04	530 Fulton Street	161	37	Residential/Commercial	66.7 - 67.7
R05	526 Fulton Street	161	27	Community Facility	66.8 - 67.7
R06	524 Fulton Street	161	33	Community Facility	66 - 67
R07	518 Fulton St	161	30	Commercial Office	66.1 - 67.1
R08	589 Fulton Street	149	14	Residential/Commercial	65.6 - 69.8
R09	563 Fulton St	149	26	Residential/Commercial	66.2 - 67
R10	559 Fulton St	149	28	Residential/Commercial	65.6 - 66.6
R11	33 DeKalb Ave	149	60	Commercial Office	68.8 - 69.8
R12	9 DeKalb Ave	149	7503	Residential/Commercial	53.6 - 69.2
R13	371 Flatbush Ave Ext	2085	7501	Community Facility	66.5 - 68.3
R14	75 DeKalb Avenue	2085	1	Community Facility	62.4 - 63.4
R15	80 DeKalb Avenue	2094	10	Residential/Commercial	58.6 - 66.9
R16	625 Fulton Street	2094	1	Residential/Commercial	57.3 - 64.8
R17	1 Flatbush Avenue	2106	26	Residential/Commercial	65.9 - 67.4

Notes:
[1] The range of background noise levels represent the range from ground level to the highest floor modeled for each façade of each receptor building.

Construction Noise Levels

The predicted construction noise levels are based on the equipment described in **Table 17-20**. Throughout the phased development consistent with New York City Building Code requirements, 8-foot perimeter walls have been modeled around the site.

In the *CEQR Technical Manual,* Chapter 19, Noise, defines 45 dBA (L_{10}) as an acceptable interior noise level limit for residential and community facility uses. Interior noise level of 50 dBA (L_{10}) is typically

considered to be an acceptable interior noise level limit for office and commercial office spaces. These acceptable interior L_{10} noise level limits were used to determine if mitigation measures are needed at receptors where elevated noise levels are projected with construction of the Proposed Project. The L_{10} metric is calculated by adding a 3-dBA adjustment factor to the calculated L_{eq} according to the guidance of the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM).

Table 17-20 provides the results of the with-construction condition exterior noise assessment at the nearest receptors to the Proposed Project, and the following sections discuss those receptors where noise increases are projected to be greater than 10 dBA. At those receptors, including residential receptors, where the predicted increases in noise levels due to construction of the Proposed Project would be less than 10 dBA, significant adverse construction noise impacts are not expected to occur.

It is found that the maximum construction noise levels (L_{10}) are expected to exceed 85 dBA at R13, R15, and R16. However, the construction modeling is based on an extremely conservative scenario that all equipment on-site would be operated at maximum capacity at the same time, which would barely occur or only occur for a very short period. Additionally, a noise mitigation plan would be developed prior to the start of work as required by the New York City Noise Code to reduce the construction noise impact as much as possible. Therefore, the exceedances of 85 dBA are expected to be temporary.

Table 17-20 Construction Exterior Noise Level

Receptors	Address	Land Use	Maximum Construction Noise L_{eq}	Maximum Construction Noise L_{10}	Change in L_{eq} (dBA)
R01	38 Flatbush Avenue Ext	Commercial Office	76.5	79.5	8.0
R02	542 Fulton Street	Commercial Office	78.8	81.8	9.0
R03	540 Fulton Street	Residential/Commercial	78.5	81.5	**13.6**
R04	530 Fulton Street	Residential/Commercial	76	79	9.3
R05	526 Fulton Street	Community Facility	74.9	77.9	8.1
R06	524 Fulton Street	Community Facility	73.5	76.5	7.5
R07	518 Fulton St	Commercial Office	71.6	74.6	5.5
R08	589 Fulton Street	Residential/Commercial	79.6	82.6	**13.0**
R09	563 Fulton St	Residential/Commercial	71.4	74.4	5.2
R10	559 Fulton St	Residential/Commercial	70.1	73.1	4.5
R11	33 DeKalb Ave	Commercial Office	75.1	78.1	6.3
R12	9 DeKalb Ave	Residential/Commercial	72.6	75.6	**13.5**
R13	371 Flatbush Ave Ext	Community Facility	84.5	87.5	**17.7**
R14	75 DeKalb Avenue	Community Facility	78.5	81.5	**16.1**
R15	80 DeKalb Avenue	Residential/Commercial	84.3	87.3	**25.6**
R16	625 Fulton Street	Residential/Commercial	86.6	89.6	**29.2**
R17	1 Flatbush Avenue	Residential/Commercial	76.7	79.7	**10.3**

Source: VHB, 2025

Receptor 03

Receptor 03 represents the residential building located at 540 Fulton Street. At this receptor, construction is predicted to produce exterior noise levels (L_{10}) up to low-80s dBA during the most noise-intensive stages of construction, which would result in noise level (L_{eq}) increases up to 13.6 dBA for 27 months. Noise levels for the remainder of construction would remain in the low to mid-70s dBA. As the building has a central HVAC system, it is expected that 30 dBA attenuation can be achieved with a closed-window condition. Therefore, maximum interior noise levels during construction would be in the high-40s to low-50s dBA for during this 27-month period, which is more than approximately 3 dBA greater than the recommended noise level threshold for this type of use according to the *CEQR Technical Manual* noise exposure criteria. As interior noise levels in the high-40s to low-50s dBA at this receptor would be greater than the recommended interior noise level threshold for residential uses (i.e., 45 dBA), such increases in noise levels would be considered a significant adverse construction noise impact. However, it should be noted that construction would typically occur during weekday daytime hours, when most residents are away from their homes and at workplaces.

Receptor 08

Receptor 08 represents the new residential building located at 589 Fulton Street, right across from the Flatbush Avenue Extension. At this receptor, construction is predicted to produce exterior noise levels (L_{10}) up to low-80s dBA during the most noise-intensive stages of construction, which would result in noise level (L_{eq}) increases up to 13.0 dBA for 20 months. Noise levels for the remainder of construction would remain in the high-70s dBA. The site has an E-designation requiring noise attenuation of 35 dBA. Therefore, maximum interior noise levels during construction would be in the mid-40s dBA for the entire period of construction, which is within 3 dBA of the recommended noise level threshold for this type of use according to the *CEQR Technical Manual* noise exposure criteria. Therefore, there would be no construction noise impact at this receptor.

Receptor 12

Receptor 12 represents the new residential/commercial building located at 9 DeKalb Avenue, diagonally across from the Flatbush Avenue Extension and DeKalb Avenue. At this receptor, construction is predicted to produce exterior noise levels (L_{10}) up to mid-70s dBA during the most noise-intensive stages of construction, which would result in noise level (L_{eq}) increases up to 13.5 dBA for 27 months. Noise levels for the remainder of construction would remain in the low-70s dBA. As the building has a central HVAC system, it is expected that 30 dBA attenuation could be achieved with a closed-window condition. Therefore, maximum interior noise levels during construction would be in the mid-40s dBA for the entire period of construction, which is within 3 dBA of the recommended noise level threshold for this type of use according to the *CEQR Technical Manual* noise exposure criteria. Therefore, there would be no construction noise impact at this receptor.

Receptors 13 and 14

Receptors 13 and 14 represent the community facility buildings of LIU located across from DeKalb Avenue. At these receptors, construction is predicted to produce exterior noise levels (L_{10}) up to low-80s dBA during the most noise-intensive stages of construction, which would result in noise level (L_{eq}) increases up to 17.7 dBA and 16.1 dBA for up to 20 consecutive months, and a total of 27 months and 32 months at Receptors 13 and 14, respectively. Noise levels for the remainder of construction would remain in the mid to high-70s dBA. As the building of Receptor 13 has window

air-conditioning (A/C) units, it is expected that 25 dBA attenuation could be achieved with a closed-window condition. And as the building of Receptor 14 has a central HVAC system, it is expected that 30 dBA attenuation could be achieved with a closed-window condition. Therefore, maximum interior noise levels during construction would be in the low-50s to mid-50s dBA during this period, which is more than approximately 3 dBA greater than the recommended noise level threshold for this type of use according to the *CEQR Technical Manual* noise exposure criteria. As interior noise levels in the low-50s to low-60s dBA are greater than the recommended interior noise level threshold for community facility uses (i.e., 45 dBA), a construction noise impact would occur at these receptors. It is also found that the maximum noise level (L_{10}) during construction would be up to 87.5 dBA, which exceeds the noise criteria of 85 dBA from the New York City Noise Code. As mentioned above, the construction modeling is based on an extremely conservative scenario that all equipment on-site would be operated at maximum capacity at the same time, which would barely occur or only occur for a very short period. Additionally, a noise mitigation plan would be developed prior to the start of work as required by the Noise Code to reduce the construction noise impact as much as possible. Therefore, the exceedances of 85 dBA are expected to be temporary.

Receptors 15 and 16

Receptors 15 and 16 represent the residential buildings located at 80 DeKalb Avenue and the recently redeveloped 625 Fulton Street, both of which are directly across Hudson Avenue from the Development Site. Construction is predicted to produce exterior noise levels (L_{10}) up to mid-80s dBA during the most noise-intensive stages of construction, which would result in noise level increases up to 25.6 and 29.2 dBA for 49 months at Receptors 15 and 16, respectively. Noise levels for the remainder of construction would remain in the high-70s to low-80s dBA. As each of the buildings have central HVAC systems, it is expected that 30 dBA attenuation can be achieved with a closed-window condition at each receptor. Therefore, maximum interior noise levels during construction would be in the low- to mid-50s dBA for the entire period of construction, which is more than approximately 3 dBA greater than the recommended noise level threshold for this type of use according to the *CEQR Technical Manual* noise exposure criteria. As interior noise levels in the high-40s to low-50s dBA at these receptors would be greater than the recommended interior noise level threshold for residential uses (i.e., 45 dBA), such increases in noise levels would be considered a significant adverse construction noise impact. However, it should be noted that construction would typically occur during weekday daytime hours, when most residents would be away from their homes and at workplaces. The maximum noise level (L_{10}) during construction would be up to 89.6 dBA, which exceeds the noise criteria of 85 dBA from the New York City Noise Code. As mentioned above, the construction modeling is based on an extremely conservative scenario that all equipment on-site would be operated at maximum capacity at the same time, which would rarely occur or only occur for a very short period. Additionally, a noise mitigation plan would be developed prior to the start of work as required by the Noise Code to reduce the construction noise impact as much as possible. Therefore, the exceedances of 85 dBA are expected to be temporary.

Receptor 17

Receptor 17 represents the residential building located at 1 Flatbush Avenue Extension. At this receptor, construction is predicted to produce exterior noise levels (L_{10}) up to high-70s dBA during the most noise-intensive stages of construction, which would result in noise level (L_{eq}) increases up to 10.3 dBA, and the increase of 10 dBA or more would last up to 11 months. Noise levels for the remainder of construction would remain in the low to mid-70s dBA. Since the duration of the

exceedance would be less than 12 months, the construction noise impact would be considered temporary. Therefore, there would be no construction noise impact at this receptor.

Conclusion

Since construction noise levels would exceed the thresholds for exterior increase in noise, and considering interior noise levels would be above the acceptable range at several adjacent sensitive receptors, there would be potential for the project to result in significant adverse construction noise impacts. All construction noise impacts would occur at existing residential buildings located close to the Development Site, including the following sensitive receptors: R03, R13, R14, R15, and R16. Interior noise levels at these receptors, which include a mix of residential and community facility receptors, would primarily experience an exceedance of the CEQR interior noise level impact criteria during the demolition, excavation/foundation, and core and shell phases of construction.

With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, an 8-foot construction noise barrier has been included in the modeling. However, construction noise would continue to exceed the thresholds for significant construction noise impact prior to mitigation.

The primary sources of construction noise causing significant adverse impacts include the rigs during the foundation phases of construction and concrete mixer trucks during the foundation and superstructure phases of construction. Since the impacted residential buildings are generally 10 or more stories tall, increasing the height of the perimeter wall would provide limited benefit compared to the standard 8-foot wall.

Concrete mixer trucks would be located along Hudson Avenue or DeKalb Avenue depending on the specific phase of construction. As the impacted receptors are relatively tall, it would not be feasible to introduce a noise barrier between the receptor buildings and the Development Site. See **Chapter 18, Mitigation** for further information on the construction noise control measures that will be included with the Proposed Actions.

Therefore, the Proposed Actions would have the potential to result in a significant adverse noise impact that would remain unmitigated. See **Chapter 20, Unavoidable Adverse Impacts**.

Vibration

Construction activities have the potential to generate ground-borne vibrations that can potentially cause structural or architectural damage or annoy people in nearby vibration-sensitive spaces, such as residences. The most substantial sources of construction vibration are equipment associated with the excavation and foundation phase, such as pile drivers, drill rigs, bulldozers, and jack hammers.

There are no buildings within the Project Area listed by LPC or the S/NR that would require special protection from potential damage due to vibration.

There would be the potential for construction vibration from some construction equipment, such as pile drivers, to cause annoyance in nearby residences. However, the existing REUC easement prevents pile driving too deep on the southern portion of the site due to the proximity to the MTA subway station, a caisson rig would be used instead if possible. Additionally, these construction activities would only occur for limited periods of time at any particular location, and there would be no significant adverse impact as a result of construction vibration.

18

Mitigation

In accordance with the *2021 City Environmental Quality Review (CEQR) Technical Manual*, where significant adverse impacts are identified, mitigation measures to reduce or eliminate the impacts to the fullest extent practicable are to be developed and evaluated.

Introduction

As detailed in the preceding chapters, approval of the Proposed Actions has the potential to result in significant adverse impacts related to transportation (i.e., traffic and pedestrians) and construction (i.e., construction transportation and noise). Mitigation measures have been identified to address those impacts where feasible and/or practical. As discussed below in more detail, partial mitigation is proposed for some of the significant adverse impacts resulting from the Proposed Actions. If no mitigation has been identified, an unavoidable significant adverse impact may result.

Principal Conclusions

As detailed in preceding sections, the Proposed Actions have the potential to result in significant adverse impacts to transportation (traffic and pedestrian) and construction (traffic, pedestrian, and noise). Potential measures for these impacts are still being developed in consultation with the lead and expert agencies and are summarized below (see **Table 18-1**).

Table 18-1 Impact and Potential Mitigations Summary

Impact Category	Significant Impact	Mitigation Measure(s) if Applicable
Transportation – Traffic	› Seven intersections during the weekday AM peak hour; › Six intersections during the weekday midday peak hour; › Six intersections during the weekday PM peak hour; and › Ten intersections during the Saturday peak hour	Standard traffic capacity improvements typically implemented by NYC DOT, such as signal timing modifications, could partially mitigate some of these traffic impacts
Transportation – Pedestrian	› One pedestrian element during the weekday AM and PM peak hours, and › Two pedestrian elements during the Saturday peak hour	Improvements in the form of crosswalk widening were identified and would mitigate these impacts.
Construction—Traffic	Temporary traffic impact at › Nine intersections during the AM construction peak hour, and › Three intersections during the PM construction peak hour	Standard traffic capacity improvements typically implemented by NYC DOT, such as signal timing modifications, could partially mitigate some of these temporary traffic impacts
Construction-Noise	Noise sensitive receptors at existing residential and/or community facility buildings located close to the Development Site	The potential for additional mitigation will be considered further between the Draft EIS and Final EIS, in coordination with the lead agency
Construction-Pedestrian	Temporary pedestrian impact at the north sidewalk of DeKalb Avenue between Flatbush Avenue Extension and Hudson Avenue during the weekday AM and PM peak hours	These impacts would be unmitigable.

Transportation

Traffic

Of the 19 intersections analyzed, the Proposed Actions would result in significant adverse traffic impacts at seven intersections (at eight traffic movements) during the weekday AM peak hour, six intersections (at eight traffic movements) during the weekday midday peak hour, six intersections (at nine traffic movements) during the weekday PM peak hour, and ten intersections (at 16 traffic movements) during the Saturday peak hour. Standard traffic capacity improvements typically implemented by New York City Department of Transportation (NYC DOT), such as signal timing modifications, could fully mitigate traffic impacts at four intersections during the weekday midday peak hour (one intersection would be partially mitigated), two intersections during the weekday PM peak hour (one intersection would be partially mitigated), and four intersections during the Saturday

peak hour (one intersection would be partially mitigated); significant traffic impacts during the weekday AM peak hour would remain unmitigated. Significant traffic impacts to the intersections listed below would remain unmitigated (see **Table 18-2**).

- Flatbush Avenue Extension and Tillary Street (AM, PM, and Saturday)
- Flatbush Avenue Extension and Myrtle Avenue (AM)
- Flatbush Avenue Extension and DeKalb Avenue (AM, PM, and Saturday)
- Flatbush Avenue Extension and Fulton Street (AM, midday, PM, and Saturday)
- Flatbush Avenue and Lafayette Avenue (AM and Saturday)
- Fulton Street and Hudson Avenue (AM, PM, and Saturday)
- DeKalb Avenue and Ashland Place (AM)
- Schermerhorn Street and Third Avenue (midday and Saturday)

Table 18-2 Transportation- Traffic Impact Summary

Intersection with significant Impact	Impact	Mitigation Measure(s) if Applicable
Flatbush Avenue Extension and Tillary Street	Weekday AM, PM, and Saturday Peak Hours	Standard traffic capacity improvements typically implemented by NYC DOT, such as signal timing modifications could mitigate or partially mitigate some of the significant impacts
Flatbush Avenue Extension and Myrtle Avenue	Weekday AM, PM, and Saturday Peak Hours	
Flatbush Avenue Extension and DeKalb Avenue	Weekday AM, Midday, PM,and Saturday Peak Hours	
Flatbush Avenue Extension and Fulton Street	Weekday AM, Midday, PM, and Saturday Peak Hours	
Flatbush Avenue and Lafayette Avenue	Weekday AM, Midday, and Saturday Peak Hours	
Flatbush Avenue and Atlantic Avenue	Weekday PM and Saturday Peak Hours	
Fulton Street and Hudson Avenue	Weekday AM, PM, and Saturday Peak Hours	
Fulton Street and Rockwell Avenue	Saturday Peak Hour	
DeKalb Avenue and Ashland Place	Weekday AM Peak Hour	
Fulton Street and Ashland Place	Saturday Peak Hour	
Lafayette Avenue and Ashland Place	Weekday Midday Peak Hour	
Schermerhorn Street and Third Avenue	Weekday Midday, and Saturday Peak Hours	
Nevins Street and Schermerhorn Street	Weekday Midday Peak Hour	

Shading denotes that no mitigation measures were identified, significant impact on traffic movements would remain unmitigated

Pedestrians

As discussed in **Chapter 10, Transportation**, the Proposed Actions would result in significant adverse impacts at one pedestrian element during the weekday AM and PM peak hours and two pedestrian elements during the Saturday peak hour. Improvements in the form of crosswalk

widening were identified and would mitigate these impacts. Implementation of the pedestrian mitigation measures is within the jurisdiction of NYC DOT.

Construction

Construction Transportation

As discussed in **Chapter 17, Construction**, 18 key intersections were analyzed for potential significant traffic impacts during the construction traffic peak hours. Significant adverse impacts were identified at nine intersections during the AM construction peak hour and three intersections during the PM construction peak hour. Where impacts during construction may occur, traffic capacity improvements in the form of signal timing modifications were proposed to provide full mitigation at some intersections. Significant traffic impacts could be fully mitigated at four of the nine significantly impacted intersections during the AM construction peak hour (five intersections would remain unmitigated) and two of the three significantly impacted intersections during the PM construction peak hour (one intersection would remain unmitigated).

Noise

Since noise levels during construction would have the potential to exceed the thresholds for exterior increases in noise, there would be potential for the project to result in high exterior and interior noise levels at existing noise receptors located in the vicinity of the Development Sites. As described in **Chapter 17, Construction**, all construction noise impacts would occur at existing residential and/or community facility buildings located close to the Development Site, including the following sensitive receptors: R03, R13, R14, R15, and R16. Interior noise levels at these receptors, which include a mix of residential and community facility receptors, would primarily experience an exceedance of the CEQR interior noise level impact criteria during the demolition, excavation/foundation, and core and shell phases of construction.

With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, an 8-foot construction noise barrier has been included in the modeling. However, construction noise would continue to exceed the thresholds for significant construction noise impact prior to mitigation.

The primary sources of construction noise causing significant adverse impacts include the rigs during the foundation phases of construction and concrete mixer trucks during the foundation and superstructure phases of construction. Since the impacted residential buildings are generally 10 or more stories tall, increasing the height of the perimeter wall would provide limited benefit compared to the standard 8-foot wall. Concrete mixer trucks would be located along Hudson Avenue or DeKalb Avenue depending on the specific phase of construction. As the impacted receptors are relatively tall, it would not be feasible to introduce a noise barrier between the receptor buildings and the Development Site.

The potential for additional mitigation will be considered further between the Draft EIS and Final EIS, in coordination with the lead agency; however, if no further feasible or practicable mitigation measures are identified, the Proposed Actions would result in a significant adverse noise impact due to construction that would remain unmitigated.

Transportation

Traffic

Of the 19 intersections analyzed, the Proposed Actions would result in significant adverse traffic impacts at seven intersections (at eight traffic movements) during the weekday AM peak hour, six intersections (at eight traffic movements) during the weekday midday peak hour, six intersections (at nine traffic movements) during the weekday PM peak hour, and ten intersections (at 16 traffic movements) during the Saturday peak hour.

Table 18-3 summarizes the number of significant traffic impacts and whether they could be fully mitigated (i.e., "mitigated") or partially mitigated, and **Table 18-4** summarizes the significantly impacted traffic movements. Details of the intersection capacity analyses are summarized in **Table 18-5** through **Table 18-8**.

Table 18-3 Traffic Impact Mitigation Summary

Intersections	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour
No significant impact	12	13	13	9
Fully mitigated impact	0	4	2	4
Partially mitigated impact	0	1	1	1
Unmitigated impact	7	1	3	5

Standard traffic capacity improvements typically implemented by NYC DOT, such as signal timing modifications, could potentially provide mitigation at some of the significantly impacted intersections. Such measures were identified and could fully mitigate significant traffic impacts four intersections during the weekday midday peak hour (one intersection would be partially mitigated), two intersections during the weekday PM peak hour (one intersection would be partially mitigated), and four intersections during the Saturday peak hour (one intersection would be partially mitigated). Significant traffic impacts would remain unmitigated at other intersections during these peak hours and at all seven significantly impacted intersections during the weekday AM peak hour, as shown in **Table 18-3**. During the weekday midday peak hour, two intersection would remain unmitigated during the weekday midday peak hour (one intersection would be partially mitigated), four intersections would remain unmitigated during the weekday PM peak hour (one intersection would be partially mitigated), and six intersections would remain unmitigated during the Saturday peak hour (one intersection would be partially mitigated).

Table 18-4 Summary of Significantly Impacted Traffic Movements

Intersection	AM Peak Hour	Midday Peak Hour	PM Peak Hour	Saturday Peak Hour
Flatbush Avenue Extension and Tillary Street	NBL		WBL	WBL
Flatbush Avenue Extension and Myrtle Avenue	NBTR		EBTR WBL	NBTR
Flatbush Avenue Extension and DeKalb Avenue	WBLT WBR	WBLT WBR	WBLT WBR	WBLT WBR
Flatbush Avenue Extension and Fulton Street	SBL	SBL WBLT	SBL WBLT	SBL EBLTR WBLT
Flatbush Avenue and Lafayette Avenue	EBL	EBL		SBL EBL
Flatbush Avenue and Atlantic Avenue			WBR	WBR
Fulton Street and Hudson Avenue	EBLT		EBLT	EBLT WBTR
Fulton Street and Rockwell Avenue				WBLT
DeKalb Avenue and Ashland Place	NBLT			
Fulton Street and Ashland Place				EBLT WBTR
Lafayette Avenue and Ashland Place		EBLTR		
Schermerhorn Street and Third Avenue		EBT		NBR
Nevins Street and Schermerhorn Street		SBLT		
Number of impacted traffic movements	8	8	9	16
Number of unmitigated traffic movements	8	2	5	10

Notes: NB=Northbound; SB=Southbound; EB=Eastbound; WB=Westbound; L=Left turn; T=Through; R=Right turn
Shading denotes significantly impacted traffic movements that would remain unmitigated.

Table 18-5 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday AM Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue Extension and Tillary Street														
Flatbush Avenue Extension	NB	L	1.11	102.4	F	L	1.12	108.6	F	L	1.12	108.6	F	**Unmitigable.**
	NB	T	0.94	49.0	D	T	0.95	49.5	D	T	0.95	49.5	D	
	NB	R	0.57	4.0	A	R	0.57	4.3	A	R	0.57	4.3	A	
	SB	T	0.7	42.3	D	T	0.70	42.4	D	T	0.70	42.4	D	
	SB	R	0.19	19.2	B	R	0.19	19.2	B	R	0.19	19.2	B	
Tillary Street	EB	L	0.64	66.0	E	L	0.64	66.0	E	L	0.64	66.0	E	
	EB	T	0.89	55.2	E	T	0.89	55.2	E	T	0.89	55.2	E	
	EB	R	0.83	49.8	D	R	0.84	51.0	D	R	0.84	51.0	D	
	WB	L	1.14	134.7	F	L	1.15	136.3	F	L	1.15	136.3	F	
	WB	T	0.88	55.2	E	T	0.88	55.2	E	T	0.88	55.2	E	
	WB	R	1.05	109.0	F	R	1.05	109.0	F	R	1.05	109.0	F	
Overall Intersection		-	-	**58.8**	**E**	-	-	**59.6**	**E**	-	-	**59.6**	**E**	

Table 18-5 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday AM Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue Extension and Myrtle Avenue														
Flatbush Avenue Extension	NB	TR	1.16	89.8	F	TR	1.19	105.3	F	TR	1.19	105.3	F	**Unmitigable.**
	SB	L	0.30	55.8	E	L	0.30	56.3	E	L	0.30	56.3	E	
	SB	TR	0.73	16.3	B	TR	0.73	16.3	B	TR	0.73	16.3	B	
Myrtle Avenue	EB	L	1.09	182.3	F	L	1.09	182.3	F	L	1.09	182.3	F	
	EB	TR	0.60	48.0	D	TR	0.60	48.0	D	TR	0.60	48.0	D	
	WB	L	0.44	50.6	D	L	0.44	50.6	D	L	0.44	50.6	D	
	WB	TR	1.06	108.2	F	TR	1.06	108.2	F	TR	1.06	108.2	F	
Overall Intersection		-	-	**64.2**	**E**	-	-	**72.1**	**E**	-	-	**72.1**	**E**	
Flatbush Avenue Extension and Willoughby Street														
Flatbush Avenue Extension	NB	T	0.95	52.0	D	T	0.97	51.7	D	T	0.97	51.7	D	Mitigation not needed.
	SB	TR	0.66	28.4	C	TR	0.66	28.4	C	TR	0.66	28.4	C	
Willoughby Street	EB	L	0.79	61.3	E	L	0.79	61.8	E	L	0.79	61.8	E	
	EB	R	0.16	29.0	C	R	0.16	29.0	C	R	0.16	29.0	C	
	WB	LTR	0.73	45.7	D	LTR	0.74	46.6	D	LTR	0.74	46.6	D	
Overall Intersection		-	-	**43.7**	**D**	-	-	**43.7**	**D**	-	-	**43.7**	**D**	

Table 18-5 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday AM Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue Extension and DeKalb Avenue														
Flatbush Avenue Extension	NB	T	0.99	64.3	E	T	0.94	62.3	E	T	0.94	62.3	E	**Unmitigable.[2]**
	SB	TR	0.75	45.6	D	TR	0.76	45.3	D	TR	0.76	45.3	D	
DeKalb Avenue	WB	LT	0.94	58.6	E	LT	1.04	85.2	F	LT	1.04	84.9	F	
	WB	R	1.27	173.8	F	R	1.48	258.7	F	R	1.48	258.6	F	
Overall Intersection		-	-	**68.2**	**E**	-	-	**80.4**	**F**	-	-	**80.4**	**F**	
Flatbush Avenue Extension and Fulton Street														
Flatbush Avenue Extension	NB	T	0.89	15.7	B	T	0.90	52.7	D	T	0.90	52.7	D	**Unmitigable.**
	SB	L	1.30	200.9	F	L	1.44	260.0	F	L	1.44	260.0	F	
	SB	T	0.54	16.5	B	T	0.54	16.5	B	T	0.54	16.5	B	
Fulton Street	EB	LTR	0.46	44.7	D	LTR	0.46	51.7	D	LTR	0.46	51.7	D	
	WB	LT	0.82	34.1	C	LT	0.85	37.1	D	LT	0.85	37.1	D	
	WB	R	0.91	35.5	D	R	0.92	40.3	D	R	0.92	40.3	D	
Overall Intersection		-	-	**34.9**	**C**	-	-	**56.6**	**E**	-	-	**56.6**	**E**	

Table 18-5 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday AM Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue and Livingston Street														
Flatbush Avenue	NB	L	0.70	43.9	D	L	0.70	41.0	D	L	0.70	41.0	D	Mitigation not needed.
	NB	T	0.69	28.9	C	T	0.69	29.6	C	T	0.69	29.6	C	
	SB	T	0.56	3.6	A	T	0.56	3.7	A	T	0.56	3.7	A	
Livingston Street	EB	R	0.15	23.4	C	R	0.15	23.4	C	R	0.15	23.4	C	
Overall Intersection		-	-	**22.2**	**C**	-	-	**22.1**	**C**	-	-	**22.1**	**C**	
Flatbush Avenue and Lafayette Avenue														
Flatbush Avenue	NB	TR	1.01	74.9	E	TR	1.00	72.0	E	TR	1.00	72.0	E	**Unmitigable.**
	SB	L	0.77	114.9	F	L	0.77	115.1	F	L	0.77	115.1	F	
	SB	T	0.46	5.9	A	T	0.46	5.8	A	T	0.46	5.8	A	
Schermerhorn Street	EB	L	1.24	160.2	F	L	1.26	167.6	F	L	1.26	167.6	F	
	EB	TR	0.57	82.1	F	TR	0.57	82.0	F	TR	0.57	82.0	F	
Overall Intersection		-	-	**68.3**	**E**	-	-	**67.8**	**E**	-	-	**67.8**	**E**	
Flatbush Avenue and State Street														
Flatbush Avenue	NB	T	0.83	5.9	A	T	0.82	5.9	A	T	0.82	5.9	A	Mitigation not needed.
	SB	T	0.74	36.1	D	T	0.74	36.5	D	T	0.74	36.5	D	
State Street	EB	R	0.18	23.4	C	R	0.18	23.4	C	R	0.18	23.4	C	
Overall Intersection		-	-	**17.6**	**B**	-	-	**17.8**	**B**	-	-	**17.8**	**B**	

Table 18-5 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday AM Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue and Fourth Avenue														
Flatbush Avenue	NB	T	0.77	12.0	B	T	0.77	11.9	B	T	0.77	11.9	B	Mitigation not needed.
	SB	TR	0.65	7.0	A	TR	0.65	7.0	A	TR	0.65	7.0	A	
	SB	R	0.69	15.0	B	R	0.69	15.4	B	R	0.69	15.4	B	
Overall Intersection		-	-	**10.9**	**B**	-	-	**10.9**	**B**	-	-	**10.9**	**B**	
Flatbush Avenue and Atlantic Avenue														
Flatbush Avenue	NB	LT	0.88	37.6	D	LT	0.88	37.6	D	LT	0.88	37.6	D	Mitigation not needed.
	SB	T	0.65	7.4	A	T	0.65	7.4	A	T	0.65	7.4	A	
Atlantic Avenue	EB	T	0.68	29.7	C	T	0.68	29.7	C	T	0.68	29.7	C	
	EB	R	0.56	40.8	D	R	0.56	40.8	D	R	0.56	40.8	D	
	WB	T	0.71	30.6	C	T	0.71	30.6	C	T	0.71	30.6	C	
	WB	R	1.14	129.9	F	R	1.13	124.3	F	R	1.13	124.3	F	
Overall Intersection		-	-	**38.3**	**D**	-	-	**37.7**	**D**	-	-	**37.7**	**D**	
DeKalb Avenue and Hudson Avenue														
Hudson Avenue	NB	L	0.24	24.0	C	L	0.31	24.8	C	L	0.31	24.8	C	Mitigation not needed.[2]
DeKalb Avenue	WB	LT	0.50	31.4	C	T	0.51	32.6	C	T	0.51	32.6	C	
Overall Intersection		-	-	**25.4**	**C**	-	-	**26.5**	**C**	-	-	**26.5**	**C**	

Table 18-5 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday AM Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Fulton Street and Hudson Avenue														
Fulton Street	EB	LT	0.65	35.0	C	LT	0.80	85.3	F	LT	0.80	85.3	F	**Unmitigable.**
	WB	T	1.13	123.0	F	T	1.14	125.9	F	T	1.14	125.9	F	
	WB	R	0.27	33.3	C	R	0.32	34.7	C	R	0.32	34.7	C	
Overall Intersection		-	-	**84.5**	**F**	-	-	**103.5**	**F**	-	-	**103.5**	**F**	
Fulton Street and Rockwell Place														
Rockwell Place	SB	LTR	0.21	21.3	C	LTR	0.23	21.6	C	LTR	0.23	21.6	C	Mitigation not needed.
Fulton Street	EB	T	0.42	17.1	B	T	0.43	17.4	B	T	0.43	17.4	B	
	EB	R	0.17	13.0	B	R	0.19	13.4	B	R	0.19	13.4	B	
	WB	LT	0.91	30.9	C	LT	0.90	28.8	C	LT	0.90	28.8	C	
Overall Intersection		-	-	**25.6**	**C**	-	-	**24.3**	**C**	-	-	**24.3**	**C**	

Table 18-5 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday AM Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
DeKalb Avenue and Ashland Place														
Ashland Place	NB	LT	1.14	110.4	F	LT	1.19	127.6	F	LT	1.19	127.6	F	**Unmitigable.**
	SB	R	0.58	22.7	C	R	0.60	23.2	C	R	0.60	23.2	C	
DeKalb Avenue	WB	TR	0.95	47.3	D	TR	0.95	47.3	D	TR	0.95	47.3	D	
Overall Intersection		-	-	**67.3**	**E**	-	-	**74.4**	**E**	-	-	**74.4**	**E**	
Fulton Street and Ashland Place														
Ashland Place	NB	L	0.50	31.4	C	L	0.48	31.0	C	L	0.48	31.0	C	Mitigation not needed.
	NB	TR	0.81	44.4	D	TR	0.84	47.1	D	TR	0.84	47.1	D	
Fulton Street	EB	LT	0.55	13.3	B	LT	0.59	14.5	B	LT	0.59	14.5	B	
	WB	T	0.67	27.9	C	T	0.67	27.6	C	T	0.67	27.6	C	
	WB	R	0.43	18.4	B	R	0.43	18.3	B	R	0.43	18.3	B	
Overall Intersection		-	-	**28.5**	**C**	-	-	**29.4**	**C**	-	-	**29.4**	**C**	
Lafayette Avenue and Ashland Place														
Ashland Place	NB	TR	0.60	41.9	D	TR	0.60	41.9	D	TR	0.60	41.9	D	Mitigation not needed.
Lafayette Avenue	EB	LTR	0.71	17.1	B	LTR	0.72	17.3	B	LTR	0.72	17.3	B	
Overall Intersection		-	-	**23.0**	**C**	-	-	**23.1**	**C**	-	-	**23.1**	**C**	

Table 18-5 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday AM Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Schermerhorn Street and Third Avenue														
Third Avenue	NB	R	0.96	116.5	F	R	0.97	116.9	F	R	0.97	116.9	F	Mitigation not needed.
Schermerhorn Street	EB	T	0.49	34.6	C	T	0.49	34.6	C	T	0.49	34.6	C	
Overall Intersection		-	-	**88.5**	**F**	-	-	**88.8**	**F**	-	-	**88.8**	**F**	
Atlantic Avenue and Third Avenue														
Third Avenue	NB	LTR	0.58	38.8	D	LTR	0.58	38.9	D	LTR	0.58	38.9	D	Mitigation not needed.
Atlantic Avenue	EB	TR	0.61	28.4	C	TR	0.61	28.4	C	TR	0.61	28.4	C	
	WB	T	0.91	44.3	D	T	0.91	44.3	D	T	0.91	44.3	D	
	WB	R	0.54	30.5	C	R	0.54	30.5	C	R	0.54	30.5	C	
Overall Intersection		-	-	**37.5**	**D**	-	-	**37.5**	**D**	-	-	**37.5**	**D**	
Nevins Street and Schermerhorn Street														
Nevins Street	SB	LT	0.61	33.3	C	LT	0.62	33.5	C	LT	0.62	33.5	C	Mitigation not needed.
Schermerhorn Street	EB	TR	0.63	27.4	C	TR	0.64	27.6	C	TR	0.64	27.6	C	
Overall Intersection		-	-	**29.9**	**C**	-	-	**30.1**	**C**	-	-	**30.1**	**C**	

Note: Overall intersection v/c ratio is the critical lane groups' v/c ratio.

[1] Control delay is measured in seconds per vehicle.

[2] Intersection delays change as a result of proposed mitigation measures at nearby intersections.

Table 18-6 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday Midday Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue Extension and Tillary Street														
Flatbush Avenue Extension	NB	L	1.07	103.9	F	L	1.07	104.4	F	L	1.07	104.5	F	Mitigation not needed.[2]
	NB	T	0.73	34.8	C	T	0.74	35.1	D	T	0.74	34.9	C	
	NB	R	0.49	1.1	A	R	0.49	1.1	A	R	0.49	1.1	A	
	SB	T	0.72	42.9	D	T	0.73	43.1	D	T	0.73	43.1	D	
	SB	R	0.24	19.7	B	R	0.24	19.7	B	R	0.24	19.7	B	
Tillary Street	EB	L	0.53	59.3	E	L	0.53	59.3	E	L	0.53	59.3	E	
	EB	T	0.96	65.7	E	T	0.96	65.7	E	T	0.96	65.7	E	
	EB	R	0.58	31.8	C	R	0.59	32.0	C	R	0.59	32.0	C	
	WB	L	0.90	78.1	E	L	0.91	79.7	E	L	0.91	79.7	E	
	WB	T	0.87	53.5	D	T	0.87	53.5	D	T	0.87	53.5	D	
	WB	R	0.97	92.6	F	R	0.97	92.6	F	R	0.97	92.6	F	
Overall Intersection		-	-	**51.1**	**D**	-	-	**51.3**	**D**	-	-	**51.2**	**D**	

Table 18-6 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday Midday Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue Extension and Myrtle Avenue														
Flatbush Avenue Extension	NB	TR	0.94	29.2	C	TR	0.95	31.3	C	TR	0.95	31.2	C	Mitigation not needed.[2]
	SB	L	0.32	51.6	D	L	0.32	51.4	D	L	0.32	51.4	D	
	SB	TR	0.61	20.0	B	TR	0.62	20.4	C	TR	0.62	20.4	C	
Myrtle Avenue	EB	L	1.05	133.7	F	L	1.05	133.7	F	L	1.05	133.7	F	
	EB	TR	0.82	62.7	E	TR	0.83	63.6	E	TR	0.83	63.6	E	
	WB	L	0.39	50.0	D	L	0.39	50.6	D	L	0.39	50.6	D	
	WB	TR	1.05	111.4	F	TR	1.05	111.4	F	TR	1.05	111.4	F	
Overall Intersection		-	-	**39.2**	**D**	-	-	**40.2**	**D**	-	-	**40.2**	**D**	
Flatbush Avenue Extension and Willoughby Street														
Flatbush Avenue Extension	NB	T	0.86	16.6	B	T	0.87	17.7	B	T	0.87	17.6	B	Mitigation not needed.[2]
	SB	TR	0.60	29.3	C	TR	0.60	29.1	C	TR	0.60	29.1	C	
Willoughby Street	EB	L	0.60	42.8	D	L	0.61	43.3	D	L	0.61	43.3	D	
	EB	R	0.21	28.5	C	R	0.21	28.5	C	R	0.21	28.5	C	
	WB	LTR	0.65	39.9	D	LTR	0.69	41.9	D	LTR	0.69	41.9	D	
Overall Intersection		-	-	**24.8**	**C**	-	-	**25.5**	**C**	-	-	**25.5**	**C**	

Table 18-6 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday Midday Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue Extension and DeKalb Avenue														
Flatbush Avenue Extension	NB	T	0.80	11.7	B	T	0.77	10.2	B	T	0.83	12.5	B	Shift 4 secs of green time from NB/SB phase to WB phase. [NB/SB phase shifts from 65 secs to 61 secs; WB phase shifts from 45 secs to 49 secs].
	SB	TR	0.63	3.5	A	TR	0.65	3.6	A	TR	0.69	6.4	A	
DeKalb Avenue	WB	LT	1.00	78.9	E	LT	1.13	116.5	F	LT	1.02	77.6	E	
	WB	R	1.25	168.9	F	R	1.30	189.5	F	R	1.17	134.9	F	
Overall Intersection		-	-	**30.0**	**C**	-	-	**35.8**	**D**	-	-	**28.6**	**C**	
Flatbush Avenue Extension and Fulton Street														
Flatbush Avenue Extension	NB	T	0.85	14.4	B	T	0.87	15.0	B	T	0.92	17.8	B	**Partially Mitigable** Shift 2 sec of green time from NB/SB phase to EB/WB phase. [NB/SB phase shifts from 47 secs to 45 secs; EB/WB phase shift from 38 secs to 40 secs]. Shift signal offset from 0 sec to 119 sec.
	SB	L	1.24	175.3	F	L	1.38	228.1	F	L	1.38	228.0	F	
	SB	T	0.48	21.5	C	T	0.49	21.0	C	T	0.51	23.9	C	
Fulton Street	EB	LTR	0.46	42.7	D	LTR	0.46	42.8	D	LTR	0.43	40.2	D	
	WB	LT	1.05	74.9	E	LT	1.11	90.5	F	LT	1.04	68.9	E	
	WB	R	0.54	6.0	A	R	0.55	6.4	A	R	0.53	5.9	A	
Overall Intersection		-	-	**37.3**	**D**	-	-	**45.4**	**D**	-	-	**46.0**	**D**	

Table 18-6 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday Midday Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue and Livingston Street														
Flatbush Avenue	NB	L	0.43	23.0	C	L	0.43	22.8	C	L	0.43	23.2	C	Mitigation not needed.[2]
	NB	T	0.60	6.5	A	T	0.61	6.8	A	T	0.61	7.4	A	
	SB	T	0.61	14.3	B	T	0.61	14.4	B	T	0.61	15.9	B	
Livingston Street	EB	R	0.14	22.5	C	R	0.14	22.5	C	R	0.14	22.5	C	
Overall Intersection		-	-	**11.9**	**B**	-	-	**12.0**	**B**	-	-	**13.0**	**B**	
Flatbush Avenue and Lafayette Avenue														
Flatbush Avenue	NB	TR	0.80	35.1	D	TR	0.81	38.9	D	TR	0.84	36.5	D	Shift 2 secs of green time from NB/SB-T phase to EB phase. [NB/SB-T phase shifts from 55 secs to 53 secs; EB phase shifts from 39 secs to 41 secs].
	SB	L	0.69	95.3	F	L	0.71	96.5	F	L	0.73	97.7	F	
	SB	T	0.48	2.5	A	T	0.48	2.5	A	T	0.50	2.5	A	
Schermerhorn Street	EB	L	1.17	125.3	F	L	1.23	146.8	F	L	1.16	117.8	F	
	EB	TR	0.67	74.7	E	TR	0.67	75.1	E	TR	0.64	72.9	E	
Overall Intersection		-	-	**44.3**	**D**	-	-	**48.5**	**D**	-	-	**44.2**	**D**	
Flatbush Avenue and State Street														
Flatbush Avenue	NB	T	0.68	3.3	A	T	0.69	3.4	A	T	0.69	3.4	A	Mitigation not needed.[2]
	SB	T	0.77	29.8	C	T	0.78	30.4	C	T	0.78	30.9	C	
State Street	EB	R	0.19	23.5	C	R	0.19	23.5	C	R	0.19	23.5	C	
Overall Intersection		-	-	**15.7**	**B**	-	-	**16.0**	**B**	-	-	**16.2**	**B**	

Table 18-6 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday Midday Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue and Fourth Avenue														
Flatbush Avenue	NB	T	0.66	8.9	A	T	0.67	9.0	A	T	0.67	9.0	A	Mitigation not needed.
	SB	TR	0.70	8.4	A	TR	0.71	8.7	A	TR	0.71	8.7	A	
	SB	R	0.78	28.9	C	R	0.79	30.4	C	R	0.79	30.4	C	
Overall Intersection		-	-	**11.6**	**B**	-	-	**12.0**	**B**	-	-	**12.0**	**B**	
Flatbush Avenue and Atlantic Avenue														
Flatbush Avenue	NB	LT	0.75	30.3	C	LT	0.76	30.4	C	LT	0.76	30.4	C	Mitigation not needed.
	SB	T	0.66	7.2	A	T	0.67	7.4	A	T	0.67	7.4	A	
Atlantic Avenue	EB	T	0.72	31.0	C	T	0.72	31.0	C	T	0.72	31.0	C	
	EB	R	0.77	52.2	D	R	0.77	52.2	D	R	0.77	52.2	D	
	WB	T	0.48	24.9	C	T	0.48	24.9	C	T	0.48	24.9	C	
	WB	R	1.14	133.0	F	R	1.15	136.5	F	R	1.15	136.5	F	
Overall Intersection		-	-	**35.0**	**D**	-	-	**35.4**	**D**	-	-	**35.4**	**D**	
DeKalb Avenue and Hudson Avenue														
Hudson Avenue	NB	L	0.25	27.6	C	L	0.25	28.6	C	L	0.25	28.5	C	Mitigation not needed.[2]
DeKalb Avenue	WB	LT	0.41	43.0	D	T	0.44	44.9	D	T	0.44	44.9	D	
Overall Intersection		-	-	**31.4**	**C**	-	-	**32.3**	**C**	-	-	**32.2**	**C**	

Table 18-6 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday Midday Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Fulton Street and Hudson Avenue														
Fulton Street	EB	LT	0.61	20.5	C	LT	0.69	32.0	C	LT	0.69	34.6	C	Mitigation not needed.[2]
	WB	T	0.97	116.2	F	T	0.99	117.0	F	T	0.99	117.0	F	
	WB	R	0.43	38.5	D	R	0.46	39.5	D	R	0.46	39.5	D	
Overall Intersection		-	-	**69.0**	**E**	-	-	**72.9**	**E**	-	-	**74.0**	**E**	
Fulton Street and Rockwell Place														
Rockwell Place	SB	LTR	0.25	23.3	C	LTR	0.29	24.2	C	LTR	0.29	24.2	C	Mitigation not needed.
Fulton Street	EB	T	0.44	18.0	B	T	0.49	19.4	B	T	0.49	19.4	B	
	EB	R	0.11	11.9	B	R	0.11	11.9	B	R	0.11	11.9	B	
	WB	LT	0.75	23.4	C	LT	0.76	23.9	C	LT	0.76	23.9	C	
Overall Intersection		-	-	**21.0**	**C**	-	-	**21.8**	**C**	-	-	**21.8**	**C**	
DeKalb Avenue and Ashland Place														
Ashland Place	NB	LT	0.83	35.6	D	LT	0.91	46.5	D	LT	0.91	46.5	D	Mitigation not needed.
	SB	R	0.50	19.8	B	R	0.57	21.7	C	R	0.57	21.7	C	
DeKalb Avenue	WB	TR	0.68	22.1	C	TR	0.68	22.2	C	TR	0.68	22.2	C	
Overall Intersection		-	-	**26.5**	**C**	-	-	**31.1**	**C**	-	-	**31.1**	**C**	

Table 18-6 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday Midday Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Fulton Street and Ashland Place														
Ashland Place	NB	L	0.62	35.1	D	L	0.62	35.2	D	L	0.62	35.2	D	Mitigation not needed.
	NB	TR	0.49	30.0	C	TR	0.52	30.7	C	TR	0.52	30.7	C	
Fulton Street	EB	LT	0.67	16.5	B	LT	0.84	29.5	C	LT	0.84	29.5	C	
	WB	T	0.51	22.3	C	T	0.52	22.8	C	T	0.52	22.8	C	
	WB	R	0.31	17.5	B	R	0.31	17.5	B	R	0.31	17.5	B	
Overall Intersection		-	-	**23.8**	**C**	-	-	**27.8**	**C**	-	-	**27.8**	**C**	
Lafayette Avenue and Ashland Place														
Ashland Place	NB	TR	0.81	59.2	E	TR	0.81	59.2	E	TR	0.83	62.9	E	Shift 1 sec of green time from NB phase to EB phase. [NB phase shifts from 39 secs to 38 secs; EB phase shifts from 67 secs to 68 secs].
Lafayette Avenue	EB	LTR	0.66	75.8	E	LTR	0.67	80.4	F	LTR	0.66	52.7	D	
Overall Intersection		-	-	**71.5**	**E**	-	-	**75.0**	**E**	-	-	**55.3**	**E**	
Schermerhorn Street and Third Avenue														
Third Avenue	NB	R	1.00	113.9	F	R	1.01	113.9	F	R	1.01	113.5	F	Unmitigable[2]
Schermerhorn Street	EB	T	0.62	82.0	F	T	0.66	102.6	F	T	0.66	102.6	F	
Overall Intersection		-	-	**104.4**	**F**	-	-	**110.4**	**F**	-	-	**110.2**	**F**	

Table 18-6 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday Midday Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Atlantic Avenue and Third Avenue														
Third Avenue	NB	LTR	0.56	42.5	D	LTR	0.57	42.7	D	LTR	0.57	42.7	D	Mitigation not needed.
Atlantic Avenue	EB	TR	0.69	27.1	C	TR	0.69	27.1	C	TR	0.69	27.1	C	
	WB	T	0.62	24.9	C	T	0.62	24.9	C	T	0.62	24.9	C	
	WB	R	0.59	28.6	C	R	0.59	28.6	C	R	0.59	28.6	C	
Overall Intersection		-	-	**28.9**	**C**	-	-	**29.0**	**C**	-	-	**29.0**	**C**	
Nevins Street and Schermerhorn Street														
Nevins Street	SB	LT	0.80	50.0	D	LT	0.86	56.7	E	LT	0.83	51.4	D	Shift 1 sec of green time from EB phase to SB phase. [EB shifts from 48 secs to 47 secs; SB phases shifts from 32 secs to 33 secs].
Schermerhorn Street	EB	TR	0.61	23.2	C	TR	0.62	23.5	C	TR	0.63	24.8	C	
Overall Intersection		-	-	**35.0**	**D**	-	-	**38.5**	**D**	-	-	**36.8**	**D**	

Note: Overall intersection v/c ratio is the critical lane groups' v/c ratio.

[1] Control delay is measured in seconds per vehicle.

[2] Intersection delays change as a result of proposed mitigation measures at nearby intersections.

Table 18-7 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday PM Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue Extension and Tillary Street														
Flatbush Avenue Extension	NB	L	1.06	92.1	F	L	1.07	94.3	F	L	1.07	92.9	F	**Unmitigable.[2]**
	NB	T	0.61	42.4	D	T	0.61	42.6	D	T	0.61	43.4	D	
	NB	R	0.49	1.6	A	R	0.49	1.5	A	R	0.49	1.8	A	
	SB	T	0.94	57.0	E	T	0.95	58.6	E	T	0.95	58.6	E	
	SB	R	0.24	19.9	B	R	0.24	19.9	B	R	0.24	19.9	B	
Tillary Street	EB	L	0.41	53.6	D	L	0.41	53.6	D	L	0.41	53.6	D	
	EB	T	1.03	80.7	F	T	1.03	80.7	F	T	1.03	80.7	F	
	EB	R	0.79	44.1	D	R	0.80	45.4	D	R	0.80	45.4	D	
	WB	L	0.93	81.4	F	L	0.98	91.7	F	L	0.98	91.7	F	
	WB	T	0.91	57.3	E	T	0.91	57.3	E	T	0.91	57.3	E	
	WB	R	0.62	48.2	D	R	0.62	48.2	D	R	0.62	48.2	D	
Overall Intersection		-	-	**55.1**	**E**	-	-	**56.4**	**E**	-	-	**56.5**	**E**	

Table 18-7 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday PM Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue Extension and Myrtle Avenue														
Flatbush Avenue Extension	NB	TR	0.90	35.3	D	TR	0.92	37.7	D	TR	0.96	43.2	D	Shift 2 sec of green time from NB/SB-TR phase to EB/WB phase. [NB/SB-TR phase shifts from 62 secs to 60 secs; EB/WB phase shift from 35 secs to 37 secs].
	SB	L	0.54	75.9	E	L	0.54	75.7	E	L	0.54	75.7	E	
	SB	TR	0.76	10.3	B	TR	0.78	10.8	B	TR	0.80	12.8	B	
Myrtle Avenue	EB	L	0.86	88.6	F	L	0.86	88.6	F	L	0.78	72.7	E	
	EB	TR	1.04	103.6	F	TR	1.10	119.0	F	TR	1.02	96.9	F	
	WB	L	0.68	82.9	F	L	0.78	104.7	F	L	0.63	74.6	E	
	WB	TR	0.70	54.0	D	TR	0.70	54.0	D	TR	0.65	49.6	D	
Overall Intersection		-	-	**34.1**	**C**	-	-	**37.0**	**D**	-	-	**37.1**	**D**	
Flatbush Avenue Extension and Willoughby Street														
Flatbush Avenue Extension	NB	T	0.74	17.0	B	T	0.75	16.9	B	T	0.75	17.6	B	Mitigation not needed.[2]
	SB	TR	0.75	10.6	B	TR	0.76	10.7	B	TR	0.76	9.1	A	
Willoughby Street	EB	L	0.82	63.5	E	L	0.83	65.1	E	L	0.83	65.1	E	
	EB	R	0.24	30.7	C	R	0.24	30.7	C	R	0.24	30.7	C	
	WB	LTR	0.70	43.3	D	LTR	0.75	46.7	D	LTR	0.75	46.7	D	
Overall Intersection		-	-	**19.7**	**B**	-	-	**20.2**	**C**	-	-	**19.8**	**B**	

Table 18-7 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday PM Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue Extension and DeKalb Avenue														
Flatbush Avenue Extension	NB	T	0.72	47.0	D	T	0.70	45.9	D	T	0.70	47.9	D	**Unmitigable.[2]**
	SB	TR	0.79	5.4	A	TR	0.80	5.7	A	TR	0.80	5.7	A	
DeKalb Avenue	WB	LT	1.43	232.8	F	LT	1.58	296.1	F	LT	1.58	296.1	F	
	WB	R	1.27	178.0	F	R	1.34	205.3	F	R	1.34	205.3	F	
Overall Intersection		-	-	**66.3**	**E**	-	-	**78.8**	**E**	-	-	**79.6**	**E**	
Flatbush Avenue Extension and Fulton Street														
Flatbush Avenue Extension	NB	T	0.83	12.7	B	T	0.84	13.2	B	T	0.89	15.3	B	**Partially Mitigable** Shift 2 sec of green time from NB/SB phase to EB/WB phase. [NB/SB phase shifts from 47 secs to 45 secs; EB/WB phase shift from 38 secs to 40 secs]. Shift signal offset from 11 sec to 12 sec.
	SB	L	1.34	204.1	F	L	1.52	279.9	F	L	1.52	279.5	F	
	SB	T	0.59	7.7	A	T	0.59	8.1	A	T	0.61	8.7	A	
Fulton Street	EB	LTR	0.43	44.3	D	LTR	0.43	45.8	D	LTR	0.40	46.4	D	
	WB	LT	1.04	82.1	F	LT	1.10	102.4	F	LT	1.02	76.3	E	
	WB	R	0.40	7.8	A	R	0.41	8.0	A	R	0.39	8.0	A	
Overall Intersection		-	-	**36.4**	**D**	-	-	**49.4**	**D**	-	-	**48.8**	**D**	
Flatbush Avenue and Livingston Street														
Flatbush Avenue	NB	L	0.50	33.2	C	L	0.50	33.8	C	L	0.50	33.9	C	Mitigation not needed.[2]
	NB	T	0.65	9.5	A	T	0.67	9.7	A	T	0.67	9.6	A	
	SB	T	0.68	5.4	A	T	0.68	5.6	A	T	0.68	5.4	A	
Livingston Street	EB	R	0.13	22.3	C	R	0.13	22.3	C	R	0.13	22.3	C	
Overall Intersection		-	-	**10.2**	**B**	-	-	**10.4**	**B**	-	-	**10.3**	**B**	

Table 18-7 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday PM Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue and Lafayette Avenue														
Flatbush Avenue	NB	TR	0.81	24.4	C	TR	0.82	24.6	C	TR	0.82	25.1	C	Mitigation not needed.[2]
	SB	L	0.70	106.6	F	L	0.72	107.7	F	L	0.72	107.3	F	
	SB	T	0.57	2.9	A	T	0.58	2.9	A	T	0.58	2.9	A	
Schermerhorn Street	EB	L	1.07	102.8	F	L	1.11	106.2	F	L	1.11	106.2	F	
	EB	TR	0.74	80.9	F	TR	0.75	81.0	F	TR	0.75	81.0	F	
Overall Intersection		-	-	**36.6**	**D**	-	-	**37.3**	**D**	-	-	**37.4**	**D**	
Flatbush Avenue and State Street														
Flatbush Avenue	NB	T	0.62	2.6	A	T	0.63	2.6	A	T	0.63	2.6	A	Mitigation not needed.[2]
	SB	T	0.86	28.6	C	T	0.86	29.0	C	T	0.86	29.7	C	
State Street	EB	R	0.29	25.2	C	R	0.29	25.2	C	R	0.29	25.2	C	
Overall Intersection		-	-	**16.3**	**B**	-	-	**16.4**	**B**	-	-	**16.8**	**B**	
Flatbush Avenue and Fourth Avenue														
Flatbush Avenue	NB	T	0.65	9.1	A	T	0.66	9.2	A	T	0.66	8.9	A	Mitigation not needed.[2]
	SB	TR	0.81	22.9	C	TR	0.82	24.1	C	TR	0.82	24.1	C	
	SB	R	0.97	79.5	E	R	0.97	79.8	E	R	0.97	79.8	E	
Overall Intersection		-	-	**25.1**	**C**	-	-	**25.6**	**C**	-	-	**25.5**	**C**	

Table 18-7 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Flatbush Avenue and Atlantic Avenue														
Flatbush Avenue	NB	LT	0.66	27.2	C	LT	0.66	27.3	C	LT	0.68	28.2	C	Shift 1 secs of green time from NB/SB phase to EB-TR/WB-TR phase. [NB/SB phase shifts from 61 secs to 60 secs; EB-TR/WB-TR phase shifts from 44 secs to 45 secs].
	SB	T	0.81	11.6	B	T	0.81	11.8	B	T	0.82	13.7	B	
Atlantic Avenue	EB	T	0.79	33.8	C	T	0.79	33.8	C	T	0.78	32.5	C	
	EB	R	0.81	57.9	E	R	0.81	57.9	E	R	0.78	54.1	D	
	WB	T	0.67	29.2	C	T	0.67	29.2	C	T	0.65	28.2	C	
	WB	R	1.12	126.1	F	R	1.14	131.4	F	R	1.11	119.9	F	
Overall Intersection		-	-	**35.4**	**D**	-	-	**36.0**	**D**	-	-	**35.0**	**C**	
DeKalb Avenue and Hudson Avenue														
Hudson Avenue	NB	LT	0.28	27.5	C	L	0.31	27.4	C	L	0.31	27.4	C	Mitigation not needed.[2]
DeKalb Avenue	WB	LT	0.50	11.5	B	T	0.53	11.2	B	T	0.53	10.6	B	
Overall Intersection		-	-	**24.0**	**C**	-	-	**23.8**	**C**	-	-	**23.7**	**C**	
Fulton Street and Hudson Avenue														
Fulton Street	EB	LT	0.73	54.3	D	LT	0.86	86.0	F	LT	0.86	85.7	F	**Unmitigable.[2]** Shift signal offset from 61 sec to 63 sec [Improvements needed in conjunction with mitigation at adjacent intersection]
	WB	T	0.74	101.6	F	T	0.76	102.2	F	T	0.76	102.2	F	
	WB	R	0.53	43.4	D	R	0.57	45.1	D	R	0.57	45.1	D	
Overall Intersection		-	-	**71.2**	**E**	-	-	**87.2**	**F**	-	-	**87.0**	**F**	

Table 18-7 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday PM Peak Hour

Intersection & Approach		No-Action				With-Action				Mitigation				Mitigation Measure
		Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	Mvt	V/C	Ctrl Delay[1]	LOS	
Fulton Street and Rockwell Place														
Rockwell Place	SB	LTR	0.63	32.0	C	LTR	0.67	33.4	C	LTR	0.67	33.4	C	Mitigation not needed.
Fulton Street	EB	T	0.47	18.9	B	T	0.52	21.1	C	T	0.52	21.1	C	
	EB	R	0.16	12.6	B	R	0.17	12.8	B	R	0.17	12.8	B	
	WB	LT	0.65	17.7	B	LT	0.66	18.0	B	LT	0.66	18.0	B	
Overall Intersection		-	-	**21.1**	**C**	-	-	**22.2**	**C**	-	-	**22.2**	**C**	
DeKalb Avenue and Ashland Place														
Ashland Place	NB	LT	0.82	34.7	C	LT	0.93	49.2	D	LT	0.93	49.2	D	Mitigation not needed.
	SB	R	0.80	35.2	D	R	0.88	44.4	D	R	0.88	44.4	D	
DeKalb Avenue	WB	TR	0.68	21.8	C	TR	0.69	21.9	C	TR	0.69	21.9	C	
Overall Intersection		-	-	**29.2**	**C**	-	-	**36.6**	**D**	-	-	**36.6**	**D**	
Fulton Street and Ashland Place														
Ashland Place	NB	L	0.64	37.0	D	L	0.64	37.0	D	L	0.64	37.0	D	Mitigation not needed.
	NB	TR	0.66	35.2	D	TR	0.68	36.1	D	TR	0.68	36.1	D	
Fulton Street	EB	LT	0.74	22.8	C	LT	0.87	31.9	C	LT	0.87	31.9	C	
	WB	T	0.35	15.5	B	T	0.36	15.6	B	T	0.36	15.6	B	
	WB	R	0.28	15.4	B	R	0.28	15.4	B	R	0.28	15.4	B	
Overall Intersection		-	-	**25.9**	**C**	-	-	**29.3**	**C**	-	-	**29.3**	**C**	

Table 18-7 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Weekday PM Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Lafayette Avenue and Ashland Place														
Ashland Place	NB	TR	0.94	78.6	E	TR	0.94	78.6	E	TR	0.94	78.6	E	Mitigation not needed.
Lafayette Avenue	EB	LTR	0.80	20.4	C	LTR	0.81	21.2	C	LTR	0.81	21.3	C	
Overall Intersection		-	-	**34.8**	**C**	-	-	**35.3**	**D**	-	-	**35.4**	**D**	
Schermerhorn Street and Third Avenue														
Third Avenue	NB	R	0.93	111.0	F	R	0.95	112.0	F	R	0.95	112.0	F	Mitigation not needed.
Schermerhorn Street	EB	T	0.64	96.2	F	T	0.66	96.9	F	T	0.66	96.9	F	
Overall Intersection		-	-	**105.6**	**F**	-	-	**106.4**	**F**	-	-	**106.4**	**F**	
Atlantic Avenue and Third Avenue														
Third Avenue	NB	LTR	0.73	46.6	D	LTR	0.74	47.2	D	LTR	0.74	47.2	D	Mitigation not needed.
Atlantic Avenue	EB	TR	0.64	27.4	C	TR	0.64	27.4	C	TR	0.64	27.4	C	
	WB	T	0.87	38.2	D	T	0.87	38.2	D	T	0.87	38.2	D	
	WB	R	0.67	34.7	C	R	0.67	34.7	C	R	0.67	34.7	C	
Overall Intersection		-	-	**36.2**	**D**	-	-	**36.4**	**D**	-	-	**36.4**	**D**	
Nevins Street and Schermerhorn Street														
Nevins Street	SB	LT	0.73	34.2	C	LT	0.74	34.7	C	LT	0.74	34.7	C	Mitigation not needed.
Schermerhorn Street	EB	TR	0.89	47.1	D	TR	0.91	50.2	D	TR	0.91	50.2	D	
Overall Intersection		-	-	**41.2**	**D**	-	-	**43.2**	**D**	-	-	**43.2**	**D**	

Note: Overall intersection v/c ratio is the critical lane groups' v/c ratio.

[1] Control delay is measured in seconds per vehicle.

[2] Intersection delays change as a result of proposed mitigation measures at nearby intersections.

Table 18-8 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Saturday Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue Extension and Tillary Street														
Flatbush Avenue Extension	NB	L	1.09	103.8	F	L	1.10	106.9	F	L	1.10	106.4	F	**Unmitigable.[2]**
	NB	T	0.63	34.6	C	T	0.64	34.8	C	T	0.64	34.8	C	
	NB	R	0.50	1.7	A	R	0.50	1.8	A	R	0.50	1.6	A	
	SB	T	0.65	40.6	D	T	0.66	40.8	D	T	0.66	40.8	D	
	SB	R	0.18	18.8	B	R	0.18	18.8	B	R	0.18	18.8	B	
Tillary Street	EB	L	0.55	59.0	E	L	0.55	59.0	E	L	0.55	59.0	E	
	EB	T	0.93	59.3	E	T	0.93	59.3	E	T	0.93	59.3	E	
	EB	R	0.70	37.0	D	R	0.70	37.3	D	R	0.70	37.3	D	
	WB	L	1.13	127.2	F	L	1.16	137.1	F	L	1.16	137.1	F	
	WB	T	0.87	52.9	D	T	0.87	52.9	D	T	0.87	52.9	D	
	WB	R	0.94	80.6	F	R	0.94	80.6	F	R	0.94	80.6	F	
Overall Intersection		-	-	**54.2**	**D**	-	-	**55.5**	**E**	-	-	**55.5**	**E**	

Table 18-8 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Saturday Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue Extension and Myrtle Avenue														
Flatbush Avenue Extension	NB	TR	1.07	62.0	E	TR	1.10	73.2	E	TR	1.08	63.9	E	Shift 1 sec of green time from SBL phase to NB/SB-TR phase. [SBL phase shifts from 16 secs to 15 secs; NB/SB-TR phase shifts from 62 secs to 63 secs].
	SB	L	0.24	47.5	D	L	0.24	47.1	D	L	0.27	49.0	D	
	SB	TR	0.66	18.7	B	TR	0.67	19.3	B	TR	0.67	18.5	B	
Myrtle Avenue	EB	L	0.61	64.7	E	L	0.61	64.7	E	L	0.61	64.7	E	
	EB	TR	0.75	56.2	E	TR	0.76	56.9	E	TR	0.76	56.9	E	
	WB	L	0.24	41.7	D	L	0.25	42.0	D	L	0.25	42.0	D	
	WB	TR	0.93	80.7	F	TR	0.93	80.7	F	TR	0.93	80.7	F	
Overall Intersection		-	-	**46.1**	**D**	-	-	**51.5**	**D**	-	-	**46.9**	**D**	
Flatbush Avenue Extension and Willoughby Street														
Flatbush Avenue Extension	NB	T	0.85	23.6	C	T	0.87	37.6	D	T	0.87	36.9	D	Mitigation not needed.[2]
	SB	TR	0.74	31.0	C	TR	0.75	30.9	C	TR	0.75	31.6	C	
Willoughby Street	EB	L	0.62	42.4	D	L	0.62	42.7	D	L	0.62	42.7	D	
	EB	R	0.36	31.9	C	R	0.36	31.9	C	R	0.36	31.9	C	
	WB	LTR	0.59	37.6	D	LTR	0.64	39.3	D	LTR	0.64	39.3	D	
Overall Intersection		-	-	**28.7**	**C**	-	-	**35.2**	**D**	-	-	**35.1**	**D**	

Table 18-8 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Saturday Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS	Mitigation Mvt	Mitigation V/C	Mitigation Ctrl Delay[1]	Mitigation LOS	Mitigation Measure
Flatbush Avenue Extension and DeKalb Avenue														
Flatbush Avenue Extension	NB	T	0.78	10.3	B	T	0.76	9.3	A	T	0.81	10.2	B	**Partially Mitigable** Shift 4 secs of green time from NB/SB phase to WB phase. [NB /SB phase shifts from 65 secs to 61 secs; WB phase shifts from 45 secs to 49 secs]. Shift signal offset from 0 sec to 1 sec.
	SB	TR	0.77	8.8	A	TR	0.79	9.6	A	TR	0.85	14.6	B	
DeKalb Avenue	WB	LT	1.20	141.3	F	LT	1.42	229.1	F	LT	1.27	165.3	F	
	WB	R	1.37	216.5	F	R	1.51	273.0	F	R	1.34	201.7	F	
Overall Intersection		-	-	**41.2**	**D**	-	-	**58.2**	**E**	-	-	**46.9**	**D**	
Flatbush Avenue Extension and Fulton Street														
Flatbush Avenue Extension	NB	T	0.88	61.0	E	T	0.90	61.6	E	T	0.90	61.6	E	**Unmitigable.[2]**
	SB	L	1.35	216.1	F	L	1.56	304.5	F	L	1.56	304.4	F	
	SB	T	0.58	22.4	C	T	0.59	21.9	C	T	0.59	20.9	C	
Fulton Street	EB	LTR	0.46	52.1	D	LTR	0.47	70.6	E	LTR	0.47	70.6	E	
	WB	LT	1.06	80.7	F	LT	1.16	105.6	F	LT	1.16	105.6	F	
	WB	R	0.65	16.9	B	R	0.68	20.8	C	R	0.68	20.8	C	
Overall Intersection		-	-	**58.7**	**E**	-	-	**73.1**	**E**	-	-	**72.7**	**E**	

Table 18-8 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Saturday Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Flatbush Avenue and Livingston Street														
Flatbush Avenue	NB	L	0.50	31.7	C	L	0.50	33.3	C	L	0.50	33.4	C	Mitigation not needed.[2]
	NB	T	0.62	7.5	A	T	0.63	7.9	A	T	0.63	7.9	A	
	SB	T	0.60	12.3	B	T	0.61	12.4	B	T	0.61	12.0	B	
Livingston Street	EB	R	0.17	23.1	C	R	0.17	23.1	C	R	0.17	23.1	C	
Overall Intersection		-	-	**12.6**	**B**	-	-	**12.9**	**B**	-	-	**12.8**	**B**	
Flatbush Avenue and Lafayette Avenue														
Flatbush Avenue	NB	TR	0.90	73.3	E	TR	0.91	74.4	E	TR	0.91	74.6	E	**Unmitigable.[2]**
	SB	L	0.73	49.9	D	L	0.75	55.7	E	L	0.75	55.7	E	
	SB	T	0.50	3.1	A	T	0.51	3.1	A	T	0.51	3.1	A	
Schermerhorn Street	EB	L	1.19	128.3	F	L	1.24	148.2	F	L	1.24	148.2	F	
	EB	TR	0.61	73.4	E	TR	0.62	73.7	E	TR	0.62	73.7	E	
Overall Intersection		-	-	**56.4**	**E**	-	-	**59.6**	**E**	-	-	**59.7**	**E**	
Flatbush Avenue and State Street														
Flatbush Avenue	NB	T	0.69	2.9	A	T	0.70	2.9	A	T	0.70	2.9	A	Mitigation not needed.
	SB	T	0.72	28.1	C	T	0.73	29.0	C	T	0.73	29.0	C	
State Street	EB	R	0.31	26.3	C	R	0.31	26.4	C	R	0.31	26.4	C	
Overall Intersection		-	-	**14.8**	**B**	-	-	**15.2**	**B**	-	-	**15.2**	**B**	

Table 18-8 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Saturday Peak Hour

Intersection & Approach		No-Action Mvt	No-Action V/C	No-Action Ctrl Delay[1]	No-Action LOS	With-Action Mvt	With-Action V/C	With-Action Ctrl Delay[1]	With-Action LOS	Mitigation Mvt	Mitigation V/C	Mitigation Ctrl Delay[1]	Mitigation LOS	Mitigation Measure
Flatbush Avenue and Fourth Avenue														
Flatbush Avenue	NB	T	0.68	10.6	B	T	0.69	10.7	B	T	0.69	10.5	B	Mitigation not needed.[2]
	SB	TR	0.75	15.6	B	TR	0.77	16.9	B	TR	0.77	16.9	B	
	SB	R	0.91	81.8	F	R	0.91	81.9	F	R	0.91	81.9	F	
Overall Intersection		-	-	**22.9**	**C**	-	-	**23.3**	**C**	-	-	**23.2**	**C**	
Flatbush Avenue and Atlantic Avenue														
Flatbush Avenue	NB	LT	0.64	26.6	C	LT	0.69	28.3	C	LT	0.71	29.4	C	Shift 1 secs of green time from NB/SB phase to EB-TR/WB-TR phase. [NB/SB phase shifts from 61 secs to 60 secs; EB-TR/WB-TR phase shifts from 44 secs to 45 secs].
	SB	T	0.58	7.4	A	T	0.59	8.0	A	T	0.60	9.5	A	
Atlantic Avenue	EB	T	0.76	32.3	C	T	0.76	32.3	C	T	0.75	31.1	C	
	EB	R	0.60	41.4	D	R	0.60	41.4	D	R	0.59	40.0	D	
	WB	T	0.60	27.3	C	T	0.60	27.3	C	T	0.59	26.4	C	
	WB	R	1.14	131.7	F	R	1.17	140.2	F	R	1.14	128.4	F	
Overall Intersection		-	-	**34.6**	**C**	-	-	**35.9**	**D**	-	-	**34.9**	**C**	
DeKalb Avenue and Hudson Avenue														
Hudson Avenue	NB	L	0.29	28.1	C	L	0.34	29.6	C	L	0.34	29.5	C	Mitigation not needed.[2]
DeKalb Avenue	WB	LT	0.46	39.5	D	T	0.50	40.4	D	T	0.50	40.4	D	
Overall Intersection		-	-	**30.7**	**C**	-	-	**32.1**	**C**	-	-	**32.0**	**C**	

Table 18-8 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Saturday Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Fulton Street and Hudson Avenue														
Fulton Street	EB	LT	0.91	89.3	F	LT	1.16	116.7	F	LT	1.16	116.7	F	**Unmitigable.**
	WB	TR	1.66	341.0	F	TR	1.73	372.1	F	TR	1.73	372.1	F	
	WB	-	-	-	-	-	-	-	-	-	-	-	-	
Overall Intersection		-	-	**229.9**	**F**	-	-	**253.3**	**F**	-	-	**253.3**	**F**	
Fulton Street and Rockwell Place														
Rockwell Place	SB	LTR	0.37	24.1	C	LTR	0.40	24.8	C	LTR	0.41	25.8	C	Shift 1 sec of green time from SB phase to EB/WB phase. [SB shifts from 38 secs to 37 secs; EB and WB phases shifts from 52 secs to 53 secs].
Fulton Street	EB	TR	0.64	26.0	C	TR	0.72	34.5	C	TR	0.70	31.9	C	
	WB	LT	0.88	52.0	D	LT	0.90	59.1	E	LT	0.88	52.2	D	
Overall Intersection		-	-	**39.2**	**D**	-	-	**45.4**	**D**	-	-	**41.1**	**D**	
DeKalb Avenue and Ashland Place														
Ashland Place	NB	LT	0.74	28.1	C	LT	0.86	38.0	D	LT	0.86	38.0	D	Mitigation not needed.
	SB	R	0.71	28.1	C	R	0.79	33.9	C	R	0.79	33.9	C	
DeKalb Avenue	WB	TR	0.64	20.6	C	TR	0.65	20.7	C	TR	0.65	20.7	C	
Overall Intersection		-	-	**24.7**	**C**	-	-	**29.7**	**C**	-	-	**29.7**	**C**	

Table 18-8 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Saturday Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Fulton Street and Ashland Place														
Ashland Place	NB	L	0.56	32.5	C	L	0.56	32.8	C	L	0.64	39.0	D	Shift 3 sec of green time from NB phase to EB/WB phase. [NB shifts from 33 secs to 30 secs; EB and WB phases shift from 47 secs to 50 secs].
	NB	TR	0.53	30.7	C	TR	0.58	32.1	C	TR	0.65	37.3	D	
Fulton Street	EB	LT	0.80	24.5	C	LT	1.09	85.1	F	LT	0.96	44.6	D	
	WB	TR	0.85	86.0	F	TR	0.87	90.9	F	TR	0.81	61.8	E	
Overall Intersection		-	-	**48.8**	**D**	-	-	**68.6**	**E**	-	-	**48.2**	**D**	
Lafayette Avenue and Ashland Place														
Ashland Place	NB	TR	0.75	53.6	D	TR	0.75	53.6	D	TR	0.75	53.6	D	Mitigation not needed.
Lafayette Avenue	EB	LTR	0.79	91.0	F	LTR	0.81	91.8	F	LTR	0.81	91.8	F	
Overall Intersection		-	-	**82.6**	**F**	-	-	**83.4**	**F**	-	-	**83.4**	**F**	
Schermerhorn Street and Third Avenue														
Third Avenue	NB	R	0.93	107.4	F	R	0.94	108.5	F	R	0.94	108.5	F	**Unmitigable.**
Schermerhorn Street	EB	T	0.69	93.9	F	T	0.73	107.4	F	T	0.73	107.4	F	
Overall Intersection		-	-	**103.0**	**F**	-	-	**108.1**	**F**	-	-	**108.1**	**F**	

Table 18-8 No-Action vs. With-Action vs. Mitigation Traffic Levels of Service Comparison – Saturday Peak Hour

		No-Action				With-Action				Mitigation				Mitigation Measure
Intersection & Approach		**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	**Mvt**	**V/C**	**Ctrl Delay[1]**	**LOS**	
Atlantic Avenue and Third Avenue														
Third Avenue	NB	LTR	0.81	52.0	D	LTR	0.82	52.9	D	LTR	0.82	52.9	D	Mitigation not needed.
Atlantic Avenue	EB	TR	0.66	26.1	C	TR	0.66	26.1	C	TR	0.66	26.1	C	
	WB	T	0.69	26.7	C	T	0.69	26.7	C	T	0.69	26.7	C	
	WB	R	0.54	26.4	C	R	0.54	26.4	C	R	0.54	26.4	C	
Overall Intersection		-	-	**32.0**	**C**	-	-	**32.3**	**C**	-	-	**32.3**	**C**	
Nevins Street and Schermerhorn Street														
Nevins Street	SB	LT	0.70	39.7	D	LT	0.75	43.5	D	LT	0.75	43.5	D	Mitigation not needed.
Schermerhorn Street	EB	TR	0.73	29.1	C	TR	0.75	30.1	C	TR	0.75	30.1	C	
Overall Intersection		-	-	**33.3**	**C**	-	-	**35.6**	**D**	-	-	**35.6**	**D**	

Note: Overall intersection v/c ratio is the critical lane groups' v/c ratio.

[1] Control delay is measured in seconds per vehicle.

[2] Intersection delays change as a result of proposed mitigation measures at nearby intersections.

A total of eight of the 19 intersections would have significant adverse traffic impacts as a result of the Proposed Actions and could not be fully mitigated in at least one peak hour, including:

- Flatbush Avenue Extension and Tillary Street (AM, PM, and Saturday)
- Flatbush Avenue Extension and Myrtle Avenue (AM)
- Flatbush Avenue Extension and DeKalb Avenue (AM, PM, and Saturday)
- Flatbush Avenue Extension and Fulton Street (AM, midday, PM, and Saturday)
- Flatbush Avenue and Lafayette Avenue (AM and Saturday)
- Fulton Street and Hudson Avenue (AM, PM, and Saturday)
- DeKalb Avenue and Ashland Place (AM)
- Schermerhorn Street and Third Avenue (midday and Saturday)

Traffic mitigation measures needed for each intersection are described below; details of signal timing modifications are summarized in **Table 18-5** through **Table 18-8**.

Implementation

Implementation of signal timing modification measures would be performed by NYC DOT. The implementation of these measures would not result in the loss of any parking or "standing" spaces. Implementation of traffic improvements measures are subjected to NYC DOT's review and approval. These mitigation measures will be studied further in conjunction with the NYC DOT between the Draft EIS and Final EIS. If, prior to implementation, NYC DOT determines that any of the identified mitigation measures are infeasible, and no other alternative and equivalent mitigation measures could be advanced, then the impacts would be unmitigated.

Pedestrians

As discussed in **Chapter 10, Transportation**, the Proposed Actions would result in significant adverse impacts at one pedestrian element during the weekday AM and PM peak hours and two pedestrian elements during the Saturday peak hour. Improvements in the form of crosswalk widening were identified and would mitigate these impacts.

- Restripe the south crosswalk at the intersection of DeKalb Avenue and Hudson Avenue from 14 feet wide to 17 feet wide.
- Restripe the east crosswalk at the intersection of Flatbush Avenue Extension and Fulton Street from 16 feet wide to 19 feet wide.

Detailed pedestrian levels of service and mitigation measures are summarized in **Table 18-9** and **Table 18-10**. Signal timing modifications proposed as traffic mitigation would affect pedestrian operations at analysis crosswalks and corners. A review of the crosswalk and corner levels of service, summarized below, confirmed that traffic mitigation would not result in new significant pedestrian impacts or worsen significant pedestrian impacts.

Table 18-9 Crosswalk Impact Mitigation Summary

		No-Action		With-Action		Mitigation		
Intersection	Crosswalk	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Mitigation Measures
Weekday AM Peak Hour								
DeKalb Avenue at Hudson Avenue	South	17.1	D	13.6	E	17.7	D	Widen south crosswalk from 14 feet to 17 feet
Flatbush Avenue Extension at Fulton Street	East	39.5	C	32.6	C	34.5	C	Widen east crosswalk from 16 feet to 19 feet [Measure needed to mitigate significant adverse impacts during other hours]
Weekday Midday Peak Hour								
Flatbush Avenue Extension at DeKalb Avenue	East	119.9	B	90.4	A	82.8	A	[Signal timing modification proposed as part of traffic mitigation]
DeKalb Avenue at Hudson Avenue	South	49.1	B	35.2	C	44.5	B	Widen south crosswalk from 14 feet to 17 feet [Measure needed to mitigate significant adverse impacts during other hours]
Flatbush Avenue Extension at Fulton Street	North	28.1	C	23.9	D	27.9	C	Widen east crosswalk from 16 feet to 19 feet [Measure needed to mitigate significant adverse impacts during other hours; signal timing modification proposed as part of traffic mitigation]
	East	37.0	C	29.6	C	33.4	C	
Weekday PM Peak Hour								
DeKalb Avenue at Hudson Avenue	South	19.9	D	14.8	E	19.2	D	Widen south crosswalk from 14 feet to 17 feet
Flatbush Avenue Extension at Fulton Street	North	27.7	C	22.6	D	26.4	C	Widen east crosswalk from 16 feet to 19 feet [Measure needed to mitigate significant adverse impacts during other hours; signal timing modification proposed as part of traffic mitigation]
	East	28.6	C	22.2	D	25.2	C	
Saturday Peak Hour								
Flatbush Avenue Extension at DeKalb Avenue	East	72.2	A	53.0	B	48.4	B	[Signal timing modification proposed as part of traffic mitigation]

Table 18-9 Crosswalk Impact Mitigation Summary

DeKalb Avenue at Hudson Avenue	South	25.3	C	16.9	D	21.8	D	Widen south crosswalk from 14 feet to 17 feet
Flatbush Avenue Extension at Fulton Street	East	28.8	C	18.3	D	22.6	D	Widen east crosswalk from 16 feet to 19 feet [Signal timing modification proposed as part of traffic mitigation]

Denotes significantly impacted pedestrian element

Table 18-10 Corner Impact Mitigation Summary

		No-Action		With-Action		Mitigation		
Intersection	Corner	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Avg Ped Space, SF/P	LOS	Mitigation Measures
Weekday Midday Peak Hour								
Flatbush Avenue Extension at DeKalb Avenue	Southeast	87.6	A	56.5	B	56.5	B	[Signal timing modification proposed as part of traffic mitigation]
Flatbush Avenue Extension at Fulton Street	Northeast	188.8	A	71.5	A	71.5	A	[Signal timing modification proposed as part of traffic mitigation]
	Southeast	89.5	A	73.1	A	73.1	A	
	Southwest	94.0	A	84.7	A	84.8	A	
Weekday PM Peak Hour								
Flatbush Avenue Extension at Fulton Street	Northeast	162.5	A	57.2	B	57.1	B	[Signal timing modification proposed as part of traffic mitigation]
	Southeast	71.6	A	55.9	B	55.8	B	
	Southwest	77.8	A	69.5	A	69.7	A	
Saturday Peak Hour								
Flatbush Avenue Extension at DeKalb Avenue	Southeast	51.9	B	33.6	C	33.6	D	[Signal timing modification proposed as part of traffic mitigation]

Implementation

Implementation of these measures would be subject to review and approval by NYC DOT, will be studied further in conjunction with the NYC DOT between the Draft EIS and Final EIS If, prior to implementation, NYC DOT determines that an identified mitigation measure is infeasible, an alternative and equivalent mitigation measure would be identified. In the absence of the application of a particular mitigation measure, the impact would remain unmitigated.

Construction

Traffic

As discussed in **Chapter 17, Construction**, 18 key intersections were analyzed for potential significant traffic impacts during the construction traffic peak hours. Significant adverse impacts were identified at nine intersections during the AM construction peak hour and three intersections during the PM construction peak hour. Where impacts during construction may occur, traffic capacity improvements in the form of signal timing modifications were proposed to provide full mitigation at some intersections. Significant traffic impacts could be fully mitigated at four of the nine significantly impacted intersections during the AM construction peak hour (five intersections would remain unmitigated) and two of the three significantly impacted intersections during the PM construction peak hour (one intersection would remain unmitigated).

Noise

Construction of the phased development would involve standard construction activities and practices for buildings in New York City. Foundation installation and superstructure phases of construction are typically when the noisiest activities occur. The exterior and interior fit-out phases of construction typically involve minimal exterior equipment and substantially quieter noise conditions. The Development Site is near existing residential, community facility, and commercial land uses, and the introduction of new residences would occur throughout construction of the proposed development. Based on the proximity of these noise-sensitive land uses, there is the potential for construction to cause significant adverse noise impacts.

To assess the potential for the Proposed Project to result in noise impacts during construction, a quantified noise analysis was conducted.

Construction noise from mobile sources was evaluated for the 6:00 AM to 7:00 AM peak period, when construction traffic would be greatest. Construction noise from mobile sources would not increase by 3 dBA or more, the applicable analysis threshold, and there would be no significant adverse noise impact due to construction mobile sources.

Construction noise from stationary sources was evaluated for five phases of construction, since there would be overlapping activities for demolition, construction of the building foundation, construction of the core and shell, and interior phases of construction associated with the Proposed Project. Construction of the Proposed Project is predicted to result in elevated noise levels at several of the analyzed receptors during limited periods of time during the overall construction period. To the west of the Development Site, at the residential building (R03) located at 540 Fulton Street, construction is predicted to result in noise level increases up to approximately 13.6 dBA for up to 27 months. To the north of the Development Site, at the Long Island University (LIU) facilities (R13 and R14) along DeKalb Avenue, construction is predicted to result in noise level increases up to 17.7 dBA for up to 32 months. To the east of the Development Site, at the residential buildings (R15 and R16) along Hudson Avenue, construction is predicted to result in noise level increases of up to approximately 29.2 dBA over a 49-month period. To the south of the Development Site, at the residential buildings (R17) along Fulton Street located at 1 Flatbush Avenue, construction is predicted to result in noise level increases up to approximately 10.3 dBA over an 11-month period. Such exceedances may be intrusive but would be temporary and would typically occur during weekdays during construction

activities. At each of these locations, since all of the buildings have central heating, ventilation and air conditioning (HVAC) systems or a similar closed-window condition, approximately 30 to 35 dBA attenuation (depending on the building) can be achieved with a closed-window condition resulting in interior noise levels that are close to or exceed the CEQR interior noise level threshold for these types of uses (i.e., 45 dBA (L_{10}) for residential and community facility uses and 50 dBA (L_{10}) for office or equivalent spaces).

Since noise level increases due to construction would exceed the CEQR exterior noise level thresholds at several existing sensitive receptors, and since the CEQR interior noise levels would also be exceeded at some of these receptors, construction of the Proposed Project would result in significant adverse construction noise impacts. As described in **Chapter 17, Construction**, all construction noise impacts would occur at existing residential and/or community facility buildings located close to the Development Site, including the following sensitive receptors: R03, R13, R14, R15, and R16. Interior noise levels at these receptors, which include a mix of residential and community facility receptors, would primarily experience an exceedance of the CEQR interior noise level impact criteria during the demolition, excavation/foundation, and core and shell phases of construction.

Construction at the Development Site would be required to adhere to New York City's construction noise regulations, including the requirement to prepare and implement a Construction Noise Mitigation Plan and to construct an 8-foot-tall construction noise barrier, which is assumed in the noise modeling analysis. Even with these measures, construction noise would still exceed the thresholds for a significant construction noise impact at certain receptor locations during certain phases of the construction work.

Noise from construction activities and some construction equipment is regulated by the New York City Noise Control Code. The New York City Noise Code (Section 24-228) limits noise from non-impulsive construction equipment to a maximum of 85 dBA, as measured 50 feet from the source. The code also limits noise from paving breakers, such as jackhammers, to 95 dBA at a distance of 1 meter and requires use of a pneumatic discharge muffler that provides an insertion loss of 5 dBA.

In addition, the New York City Noise Control Code limits construction activities to weekdays between the hours of 7:00 AM and 6:00 PM. Project-specific noise control measures would be described in the Construction Noise Mitigation Plan and can include a variety of source and path controls, such as the following:

- The contractor would self-certify that all construction tools and equipment have been maintained to not generate excessive or unnecessary noise and that the noise emissions would not exceed the levels specified in Subchapter 5 of the NYC Noise Control Code and Table 22-1 of the 2021 *CEQR Technical Manual*.
- Where feasible, practical, and safe, the use of back-up alarms would be minimized and/or quieter back-up alarms would be installed in accordance with OSHA standards.
- Vehicles would not be allowed to idle more than three minutes, in accordance with New York City Administrative Code §24-163.
- The contractor would implement a training program to inform workers of methods that can minimize construction noise.

The following path noise controls would be implemented to the extent feasible, practical, and safe as required by the New York City Noise Code:

- The DOB regulations require a perimeter barrier or "construction noise barrier," and when the site is within 200 feet of a receptor the barrier shall be constructed in a specific manner (as described in the New York City Noise Code) to provide sufficient sound attenuation. Section 3307.7 of the New York City Building Code requires a solid perimeter noise barrier made out of wood or other suitable material be constructed where a new building is being constructed or a building is being demolished to grade.
- Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, could be located away from and shielded from sensitive receptor locations.
- Should noise complaints occur during construction, the contractor shall use path noise control measures such as temporary noise barriers and jersey barriers.

The primary sources of construction noise causing significant adverse impacts include the rigs during the foundation phases of construction and concrete mixer trucks during the foundation and superstructure phases of construction. Since the impacted residential buildings are generally 10 or more stories tall, increasing the height of the perimeter wall would provide limited benefit compared to the standard 8-foot wall. Concrete mixer trucks would be located along Hudson Avenue or DeKalb Avenue depending on the specific phase of construction. As the impacted receptors are relatively tall, it would not be feasible to introduce a noise barrier between the receptor buildings and the Development Site.

The potential for additional mitigation will be considered further between the Draft EIS and Final EIS, in coordination with the lead agency; however, if no further feasible or practicable mitigation measures are identified, the Proposed Actions would result in a significant adverse noise impact due to construction that would remain unmitigated.

19

Alternatives

As described in the *2021 CEQR Technical Manual*, alternatives selected for consideration in an Environmental Impact Statement (EIS) are generally those that are feasible and have the potential to reduce, eliminate, or avoid adverse impacts of a proposed action while meeting some or all of the goals and objectives of this action.

Introduction

As described in **Chapter 1, Project Description**, the New York City Department of Housing Preservation and Development (HPD), in conjunction with the New York City Department of Health and Mental Hygiene (DOHMH) and the Department of Citywide Administrative Services (DCAS) (each a co-applicant, and collectively, the Applicant), is seeking approval for a zoning map amendment, zoning text amendments, disposition of City-owned property, site selection and acquisition of real property interest, certification to establish and facilitate a transit volume, and an amendment to the Brooklyn Center Urban Renewal Plan (URP) (collectively, the Proposed Actions) to facilitate a mixed-use development in the Downtown Brooklyn neighborhood of Brooklyn, Community District (CD) 2. The Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with an approximately 1,552,605 gross square foot (gsf), 72-story (840-foot-tall) mixed-use building (the Proposed Project). The Proposed Project would include 1,233,950 gsf (933,820 zoning square foot [zsf]) of residential floor area and 209,770 gsf (141,280 zsf) of non-residential floor area designated for commercial (office and retail) and/or community facility uses that may be dedicated for future City use.

The Proposed Project would introduce 1,263 dwelling units (DUs), of which 316 to 379 units would be designated as income-restricted, rent-stabilized, and permanently affordable for households with incomes averaging between 60 and 80 percent area median income (AMI) pursuant to applicable requirements of the City's Mandatory Inclusionary Housing (MIH) Program option 1 or 2, respectively.

The Proposed Project would also include public realm improvements, including approximately 4,745 sf of publicly accessible open space on the southern portion of the Development Site, an expanded sidewalk along the Development Site's Flatbush Avenue Extension frontage, and surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site.

This chapter considers the following two alternatives to the proposed actions:

- A **No-Action Alternative**, which is mandated by City Environmental Quality Review (CEQR) and the State Environmental Quality Review Act (SEQRA). The No-Action Alternative is intended to provide the lead and involved agencies with an assessment of the expected environmental conditions in 2032 (the "build year" for the Proposed Actions) in the absence of the Proposed Actions.
- A **No Unmitigated Significant Impacts Alternative**, which considers a development scenario that would not result in any identified unmitigated significant adverse impacts.

Principal Conclusions

No-Action Alternative

The No-Action Alternative assesses the future conditions on the Development Site in absence of the Proposed Actions (i.e., none of the discretionary approvals proposed as part of the Proposed Actions would be adopted). In the 2032 future under the No-Action Alternative, it is expected that the existing seven-story commercial office and retail building currently occupying the Development Site would remain as under existing conditions and be fully occupied with approximately 293,370 gsf of commercial office space, 35,548 gsf of commercial retail space, and a 46,190-gsf accessory parking garage with approximately 140 spaces. The proposed public realm improvements (a new public open space, an expanded sidewalk, and surface improvements around the existing DeKalb Avenue subway station entrance) would not be carried out. These conditions are referred to throughout the EIS as the No-Action Condition or the Future Without the Proposed Actions.

The anticipated significant adverse impacts of the Proposed Actions related to traffic, pedestrians, construction transportation (traffic and pedestrians), and construction noise would not occur under the No-Action Alternative. However, the No-Action Alternative would not meet the goals and objectives of the Proposed Actions. Under the No-Action Alternative, there would be no residential development on the Development Site, and there would be a substantial lost opportunity to create a large number of affordable and market-rate housing units on a single site in Downtown Brooklyn. The existing zoning would not permit residential uses of any kind, and MIH would not be mapped on the Project Area, meaning that no affordable or market rate housing would be developed. In addition, under the No-Action Alternative, there would be no public realm improvements to the Development Site, including the project-generated publicly accessible open space located on the southern portion of the Development Site, the expanded sidewalk along the Development Site's Flatbush Avenue Extension frontage, or the surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site. Therefore, the No-Action Alternative would fail to meet the objectives of the Proposed Actions.

No Unmitigated Significant Adverse Impacts Alternative

The No Unmitigated Significant Adverse Impacts Alternative assesses a scenario in which the Proposed Actions are modified such that future development would avoid the unmitigable significant adverse impacts associated with the Proposed Actions, as identified in the EIS. As discussed in **Chapter 18, Mitigation**, and **Chapter 20, Unavoidable Significant Adverse Impacts**, the Proposed Actions would result in unmitigable significant adverse impacts due to operational traffic as well as traffic and noise levels during the temporary construction period. In order to eliminate these impacts, the Proposed Actions would have to be modified to such a point where their principal goals and objectives would not be realized, such as by seeking a lower-density zoning district or removing or modifying some or all of the proposed zoning waivers.

No-Action Alternative

Description of the No-Action Alternative

The No-Action Alternative examines future conditions on the Development Site in the absence of the Proposed Actions (i.e., none of the discretionary approvals proposed as part of the Proposed Actions would be adopted). The following subsections compare the conditions under this alternative to conditions in the future with the Proposed Actions, similar to the No-Action sections in the preceding chapters. The No-Action Alternative incorporates known development projects in the surrounding area that are likely to be built by the analysis year of 2032.

In the No-Action Alternative, it is expected that the existing seven-story commercial office and retail building currently occupying the Development Site would remain as under existing conditions and be fully occupied with approximately 293,370 gsf of commercial office space, 35,548 gsf of commercial retail space, and a 46,190-gsf accessory parking garage with approximately 140 spaces. The proposed public realm improvements (a new public open space, an expanded sidewalk, and surface improvements around the existing DeKalb Avenue subway station entrance) would not be carried out.

The anticipated effects of the No-Action Alternative in comparison to those of the Proposed Actions are discussed below.

Land Use, Zoning, and Public Policy

In the No-Action Alternative, the existing building on the Development Site would remain and be reoccupied by commercial office and retail uses.

As described in **Chapter 2, Land Use, Zoning, and Public Policy**, there are seven development projects within 400 feet of the Development Site that are anticipated to be complete by 2032 regardless of the Proposed Actions. These developments would introduce a total of approximately 2,314 DUs, 261,965 zsf of commercial space including 103 hotel keys, and 55,000 zsf of community facility space.

Under the No-Action Alternative, it is anticipated that there would be no changes to zoning affecting the Development Site or the 400-foot study area. Under this alternative, the existing C6-4 zoning district and Special Downtown Brooklyn District (DB) would remain in place. There would be no modifications to the Brooklyn Center URP.

Under the No-Action Alternative, there are no known public policy changes that are anticipated to affect the Development Site or the study area. Existing public policies are expected to remain in effect.

The No-Action Alternative would not achieve the beneficial changes regarding land use and public policy that would result from the Proposed Actions. Unlike the future With-Action condition, the No-Action Alternative would not allow for the development of affordable and market-rate housing, as redevelopment of the existing commercial building would not be feasible. Without the mapping of an MIH area on the Project Area, there would be no mechanism for ensuring permanent affordability on the Development Site. The No-Action Alternative would not have benefits associated with mixed-use development, including the addition of a 24-hour residential population to the Development Site. The No-Action Alternative would be less supportive of public policies that aim to increase the supply of housing and affordable housing, such as *Housing New York 2.0, OneNYC 2050*, and *Housing Our Neighbors: A Blueprint for Housing and Homelessness*.

While the No-Action Alternative would not achieve potential benefits associated with the Proposed Actions, neither the Proposed Actions nor the No-Action Alternative would result in significant adverse impacts related to land use, zoning, and public policy, as described in **Chapter 2, Land Use, Zoning, and Public Policy**.

Socioeconomic Conditions

Neither the No-Action Alternative nor the Proposed Actions would cause a significant adverse impact on socioeconomic conditions.

Like the Proposed Actions, the No-Action Alternative would not result in direct residential or business displacement, nor would there be any significant adverse impacts related to indirect business displacement due to effects on a specific industry, increased rents, or retail market saturation.

Both in the future With-Action condition and in the No-Action Alternative, new residential developments are anticipated in the half-mile study area for indirect residential displacement. Demand for housing is anticipated to continue to rise in Downtown Brooklyn and the surrounding neighborhoods. The Proposed Actions represent an opportunity to introduce a substantial amount of housing at a single site in a high-demand area in Downtown Brooklyn, which could provide a socioeconomic benefit by increasing the supply of affordable and market-rate rental housing. As discussed in **Chapter 2, Land Use, Zoning, and Public Policy**, New York City is experiencing a housing crisis, and the Proposed Actions would be consistent with the socioeconomic goals of several public policies aimed at alleviating the crisis. In contrast with the future With-Action condition, the No-Action Alternative would not allow for residential development, nor would there be an MIH area mapped on the Development Site. As such, the potential socioeconomic benefits of the Proposed Actions (the provision of housing including permanently affordable housing pursuant to MIH) would not be achieved under the No-Action Alternative, as described in **Chapter 3, Socioeconomic Conditions**.

Community Facilities and Services

Neither the Proposed Actions nor the No-Action Alternative would result in any impacts to community facilities and services. There would be no significant adverse impacts related to direct or indirect effects on public elementary, intermediate, and high schools, library services, police, fire,

emergency medical services, or publicly funded early-childhood programs in the future with the Proposed Actions or in the No-Action alternative.

Open Space

Neither the Proposed Actions nor the No-Action Alternative would directly affect existing open spaces. However, the No-Action Alternative would not introduce any publicly accessible open space, while the Proposed Actions would introduce an approximately 4,750-sf publicly accessible open space.

As the No-Action Alternative would not introduce a residential population to the Development Site, there would be no potential for indirect effects on open space due to residential population. In the No-Action Alternative, the existing building on the Development Site would be reoccupied by a mix of commercial office and retail uses that would introduce an estimated 1,222 workers compared to existing conditions. Compared to the Proposed Actions, the No-Action Alternative would introduce an additional 491 workers. As such, there would likely be higher demand for passive open space within a quarter mile of the Development Site. In contrast to the future With-Action condition, there would be no on-site open space provided in the No-Action Alternative to meet the needs of the future on-site employee population, while the future With-Action condition would introduce a new public open space on site for use by employees, residents, and the greater public.

Shadows

In the No-Action Alternative, the existing building would remain on the Development Site; its shadows would be the same as under existing conditions. While the Proposed Actions would introduce development that would cast shadows on several sunlight-sensitive resources, there would be no significant adverse shadows impacts under either the No-Action Alternative or the Proposed Actions.

Urban Design and Visual Resources

Under the No-Action Alternative, the commercial building would remain on the Development Site. Several new developments are anticipated in the 400-foot study area for urban design and visual resources absent the Proposed Actions. Any potential benefits to the streetscape associated with the Proposed Actions, as discussed in **Chapter 7, Urban Design and Visual Resources** (e.g., the introduction of publicly accessible open space, expanded sidewalks, and improvements to the DeKalb Avenue subway station entrance), would not occur under the No-Action Alternative. While neither the No-Action Alternative nor the Proposed Actions would result in significant adverse impacts related to urban design and visual resources, the existing conditions and anticipated conditions under the No-Action Alternative are substandard with respect to urban design. In the existing conditions, the Development Site is occupied by an outdated office building with underutilized and substandard spaces at the street level, and a surplus of outdated office space within the building. This condition does not represent efficient use of the Development Site, especially given its prominent location. Under the No-Action Alternative, the existing poor streetscape design and pedestrian condition would remain at the Development Site. The With-Action Condition would significantly improve the pedestrian experience in the area.

Hazardous Materials

As discussed in **Chapter 8, Hazardous Materials**, a Recognized Environmental Conditions (REC) was identified in the Phase I Environmental Site Assessment (ESA) for the Development Site. The Development Site is subject to an existing (E)-Designation (E-124), which was applied to Brooklyn Block 2093, Lot 1 as part of the 2004 Downtown Brooklyn Development project. The (E)-Designation requires the property owner to conduct site investigation and remediation prior to redevelopment. Under the No-Action Alternative, the Development Site would not be redeveloped, and any potential subsurface contamination would remain uninvestigated and unremediated.

Transportation

Under the No-Action Alternative, there would be no significant adverse impacts to transportation. It is anticipated that traffic, transit, and pedestrian volumes would increase due to background growth and development within the surrounding area. New York City Department of Transportation (NYC DOT) is currently in the process of developing the Flatbush Avenue Bus Priority plan that would implement center-running bus lanes along Flatbush Avenue between Livingston Street and Grand Army Plaza, and is also in preliminary planning stage for the DeKalb-Lafayette Avenues Bus and Safety Improvements project to improve bus service and street safety along the DeKalb Avenue and Lafayette Avenue corridors between Flatbush Avenue Extension and Broadway. If adopted, these plans would occur regardless of the Proposed Actions.

Air Quality

As described above, no new development is expected to occur on the Development Site under the No-Action Alternative. As such, the No-Action Alternative would not result in a significant adverse mobile source or stationary source air quality impact. As discussed in **Chapter 11, Air Quality**, under the Proposed Actions, the Land Disposition Agreement (LDA) and/or Regulatory Agreement (RA) with the Lead Agency would ensure that any new residential or commercial development on the above-referenced property must ensure the heating, ventilating, and air-conditioning (HVAC) system and hot water equipment are powered by electricity only with no venting or stacks, or an equally protective alternative (e.g., steam). The existing building has an HVAC stack that is an air emissions source and would be eliminated in the With-Action and replaced with a fully electric building. In the No-Action Alternative, there would be no mechanism to provide protection of sensitive uses near the Development Site.

Greenhouse Gas Emissions and Climate Change

As the No-Action Alternative would involve the reoccupation of an existing building, there would be no significant changes to energy consumption and carbon dioxide equivalent (CO_2e) emissions per year. Neither the Proposed Actions nor the No-Action Alternative would result in significant greenhouse gas emissions or climate change impacts. However, in contrast to the No-Action Alternative, the Proposed Actions represent an opportunity to provide a substantial amount of housing in an exceptionally transit-rich area, which could reduce emissions by reducing car dependency. Such potential benefits would not occur under the No-Action Alternative.

Noise

Similar to the Proposed Actions, there would be an increase in background traffic under the No-Action condition that would result in an increase in ambient noise conditions. No-Action noise conditions have been determined based on ambient noise measurements and proportional noise modeling. These increases in traffic would result in small changes in noise levels, but changes of this magnitude would be barely perceptible. Under the No-Action Alternative, since the Development Site would not be redeveloped, compliance with the existing (E)-Designation for noise attenuation would not be required, and the existing building may not necessarily have the needed attenuation for the existing ambient noise levels at the Development Site.

Public Health

Under the No-Action Alternative, there would be no new on-site development. As such, no unmitigated significant adverse impacts would occur in the areas of hazardous materials, air quality, noise, or construction, and thus there would be no significant adverse public health impacts under the No-Action Alternative.

Neighborhood Character

No new development would occur under the No-Action Alternative and the overall neighborhood character of the area would remain similar to existing conditions, with new development introducing several new buildings to the surrounding area. Therefore, the No-Action Alternative would not result in a significant adverse impact to neighborhood character.

Construction

The No-Action Alternative would not involve new construction. Therefore, the No-Action Alternative would not result in a significant adverse construction impact. Compared to the Proposed Actions, the No-Action Alternative would not result in a significant adverse construction noise or construction traffic impact.

Disadvantaged Communities

Since no new development would occur under the No-Action Alternative, this alternative would not have a disproportionate impact on disadvantaged communities or cause or increase a pollution burden. Like the existing conditions, under the No-Action Alternative, (E)-Designations and/or LDA and/or RA would not be placed on the Development Site to mitigate any potential impacts related to hazardous materials, air quality, or noise. Potential benefits of the Proposed Actions would not occur under the No-Action Alternative. With respect to disadvantaged communities (DACs), the potential benefits of the Proposed Actions include the provision of a substantial amount of affordable housing in an amenity-rich and transit-rich area, improvements to the pedestrian streetscape, and the introduction of new public open space. While not located within a DAC, the Development Site is adjacent to a DAC that is located to the northwest. Potential benefits of the Proposed Actions related to housing supply and public realm improvements would be available to residents of DACs and non-DACs. The current housing affordability crisis is an environmental justice issue and has a disproportionate burden on disadvantaged communities. The Proposed Actions seek to help address

the housing crisis by increasing much-needed affordable housing supply into the housing market. This would not happen in the No-Action Alternative.

No Unmitigated Significant Adverse Impacts Alternative

Description of the No Unmitigated Significant Adverse Impacts Alternative

According to the *CEQR Technical Manual*, when proposed actions would result in unmitigated significant adverse impacts, it may be appropriate to include an assessment of an alternative to the project that would not result in unmitigated impacts. The No Unmitigated Significant Adverse Impact Alternative identifies those modifications to the Proposed Actions that would be required to eliminate all their unmitigated significant adverse impacts.

The Proposed Actions would result in significant adverse traffic and pedestrian impacts during the operational period. As discussed in **Chapter 18, Mitigation**, and **Chapter 20, Unavoidable Significant Adverse Impacts**, significant adverse traffic impacts would remain unmitigated at six intersections during at least 1 analysis peak hour.

As discussed below, to eliminate all unmitigated significant adverse impacts, the Proposed Actions would need to be so substantially modified that the project goals and objectives would not be realized or would be materially compromised.

Transportation

Traffic

As discussed in **Chapter 18, Mitigation**, and **Chapter 21, Unavoidable Significant Adverse Impacts**, the Proposed Project would result in significant impacts to traffic that could not be fully mitigated at seven intersections during the weekday AM peak hour, two intersection during the weekday midday peak hour, four intersections during the weekday PM peak hour, and six intersections during the Saturday peak hour. Sensitivity analyses were conducted to determine the level of reduction in the development program that would be necessary to eliminate unmitigated significant transportation impacts. The analysis determined that during the Saturday peak hour, significant traffic impacts that could not be mitigated would be expected at the intersection of Flatbush Avenue Extension and Fulton Street with a development increment of 5 percent of the Proposed Project. Furthermore, the diverted traffic volumes resulting from the proposed conversion of Hudson Avenue from a two-way roadway to a one-way roadway would also result in significant traffic impacts at the intersection of Fulton Street and Hudson Avenue that could not be mitigated.

Because a minimal increase in traffic above No-Action condition levels would be expected to result in traffic impacts that could not be mitigated, the No-Action Alternative would be the only alternative that would avoid significant adverse traffic impacts. It would not be feasible to modify the Proposed Actions such that an impact would be avoided while still meeting the project purpose and need. Although the conversion of Hudson Avenue from a two-way roadway to a one-way roadway would result in unmitigable impacts, this street conversion is being coordinated directly with NYC DOT.

Construction

The Proposed Actions would result in unmitigable significant adverse traffic, pedestrian, and noise impacts during construction.

As discussed in **Chapter 17, Construction**, and **Chapter 18, Mitigation**, 18 key intersections were analyzed for potential significant traffic impacts during the construction traffic peak hours. Temporary significant impacts that could not be fully mitigated during construction were identified at five intersections during the AM construction peak hour and one intersection during the PM construction peak hour. Refer to **Chapter 21, Unavoidable Significant Adverse Impacts**, for more detail.

As discussed in **Chapter 17, Construction**, and **Chapter 18, Mitigation**, the Proposed Actions would result in temporary unmitigable significant adverse pedestrian impacts during construction. Specifically, the north sidewalk of DeKalb Avenue between Flatbush Avenue Extension and Hudson Avenue would be significantly impacted during the weekday AM and PM peak hours (level of service [LOS] D). While this sidewalk would be temporarily significantly impacted, there would be sufficient capacity at LOS D to accommodate all pedestrian users, albeit at more crowded conditions. Considering the temporary nature of the construction activities and resulting detours, and existing sidewalk and roadway constraints along DeKalb Avenue (e.g., there is a tree pit obstruction at the critical analysis point that impedes pedestrian flows), no feasible mitigation measure was identified, and therefore the temporary pedestrian impact would remain unmitigated during construction.

As discussed in **Chapter 17, Construction**, and **Chapter 18, Mitigation**, temporary unmitigable significant adverse construction noise impacts would occur as a result of the Proposed Actions. Since noise level increases due to construction would exceed the CEQR exterior noise level thresholds at several existing sensitive receptors, and since the CEQR interior noise levels would also be exceeded at some of these receptors, there would be potential for construction of the Proposed Projects to result in significant adverse construction noise impacts at five receptor locations. With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, including an 8-foot construction noise barrier, construction noise would be reduced, but would still exceed the thresholds for significant construction noise impact.

In order to fully mitigate all identified significant adverse impacts related to construction (traffic, pedestrians, and noise), the Proposed Actions would need to be modified to a point at which the Proposed Actions' goals and objectives would not be realized. Per *CEQR Technical Manual* guidance, projects in New York City with an anticipated construction duration of 24 months or less would be unlikely to cause significant adverse impacts during the construction period. In order to reduce the duration of the Proposed Project's construction period, it would be necessary to significantly reduce its scale, such as by removing the proposed zoning text amendments to the DB or seeking a lower-density zoning district. Were the Proposed Actions modified in such a way, it would significantly decrease the number of affordable and market-rate units within the Proposed Project and likely result in a substandard site plan if the proposed waivers related to the Metropolitan Transit Authority (MTA) easement were not included. Furthermore, it is likely that the proposed site improvements (open space, an expanded sidewalk, and improvements to the subway entrance) would be scaled back or eliminated in this scenario. As such, the No Unmitigated Significant Adverse Impacts Alternative would not meet the goals and objectives outlined in **Chapter 1, Project Description**, to the same extent as the Proposed Actions.

20

Unavoidable Significant Adverse Impacts

Unavoidable significant adverse impacts are those that would occur if a proposed project or action is implemented regardless of the mitigation employed, or if mitigation is impossible.

Introduction

This chapter summarizes unavoidable significant adverse impacts resulting from the With-Action condition. According to the *2021 CEQR Technical Manual*, unavoidable significant adverse impacts are those that would occur if a proposed project or action is implemented regardless of the mitigation employed, or if mitigation is impossible.

As discussed in **Chapter 1, Project Description**, the Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with a new, approximately 1,552,605-gross-square-foot (gsf), 72-story, 840-foot-tall, mixed-use building. Under With-Action conditions, the building would include approximately 1,233,950 gsf of residential floor area, 129,000 gsf of retail space, and 88,500 gsf of office and/or community facility space that may be dedicated for future City use.

As described in **Chapter 20, Mitigation**, the Proposed Actions have the potential to result in significant adverse traffic and pedestrian impacts as well as construction-related traffic and pedestrian and noise impacts at certain locations. To the extent practicable, mitigation has been proposed for these identified significant adverse impacts. However, in some instances no practicable mitigation has been identified to fully mitigate the significant adverse impacts, and there are no reasonable alternatives to the Proposed Actions that would meet the purpose and need, eliminate potential impacts, and not cause other or similar significant adverse impacts.

Transportation

Traffic

As discussed in **Chapter 10, Transportation**, and **Chapter 18, Mitigation**, the Proposed Actions would result in significant adverse traffic impacts to seven intersections during the weekday AM, six intersections during the weekday midday, six intersections during the weekday PM, and ten intersections during the Saturday peak hours. Significant traffic impacts could not be fully mitigated at seven intersections during the weekday AM peak hour, two intersections during the weekday midday peak hour, four intersections during the weekday PM peak hour, and six intersections during the Saturday peak hour. Standard traffic capacity improvements typically implemented by New York City Department of Transportation (NYC DOT), such as signal timing modifications, could mitigate traffic impacts at four intersections during the weekday midday peak hour (one intersection would be partially mitigated), two intersections during the weekday PM peak hour (one intersection would be partially mitigated), and four intersections during the Saturday peak hour (one intersection would be partially mitigated). These mitigation measures are being explored and will be studied further in conjunction with NYC DOT between the Draft and Final Environmental Impact Statement (EIS). In cases where these mitigations measures are infeasible, and no alternative and equivalent measure is identified, these impacted locations would remain unmitigated.

Construction

Traffic

As discussed in **Chapter 17, Construction**, the Proposed Actions would result in temporary significant adverse traffic impacts during construction. Nine of the 18 analysis intersections would be significantly impacted during the AM construction peak hour of 6 AM to 7 AM, and three of the 18 analysis intersections would be significantly impacted during the PM construction peak hour of 3 PM to 4 PM. These temporary significant traffic impacts could not be fully mitigated at five of the eight significantly impacted intersections during the AM construction peak hour and one of the three significantly impacted intersections during the PM construction peak hour. These mitigation measures are being explored and will be studied further in conjunction with NYC DOT between the Draft and Final EIS. In cases where these mitigations measures are infeasible, and no alternative and equivalent measure is identified, these impacted locations would remain unmitigated.

Pedestrian

As discussed in **Chapter 17, Construction**, construction activities would result in a potential for a temporary significant adverse impact on the north sidewalk of DeKalb Avenue between Flatbush Avenue Extension and Hudson Avenue as a result of sidewalk closure-related detours during construction during the weekday AM and PM peak hours. No feasible mitigation measure was identified; potential mitigation measures will be explored between the Draft and Final EIS. In cases where these mitigations measures are infeasible, and no alternative and equivalent measure is identified, these temporary pedestrian impact would remain unmitigated during construction.

Noise

As discussed in **Chapter 17, Construction**, and **Chapter 18, Mitigation**, five of 17 receptors in the construction noise study area would experience temporary significant adverse construction noise impacts that would occur as a result of the Proposed Actions, all of which would be unmitigable (see **Figure 20-1** and **Table 20-1**). All receptors are residential/commercial buildings. Construction noise levels at all five receptors would exceed the thresholds for exterior increase in noise as well as the thresholds for acceptable interior noise levels for community facilities and residential uses. With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, including an 8-foot construction noise barrier, construction noise would be reduced, but would still exceed the thresholds for significant construction noise impact. The primary sources of construction noise causing significant adverse impacts include the rigs during the foundation phases of construction and concrete mixer trucks during the foundation and superstructure phases of construction. Since the impacted mixed-use residential and commercial buildings are generally ten or more stories tall, with residential uses on at least second floor and above, the height of the perimeter wall would provide limited benefit compared to the standard 8-foot wall. However, since concrete mixer trucks would be located along Hudson Avenue or DeKalb Avenue depending on the specific phase of construction and the impacted receptors are relatively tall, it would not be feasible to introduce a noise barrier between the receptor buildings impacted and the Development Site. Additionally, it is worth noting that the construction modeling is based on an extremely conservative scenario that all equipment on-site would be operated at maximum capacity at the same time, which would barely occur or only occur for a very short period.

As discussed in **Chapter 19, Alternatives**, to fully mitigate all identified significant adverse impacts related to construction noise, the Proposed Actions would need to be modified to a point at which the Proposed Actions' goals and objectives would not be realized. In cases where no mitigation measures are feasible or available, and no alternative is identified between the Draft and Final EIS, these impacted locations would remain unmitigated.

Table 20-1 Receptors with Unmitigable Construction Noise impacts

Receptors	Address	Land Use
R03	540 Fulton Street	Residential/Commercial
R13	371 Flatbush Ave Extension	Community Facility
R14	75 DeKalb Avenue	Community Facility
R15	80 DeKalb Avenue	Residential/Commercial
R16	625 Fulton Street	Residential/Commercial

Figure 20-1 Significant Adverse Construction Noise Impact Locations



21

Growth-Inducing Aspects of the Proposed Project

The term "growth-inducing aspects" generally refers to the potential for a proposed project to trigger additional development in areas outside of a project site (i.e., directly affected area) that would not experience such development without the proposed project.

Introduction

The *2021 CEQR Technical Manual* indicates that an analysis of the growth-inducing aspects of a proposed project is appropriate when the project:

- Adds substantial new land use, new residents, or new employment that could induce additional development of a similar kind or of support uses, such as retail establishments to serve new residential uses; and/or
- Introduces or greatly expands infrastructure capacity (e.g., sewers, central water supply).

As described in **Chapter 1, Project Description**, the Proposed Actions would facilitate a mixed-use development (the Proposed Project) in the Downtown Brooklyn neighborhood within Brooklyn Community District (CD) 2. The Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with a new, approximately 1,552,605-gross-square-foot (gsf), 72-story, 840-foot-tall, mixed-use building (the Proposed Project). Under With-Action conditions, the building would include approximately 1,233,950 gsf of residential floor 129,000 gsf of retail space and 88,500 gsf of office and/or community facility space that may be dedicated for future city use.

The Proposed Actions would introduce approximately 1,263 dwelling units, of which approximately 253 to 379 would be designated as permanently affordable for households with incomes averaging between 40 and 80 percent area median income (AMI), pursuant to applicable requirements of the City's Mandatory Inclusionary Housing (MIH) Program option 1, 2, or 3.

The Proposed Actions would also introduce public realm improvements, including an approximately 4,745 square foot (sf) publicly accessible open space on the southern portion of the Development Site, an expanded sidewalk along the Development Site's Flatbush Avenue Extension frontage, and surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site.

Principal Conclusions

As described in **Chapter 2, Land Use, Zoning, and Public Policy**, the Proposed Actions would result in an expansion of existing land uses in the study area. The Proposed C6-12 zoning district would permit higher density and bulk on the Development Site, which is situated in a transit-rich area and surrounded by other high-density mixed-use buildings. The permitted bulk and height under the Proposed Actions would be appropriate for this neighborhood and would help revitalize the Development Site to increase housing capacity, furthering the current housing goals of New York City as well as the goals of the Special Downtown Brooklyn District (DB). The proposed zoning text amendments to zoning regulations regarding the DB would permit additional residential FAR, permit special setback requirements, and grant exemptions from street wall locations and continuity requirement on a "large qualifying site." The Proposed Actions would be limited to the Development Site only, as no other potential "large qualifying sites" are identified within the current Special Downtown Brooklyn District boundary to which the proposed zoning text amendment could be applied. Similarly, the proposed setback requirements and street wall location and continuity requirements relief would only be applied to the Development Site, and no other lots within the current DB would be affected. As such, no conceptual analysis is warranted and the Proposed Actions would not trigger additional land use and/or zoning changes.

The Proposed Actions would enable much needed housing in the Downtown Brooklyn neighborhood and provide non-residential uses, such as local retail space, office space, and/or community facility space serving the local community—thus enhancing the pedestrian experience, benefiting existing and future residents, and furthering the goals of the DB as well as the Brooklyn Center Urban Renewal Plan. The Proposed Actions would also introduce much needed public realm improvements, such as a 4,745-sf public open space on the southern portion of the Development Site. The mix of ground-floor retail and open space is expected to continue to support the area's existing commercial activities while improving the pedestrian experience and benefiting this area's existing and future residents and visitors. The Proposed Actions would not conflict with the current surrounding zoning or existing uses. Rather, the Proposed Actions would facilitate development that would integrate well with this transit-rich area and the existing zoning framework within the study area. As such, the Proposed Actions are not expected to add substantial new land uses, new residents, or new employment to the surrounding area.

As described in **Chapter 3, Socioeconomic Conditions**, the Proposed Actions would introduce 2,564 new residents to the study area, increasing the half-mile study area's residential population by 3.5 percent. While the weighted average income for residents of all incremental units was estimated to be $185,881, higher than the average household income for the half-mile study area population of $132,541, the level of population increase is under five percent, which would not be expected to introduce or accelerate a trend leading to the displacement of vulnerable populations or create a significant indirect residential displacement adverse impact.

As discussed in the Environmental Assessment Statement (EAS) published on May 1, 2025, while the Proposed Actions would result in development that would increase water demand and wastewater,

the infrastructure in the study area is well equipped, and such improvements facilitated by the Proposed Actions would not induce additional growth or overburden the existing system. Similarly, the EAS has concluded that the Proposed Actions would not result in significant adverse impacts to solid waste and sanitation services or affect the transmission, generation, or consumption of energy.

In conclusion, the Proposed Actions are not expected to cause any significant secondary impacts that would lead to substantial new development in the surrounding area. Rather, the Proposed Actions would only be applied to the Development Site and would not affect any other sites. Therefore, the Proposed Actions would not induce significant new growth in the surrounding area.

22

Irreversible and Irretrievable Commitments of Resources

Per the *2021 CEQR Technical Manual*, this chapter summarizes the Proposed Project's impacts on the loss of environmental resources, both in the immediate future and in the long-term. Resources include both man-made and natural resources. Examples of losses include removal of vegetation without replacement and use of fossil fuels and materials for construction, etc. The extent to which the Proposed Project forecloses future options or involves trade-offs between short-term environmental gains and long-term losses should also be addressed. In considering the trade-offs of the project, it is also possible to compare short-term losses with long-term benefits.

The Proposed Project would constitute a long-term commitment of land resources, thereby rendering land use for other purposes highly unlikely in the foreseeable future. However, the proposed land uses that would be enabled by the Proposed Actions would be compatible with existing conditions and development trends in the surrounding neighborhood. The Development Site does not possess any natural resource of significant value, and the site has been previously developed. Furthermore, funds committed by the project sponsor to the design, construction, and operation of the Proposed Project under the Proposed Actions are not available for other projects.

These commitments of resources and materials are weighted against the benefits of the Proposed Project. As described in **Chapter 1, Project Description**, the Proposed Actions would facilitate the redevelopment of Brooklyn Block 2093, Lot 1 (the Development Site) with a new, approximately 1,552,605-gross-square-foot (gsf), 72-story, 840-foot-tall, mixed-use building. Under With-Action conditions, the building would include approximately 1,233,950 gsf of residential floor 129,000 gsf of retail space and 88,500 gsf of office and/or community facility space that may be dedicated for future City use.

The Proposed Actions would introduce approximately 1,263 dwelling units, of which approximately 253 to 379 would be designated as permanently affordable for households with incomes averaging between 40 and 80 percent area median income (AMI), pursuant to applicable requirements of the City's Mandatory Inclusionary Housing (MIH) Program option 1, 2, or 3.

The Proposed Actions aim to transform a City-owned Development Site located in Downtown Brooklyn, the city's third-largest Central Business District, from underperforming commercial uses into a vibrant mixed-use development. This redevelopment will provide new housing opportunities, including permanently affordable units alongside modern commercial and/or community facility spaces that would serve both existing and future residential population. The project will support neighborhood economic activity by taking advantage of the area's existing mixed-use character and proximity to public transportation. Redevelopment of the Development Site under the Proposed Actions would align with the goals of the Brooklyn Center Urban Renewal Plan by replacing underutilized office space with essential housing within the Brooklyn Center Urban Renewal Area, supported by both existing and new commercial and community facility uses. Additionally, the additional affordable housing units generated by the Proposed Actions would also align with the goals identified in the City's *Housing Our Neighbors: A Blueprint for Housing and Homelessness* report—more specifically, the Blueprint's goal to redevelop underutilized government-owned land. In addition to its residential offerings, the Proposed Actions would also introduce non-residential uses benefiting the neighborhood.

The Proposed Project would also include public realm improvements, including an approximately 4,745 square foot (sf) open space available to the public on the southern portion of the Development Site, an expanded sidewalk along the Development Site's Flatbush Avenue Extension frontage, and surface improvements around the existing DeKalb Avenue subway station entrance on the Development Site. Absent the approval of the Proposed Actions, these public realm improvements would not be realized.

In conclusion, the Proposed Actions would transform an underutilized site in Downtown Brooklyn into a vibrant, mixed-use community hub that aims to provide much-needed affordable housing, commercial amenities, and public open space. The Proposed Actions would not result in an immediate or long-term loss of environmental resources, since the Development Site does not possess any natural resource of significant value, and the site has been previously developed. The long-term commitment of land resources needed for the Proposed Project would be balanced by the project's beneficial aspects, including public realm improvements, economic developments, and housing—especially affordable housing production—in accordance with City policy goals.

Appendix A: LPC Correspondence

Landmarks Preservation Commission

1 Centre Street
9th Floor North
New York, NY 10007

Voice (212)-669-7700
Fax (212)-669-7960
http://nyc.gov/landmarks

ENVIRONMENTAL REVIEW

Project number: LA-CEQR-K (HOUSING PRESERVATION AND DEV)
Project:
Address: 395 FLATBUSH AVENUE EXT BBL: 3020930001
Date Received: 1/21/2025

[X**] No architectural significance [PROJECT SITE]**

[X**] No archaeological significance [PROJECT SITE]**

[x] IN RADIUS Designated New York City Landmark or Within Designated Historic District

[X] IN RADIUS Listed on National Register of Historic Places

[X] IN RADIUS Appears to be eligible for National Register Listing and/or New York City Landmark Designation

[ ] May be archaeologically significant; requesting additional materials

Comments:

RADIUS:

LPC DESIGNATED AND S/NR ELIGIBLE DIME SAVINGS BANK OF NEW YORK, 9 DEKALB AVENUE AND S/NR UNDETERMINED 33 FLATBUSH AVENUE WITHIN THE 400' RADIUS; S/NR AND LPC ELIGIBLE PIONEER WAREHOUSE, 37-53 FLATBUSH AVENUE ADJACENT TO 400' RADIUS.

SHADOW STUDY (3,268') RADIUS:

These properties should all be screened as per the CEQR Technical Manual:

THE LPC DESIGNATED FRIENDS MEETING HOUSE, 110 SCHERMERHORN STREET AND FIRST FREE CONGREGATION CHURCH, 311 BRIDGE STREET; S/NR ELIGIBLE CATHEDRAL BASILICA OF ST. JAMES, 250 CATHEDRAL PLACE AND MARY OF NAZARETH RC CHURCH, 37 ADELPHI STREET; PLUS THE FOLLOWING PROPERTIES IN THE LPC DESIGNATED AND S/NR LISTED FORT GREENE HISTORIC DISTRICT: FORT GREENE PARK; ST. MARKS & ST. MICHAEL'S EPISCOPAL CHURCH, 222-232 ADELPHI STREET; SIMPSON METHODIST EPISCOPAL CHURCH, 201-2011 CLERMONT AVENUE; LAFAYETTE AVENUE PRESBYTERIAN CHURCH, 102-108 LAFAYETTE AVENUE; EVANGELICAL LUTHERAN CHURCH OF THE HOLY TRINITY, 266 CUMBERLAND STREET; AND QUEEN OF ALL SAINTS RC CHURCH, 201-209 LAFAYETTE AVENUE.

Gina Santucci 2/11/2025

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 37555_FSO_GS_02112025.docx

Landmarks Preservation Commission

1 Centre Street
9th Floor North
New York, NY 10007

Voice (212)-669-7700
Fax (212)-669-7960
http://nyc.gov/landmarks

ENVIRONMENTAL REVIEW

Project number: LA-CEQR-M (DEPARTMENT OF CITY PLANNING)
Project: 101 FRANKLIN STREET
Address: 59 LEONARD STREET BBL: 1001770002
Date Received: 3/18/2025

[X] No architectural significance

[X] No archaeological significance

[ ] Designated New York City Landmark or Within Designated Historic District

[ ] Listed on National Register of Historic Places

[ ] Appears to be eligible for National Register Listing and/or New York City Landmark Designation

[ ] May be archaeologically significant; requesting additional materials

Comments:

Two properties directly adjacent to the project site, 103 and 105 Franklin Street, are located within the LPC designated and S/NR eligible Tribeca East Historic District. A Construction Protection Plan (CPP) is required for both of these properties. See the CEQR Technical Manual, Chapter 9 for Historic Resources, Section 522, page 9-21 for details.

The CPP shall be submitted to LPC for review and approval prior to construction.

LPC DESIGNATED AND S/NR LISTED 85 LEONARD STREET; LPC DESIGNATED AND S/NR ELIGIBLE TRIBECA EAST HISTORIC DISTRICT AND TRIBECA WEST HISTORIC DISTRICT; LPC DESIGNATED 2 WHITE STREET; CONDICT STORE, 55 WHITE STREET; WOOD'S MERCANTILE, 46 WHITE STREET; 39 AND 41 WORTH STREET BUILDINGS AND 175 WEST BROADWAY BUILDING WITHIN RADIUS.

LPC DESIGNATED WOOD'S MERCANTILE, 48-50 WHITE STREET AND S/NR ELIGIBLE 359 BROADWAY BUILDING, AND LPC DESIGNATED AND S/NR LISTED 361 BROADWAY ARE ADJACENT TO THE RADIUS.

NOTHING IN SHADOW RADIUS.

Gina Santucci 3/25/2025

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 37597_FSO_DNP_03252025.docx

Landmarks Preservation Commission

1 Centre Street
9th Floor North
New York, NY 10007

Voice (212)-669-7700
Fax (212)-669-7960
http://nyc.gov/landmarks

ENVIRONMENTAL REVIEW

Project number: 25HPD058K (HOUSING PRESERVATION AND DEV)
Project:
Address: 395 FLATBUSH AVENUE EXT BBL: 3020930001
Date Received: 4/11/2025

Comments:

The LPC is in receipt of the draft Historic Resources chapter of the DEIS dated 4/8/25. The document appears acceptable, however, in order to complete the review, LPC will need to review the Shadows chapter.

Gina Santucci 4/14/2025

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 37555_FSO_GS_04142025.docx

Landmarks Preservation Commission

253 Broadway
11th Floor
New York, NY 10007

Voice (212) 669 7700
http://nyc.gov/landmarks

ENVIRONMENTAL REVIEW

Project number: 25HPD058K (HOUSING PRESERVATION AND DEV)
Project:
Address: 395 FLATBUSH AVENUE EXT BBL: 3020930001
Date Received: 6/3/2025

Comments:

The LPC is in receipt of the Shadows Chapter of the DEIS dated 4/22/25. The chapter appears acceptable for historic resources.

Gina Santucci 6/4/2025

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 37555_FSO_GS_06042025.docx

Appendix B: Phase I Environmental Site Assessment (ESA)

ASTM E 1527-21 PHASE I ENVIRONMENTAL SITE ASSESSMENT

395 Flatbush Avenue Extension

Block 2093, Lot 1

Kings County, Brooklyn, New York

PREPARED FOR

Fulton Dekalb Associates LP
c/o Rabina, LLC
505 Fifth Avenue
27th Floor
New York, NY 10017

PREPARED BY

vhb
One Penn Plaza
Suite 715
New York, NY 10119
212.857.7350

Effective Date: February 11, 2025
Report Completion Date: March 4, 2025, revised March 25, 2025

Table of Contents

Executive Summary ..... **iv**

1 Introduction **1**

1.1 Purpose and Scope of Work 1
1.2 User Reliance 2

2 Site Description **3**

2.1 Site Location, Ownership, and Description 3
2.2 Site and Vicinity General Characteristics 3
2.3 Description of Structures, Roads, and Other Site Improvements 3
2.4 Current Uses of Adjoining and Surrounding Properties 3

3 User Provided Information **5**

4 Records Review **6**

4.1 Physical Setting 6
4.1.1 Topography 6
4.1.2 Soils/Surficial Geology 6
4.1.3 Bedrock Geology 6
4.1.4 Groundwater 7
4.2 Prior Environmental Investigations 7
4.3 Standard Environmental Record Sources 7
4.3.1 Summary of Site Records 8
4.3.2 Summary of Nearby Environmental Listings of Interest 9
4.4 Local Records Review 11
4.4.1 New York City Department of Buildings 12
4.4.2 New York City Department of Finance 12
4.4.3 Summary of Records Review 13
4.5 Historical Use Information 13
4.5.1 Sanborn Maps 13
4.5.2 City Directory Abstracts 16
4.5.3 Topographic Maps 18
4.5.4 Aerial Photography 19
4.6 Site History Overview 19
4.7 Evaluation of Potential Vapor Encroachment 19

5 Site Reconnaissance **21**

5.1 Methodology and Limiting Conditions 21
5.2 Heating, Water, and Sewer Systems 23
5.3 Interior Observations 23

5.4 Exterior Observations 23

6 Interviews 24

6.1 Interview with Owner, Site Manager, Occupants, or Knowledgeable Person 24
6.2 Interviews with Local Government Officials 24

7 Conclusions and Opinions 25

7.1 Recognized Environmental Conditions 25
7.1.1 REC No. 1 – Historic Operations at Nearby Properties 25
7.2 Vapor Encroachment Condition 26
7.3 Historic Recognized Environmental Condition 26
7.4 Controlled Recognized Environmental Conditions 26
7.5 Business Environmental Risks 26
7.5.1 BER No. 1 - Urban Historic Fill 26
7.5.2 BER No. 2 - Potential for Historic USTs 26

8 Data Gaps and Limitations 28

8.1 Significant Assumptions, Limitations, Exceptions and Data Gaps. 28

9 References/Informational Sources 29

10 Signature and Qualifications of Environmental Professional 30

11 List of Acronyms 31

Figures

Figure No.	Description
Figure 1	Site Location Map
Figure 2	Site Features
Figure 3	Site Vicinity Map

Appendices

Appendix A Limitations
Appendix B Qualifications of VHB Personnel
Appendix C Environmental Data Resources, Inc. Database Report
Appendix D Sanborn Maps
Appendix E City Directory Abstracts
Appendix F Historical Topographic Maps
Appendix G Historical Aerial Photographs
Appendix H User-provided Information
Appendix I Relevant Municipal Documents
Appendix J Site Photographs
Appendix K Owner/Key Site Manager Provided Information

Appendix A Limitations 1
Appendix B Qualifications of VHB Personnel 1
Appendix C Environmental Data Resources, Inc. Database Report 1
Appendix D Sanborn Maps 1
Appendix E City Directory Abstracts 1
Appendix F Historical Topographic Maps 1
Appendix G Historical Aerial Photographs 1

Appendix H User-provided Information 1

Appendix I Relevant Municipal Documents 1

Appendix J Site Photographs 1

Appendix K Owner/Key Site Manager Provided Information 1

Executive Summary

Vanasse Hangen Brustlin, Inc. (VHB) was engaged by Fulton Dekalb Associates LP c/o Rabina, LLC, (the Client) to conduct a Phase I Environmental Site Assessment (Phase I ESA) of the property located at 395 Flatbush Extension, Brooklyn, NY 11201, hereinafter referred to as the "Site" or "subject property." The subject property is further defined as Brooklyn Block 2093, Lot 1 on the New York City Tax Map. The subject property is located in a commercial zoning district (C6-4) and the Special Downtown Brooklyn District (DB). Currently, the subject property encompasses 50,618 square feet of land and is developed with a commercial building with retail units on the ground floor, office space on floors 2 through 7, and parking in the cellar. VHB understands that the purpose of this Phase I ESA is to provide environmental due diligence in support of the future redevelopment of the Site.

This Phase I ESA has been completed using the American Society of Testing and Materials (ASTM) E 1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (the Standard) and the All Appropriate Inquiries (AAI) Final Rule at 40 CFR Part 312 as guidance.

The objective of this Phase I ESA is to identify Recognized Environmental Conditions (RECs) in connection with the Site. RECs are defined in the Standard as *"(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.*

The Client is the sole User of this Phase I ESA. Pursuant to Section 3.2.94.1 of the Standard, "the User has specific obligations for completing a successful application of this practice as outlined in Section 6" of the Standard.

The Phase I ESA should be read in its entirety to gain a comprehensive understanding of the findings presented in this Executive Summary.

Recognized Environmental Conditions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 for 395 Flatbush Extension, Brooklyn, NY 11201, the subject property. Any exceptions to, or deletions from, this practice are described in Section 8.1 of this report. This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the subject property except for the following:

- REC No. 1 – Historical Operations at Nearby Properties

Historical Recognized Environmental Conditions

The following Historical Recognized Environmental Conditions (HRECs) represent a past release of hazardous substances or petroleum products that has occurred in connection with the Site and has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities, without subjecting the Site to any controls (e.g., activity and use limitations).

This assessment has revealed no HRECs in connection with the subject property.

Controlled Recognized Environmental Conditions

Controlled recognized environmental conditions (CRECs) represent a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations.

This assessment has revealed no evidence of CRECs in connection with the subject property.

Vapor Encroachment Conditions

A Vapor Encroachment Condition (VEC) is the presence or likely presence of Chemical(s) of Concern (COC) vapors in the subsurface of the Site caused by the off gassing of vapors from contaminated soil or groundwater either on or near the subject property. VHB has identified that the following VEC exists for the Site.

- VEC No. 1 – Historic Operations at Nearby Properties

Business Environmental Risks

The following business environmental risks (BER) represent potential risks which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of the Site, but do not constitute RECs or *de minimis* conditions as defined in the Standard. However, the Environmental Professional views these as potential risks that should be considered when making decisions regarding the Site.

This assessment has revealed evidence of the following BER in connection with the subject property.

- BER No. 1 – Urban Historic Fill
- BER No. 2 - Potential for Historic USTs

Data Gaps

VHB identified one data gap at the Site during the course of this Phase I ESA. The Environmental Professional's assessment as to whether these data gaps are considered significant is outlined below.

Data Gap	Assessment
Due to limited access to several office floors and tenant spaces at the Site, not all interior spaces were inspected.	VHB believes that observations of accessible interior spaces were likely representative of interior portions of inaccessible office floors and tenant spaces, and thus the data gap is not significant.

1

Introduction

1.1 Purpose and Scope of Work

Vanasse Hangen Brustlin, Inc. (VHB) was engaged by Fulton Dekalb Associates LP c/o Rabina, LLC (the Client) to conduct a Phase I Environmental Site Assessment (Phase I ESA) of the property located at 395 Flatbush Extension, Brooklyn, NY 11201, hereinafter referred to as the "Site" or "subject property" as shown on **Figure 1**. It is VHB's understanding from the Client that the purpose of this Phase I ESA is to provide environmental due diligence in support of future redevelopment of the subject property.

This Phase I ESA has been completed using the American Society of Testing and Materials (ASTM) E 1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (the Standard) and the All Appropriate Inquiries (AAI) Final Rule at 40 CFR Part 312 as guidance.

The User is of this report as defined by the Standard. Pursuant to Section 3.2.94.1 of the Standard, "the User has specific obligations for completing a successful application of this practice as outlined in Section 6" of the Standard. This Phase I ESA is subject to the terms of the Agreement between VHB and the Client dated February 6, 2025 (the Agreement). Other than those limitations expressly provided in **Appendix A** and/or specified in Section 8, completion of the Phase I ESA was not subject to additional assumptions, limitations, or exceptions to the Standard.

The objective of this Phase I ESA is to identify, to the extent feasible pursuant to the process described in the Standard, Recognized Environmental Conditions (RECs) in connection with the Site. The Phase I ESA was completed following the Standard as guidance. RECs are defined in the Standard as "(1) *the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.*

A Controlled REC is a REC "affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations)."

Although not considered RECs, the Phase I ESA may identify other concerns or considerations, referred to as Historical RECs, *de minimis* conditions, and/or business environmental risks as defined below.

Historical RECs are *"a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities, without subjecting the property to any controls (for example, activity and use limitations or other property use limitations)."*

A *de minimis* condition is *"a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of the appropriate governmental agencies."*

A business environmental risk is *"a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of commercial real estate, not necessarily related to those environmental issues required to be investigated in [the Phase I ESA] practice."*

Per the agreement between VHB and the Client, the scope of services to complete this Phase I ESA consisted of the following main components:

- an inquiry by an "Environmental Professional" as defined by the Standard;
- interviews with past and present owners, operators, and occupants, or abutters if the subject property is abandoned, in an effort to gather any specialized knowledge or experience with regard to the subject property;
- a review of historical sources, including, but not limited to, chain of title documents, aerial photographs, building department records, and land use records to determine previous uses and occupancy since first development;
- searches for recorded environmental cleanup liens against the facility/subject property that are filed under federal, state or local law;
- a review of federal, state, or local government records; and
- a visual inspection of the subject property and surrounding properties.

The scope of the Phase I ESA did not include any environmental testing or sampling of soil, water, air, or soil vapor.

1.2 User Reliance

This Phase I ESA was completed solely for the Client and the Users, subject to the terms, conditions and limitations referenced herein and as issued in connection with the Agreement and the provisions thereof. Any use or reliance upon information provided in this report without the specific written authorization of the Client and VHB shall be at such party's sole risk.

2

Site Description

2.1 Site Location, Ownership, and Description

The approximate center of the Site is located at 40˚41'21.89'' north latitude and 73˚58'50.52'' west longitude. The subject property is further defined as Brooklyn Block 2093, Lot 1 on the New York City Tax Map. The subject property is located in a commercial zoning district (C6-4) and the Special Downtown Brooklyn District (DB). Currently, the subject property encompasses 50,618 square feet of land and is developed with a commercial building with retail units on the ground floor, office space on floors 2 through 7, and parking in the cellar.

A Site Location Map and Site Features Map showing the location of the Site and relevant Site features is included as **Figure 1** and **Figure 2**, and a Site Vicinity Map showing the vicinity of the Site and nearby sensitive receptors is provided as **Figure 3.**

2.2 Site and Vicinity General Characteristics

The Site is located in urban area characterized by mixed-use development in Brooklyn, New York. The Site is located in a commercial zoning district (C6-4) and the Special Downtown Brooklyn District (DB). The Site can be accessed via Flatbush Avenue Extension, Fulton Street, Dekalb Avenue, and Hudson Street. The topography of the Site slopes gently towards the northwest. The closest named surface water body is Wallabout Bay, located approximately one mile to the north of the Site. Additional information on the physical setting of the Site and nearby area is presented in Section 4.1.

2.3 Description of Structures, Roads, and Other Site Improvements

The subject property encompasses 50,618 square feet of land and is developed with a commercial building with retail units, including a pharmacy, an accountant, an eyeglass retailer, convenience stores, a salon, and eateries on the ground floor; office space was observed on floors 2 through 7 including a Verizon call center; and parking in the cellar.

2.4 Current Uses of Adjoining and Surrounding Properties

The table below presents the properties and features surrounding the Site:

Direction	Adjoining	Surrounding
North	› Brooklyn Paramount Theater › Long Island University	› Long Island University › Commercial and Residential Properties
East	› Mixed-use Properties	› Mixed-use Properties
South	› Mixed-use Properties	› Mixed-use Properties › Commercial Properties
West	› Mixed-use Properties	› Mixed-use Properties › Commercial Properties

3

User Provided Information

To qualify for one of the Landowner Liability Protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the User(s) and/or Grantee(s) or a party on behalf of the User(s) and/or Grantee(s) must collect the following information, if applicable, and should make the information available to the Environmental Professional upon request:

- Environmental cleanup liens that are filed or recorded against the subject property;
- Activity and land use limitations that are in place on the subject property or that have been filed or recorded in a registry;
- Specialized knowledge or experience of the person seeking to qualify for the Limited Liability Protections;
- Relationship of the purchase price to the fair market value of the subject property if it were not contaminated;
- Commonly known or reasonably ascertainable information about the subject property;
- The degree of obviousness of the presence or likely presence of contamination at the subject property and the ability to detect the contamination by appropriate investigation.

VHB provided the User Questionnaire to Ms. Marvia Wedderburn, property manager for Rabina, LLC, which specifically requests information related to each of the six items listed above. Information obtained from User Questionnaire responses have been incorporated throughout this report. The completed questionnaire has been included as **Appendix H** of this report.

4

Records Review

VHB conducted a review of environmental databases and municipal files to identify potential environmental concerns at the Site. This review also included properties in the vicinity that have had a release or pose a threat of release of petroleum and/or hazardous substances that may potentially impact the quality of environmental media at the Site. VHB reviewed Federal and state environmental databases supplied by Environmental Data Resources, Inc. (EDR). VHB also conducted a targeted review of files available from the New York State Department of Environmental Conservation (NYSDEC). The results of the records review are summarized below.

4.1 Physical Setting

VHB reviewed several sources of information pertaining to the Site's physical setting to better understand natural characteristics of the Site and surrounding area as summarized below.

4.1.1 Topography

Topography of the Site and surrounding area generally slopes slopes gently towards the northwest with an average elevation of approximately 31 feet above mean sea level.

4.1.2 Soils/Surficial Geology

According to the U.S Department of Agriculture's Soil Conservation Service's Web Soil Survey, the soils at the Site are mapped by the U.S. Department of Agriculture's Soil Conservation Service as urban land, till substratum (UtB), with 3 to 8 percent slopes, which consists of cemented material and gravelly sandy loam, with a very low available water capacity. An on-site investigation would be necessary to determine classes of soil at the subject property.

4.1.3 Bedrock Geology

According to the Bedrock Geologic Map of the Bedrock and Engineering Geologic Maps of New York County and parts of Kings and Queens Counties, New York, and Parts of Bergen and Hudson Counties, New Jersey (Baskerville, et. al), the bedrock at the Site is mapped as the Hartland Formation, which consists primarily of gray and gray-weathering thinly laminated muscovite-biotite-quartz schist with minor garnet, medium-gray, black-weathering, fine-grained biotite-muscovite-quartz-schist, white to pinkish-white, light green weathering, fine-to-medium-grained gneissic quartz-microcline-miscovite-biotite-plagioclase granite with minor garnet, dark-greenish-black

quartz-biotite hornblende amphibolite, with some white and/or pink granite pegmatite, and gray and rusty-weathering, unevenly foliated, sillimanite-plagioclase-muscovite-biotite-microcline quartz gneissic schist with minor garnet, and mica-feldspar-quartz boudins.

4.1.4 Groundwater

Groundwater flow is best determined using site-specific groundwater elevation data and may be affected by surface topography, hydrology, and characteristics of the soil and nearby wells. In the absence of site-specific data, other sources of information are typically used to determine flow direction including surface topographic information and hydrogeologic information collected from nearby properties. Based on a review of available information, regional groundwater flow is presumed to be generally to the north. Groundwater is not used as a source of potable water in Kings County.

4.2 Prior Environmental Investigations

During this Phase I ESA, VHB was not provided reports pertaining to prior environmental investigations at the Site.

4.3 Standard Environmental Record Sources

EDR provided a report dated February 11, 2025, summarizing available and reasonably ascertainable information from standard environmental record sources at the minimum distances required in Section 8.2.2 of the Standard. A copy of the EDR report is provided as **Appendix C**.

Sites with minimal address information that may be located in proximity to the Site are listed separately in the database report as "Orphan sites." A review of listed Orphan sites was conducted to estimate their location, distance, and direction from the Site. Based on information contained in the EDR report and information derived from local maps, 12 orphan sites were identified on the Site or abutting properties.

A summary of the EDR findings is included in the table below and following sections.

Record Source	Search Radii	Subject Property Listed	Number Sites Within Search Distance
Federal National Priorities List (NPL) Sites	1.0 mile	No	1
Federal Delisted NPL Sites	0.5 miles	No	0
Superfund Enterprise Management System (SEMS) Sites	0.5 miles	No	0
Federal SEMS No Further Action Planned Sites	0.5 miles	No	0
Federal Resource Conservation and Recovery Act (RCRA) Corrective Action (CORRACTS) Sites	1.0 mile	No	0
Federal RCRA Non-CORRACTS Treatment, Storage and Disposal Sites	0.5 miles	No	0
Federal RCRA Generators	Subject Property & Abutting	No	6

Record Source	Search Radii	Subject Property Listed	Number Sites Within Search Distance
Federal Engineering/Institutional Control Sites	Subject Property	No	0
Federal Emergency Release Notification System	Subject Property	No	0
State and Tribal Equivalent SEMS Sites (i.e. State Hazardous Waste Sites, Release Sites)	1.0 mile	No	0
State and Tribal Landfill or Solid Waste Disposal Sites	0.5 miles	No	0
State and Tribal Leaking Storage Tank Sites	0.5 miles	Yes	73
State and Tribal Registered Storage Tank Sites	Subject Property & Abutting	Yes	2
State and Tribal Engineering/Institutional Control Sites (i.e. Activity and Use Limitations)	Subject Property	No	0
State and Tribal Voluntary Cleanup Sites	0.5 miles	No	20
State and Tribal Brownfield Sites	0.5 miles	No	8

The EDR report provides search results of other federal, state, and local databases which are not listed as *Standard Environmental Resources* in the Standard. These databases include, but are not limited to, Brownfields, Facility Indexing System (FINDS); Polychlorinated Biphenyl (PCB) Activity Database (PADS); Toxic Chemical Release Inventory System (TRIS); Toxic Substances Control Act (TSCA); Federal Insecticide, Fungicide & Rodenticide Act (FIFRA) and TSCA Tracking System; Section Seven Tracking System; Tier 2 data listing; dry cleaners; and manufactured gas plants. Tribal Records were also searched for this report. The full EDR report is included in **Appendix C**.

4.3.1 Summary of Site Records

According to the EDR environmental database search, the subject property, was identified in the ICIS, US AIRS, FINDS, ECHO, E-Designation, NY AST, and NYC Land Use databases under the following listings:

Verizon – Flatbush Ave Ext
395 Flatbush Avenue Ext
Brooklyn, NY 11201

395 Flatbush Avenue Ext
Brooklyn, NY 11201

Verizon New York Inc – NY - 35160
395 Flatbush Avenue
Brooklyn, NY 11238

Verizon – Flatbush Ave Ext was identified in the ICIS, US AIRS, FINDS, and ECHO databases. The ICIS and US AIRS databases noted two notices of violation, and compliance monitoring conducted under ID NY0000002610100262. The FINDs and ECHO detailed facility report did not report any violations.

The subject property listed as 395 Flatbush Avenue Ext was identified in the NYC Land Use database. According to the database, the subject property was identified as an office building with commercial units built in 1974 and

altered in 2009 and 2014. The land use category was identified as commercial and office buildings, and the building class was identified as O6: office with commercial, 7-19 stories. The subject property was also listed in the E-Designation database under E-124, for underground gasoline storage tanks testing protocol, and window wall attenuation and alternate ventilation.

According to the NY AST database, NYSDEC PBS No. 2-344478 was issued for the subject property for one closed-removed 20,000-gallon AST, with a closure date of August 1, 2019. Documents obtained in the Freedom of Information Law requests, detailed in **Section 4.4**, indicate that the tank was installed in 1971.

4.3.2 Summary of Nearby Environmental Listings of Interest

Based on preliminary information from the EDR report, certain nearby environmental listings were deemed to require additional review to evaluate their potential to impact environmental conditions at the Site. Available records were reviewed electronically via NYSDEC Spills and PBS databases, and/or other state and federal databases. Information obtained during the additional reviews is summarized below.

80 Dekalb Avenue (approximately 83 feet northwest of the subject property)

The northwest nearby property at 80 Dekalb Avenue was identified in the EDR Hist Cleaner database under the following listing:

Bernie S Valet
80 Dekalb Ave
Brooklyn, NY 11201

According to the EDR Hist Cleaner database, Bernie S. Valet was identified as a garment pressing and cleaners' agents in 2010.

565-585 Fulton Street (approximately 226 feet west of the subject property)

The west nearby property located at 565-585 Fulton Street was identified in the NY SPILLS and NY UST databases under the following listings:

Bowtie Assemblage	Commercial
565-585 Fulton Street	565-585 Fulton Street
Brooklyn, NY 11201	Brooklyn, NY 11201

According to the NY SPILLS database, a release was reported during construction on the property on July 27, 2022, and was assigned NYSDEC Spill No. 2203686. According to a NYSDEC memo contained in the listing, a 550-gallon petroleum tank was discovered during construction, with pitting and holes, and a puddle of liquid with a petroleum odor was observed beside the tank. The tank was cleaned and removed, and petroleum impacted soils excavated and removed, and endpoint samples collected from the tank bed, indicating no exceedances of soil cleanup levels. The release was granted "case closed" status by the NYSDEC on October 26, 2022.

According to the NY UST database, NYSDEC PBS No. 2-613399 was issued for the property for one closed and removed 550-gallon #2 fuel oil UST, removed in August 2022, and NYSDEC PBS No. 2-613397 was issued for the same property for one closed and removed 550-gallon #2 fuel oil UST, removed in August 2022.

30 Flatbush Avenue (approximately 271 feet south of the subject property)

The south nearby property located at 30 Flatbush Avenue was identified in the NY Spills, LTANKS, RCRA-VSQG, RCRA LQG, RCRA-NonGen/NLR, Manifest, FINDS and ECHO databases under the following listings:

Con Edison – Manhole 26605
30 Flatbush Avenue
Brooklyn, NY 11217

70 Lbs of Freon 22 Leaked
30 Flatbush Avenue Con Ed Building
Brooklyn, NY

Con Edison
30 Flatbush Avenue
Brooklyn, NY 11217

30 Flatbush Avenue
30 Flatbush Avenue
Brooklyn, NY 11217

60 Lbs R-22 Freon Released
30 Flatbush Avenue
Brooklyn, NY 11217

Air Unit Flatbush Facility
30 Flatbush Avenue
Brooklyn, NY 11207

Sixty Lbs R-22 Freon Escaped to Air
30 Flatbush Avenue, Floor 4, Comp #1
Brooklyn, NY

Consolidated Edison Co of NY Inc
30 Flatbush Avenue
Brooklyn, NY 11217

R22 Freon Release
HQ 30 Flatbush Avenue
Brooklyn, NY 11217

CVS Pharmacy #10086
30 Flatbush Avenue
Brooklyn, NY 11217

Con Edison Building
30 Flatbush Avenue
Brooklyn, NY 11217

Consolidated Edison Co of NY Inc and CVS Pharmacy #10086 were identified in FINDS and ECHO databases under Registry ID 110004552118 and 110056380296, respectively. The FINDs and ECHO databases provided a facility report for both listings that did not report violations.

According to the NY SPILLS database, from at least 2001 through 2019, numerous releases of various quantities of freon was released into indoor air from faulty air conditioning units reported at the south nearby property. The releases were passively ventilated into ambient air and granted "case closed" status by NYSDEC.

According to the NY SPILLS database, a release of an unknown petroleum product within a Con Edison building was reported on July 20, 2005, assigned Spill No. 0504778. According to a NYSDEC memo contained in the listing, the release was associated with a passenger vehicle leaking gasoline onto a concrete floor of a garage due to overfilling the gas tank. The release was granted "case closed" status by NYSDEC on September 23, 2005.

According to the NY SPILLS database, a release of ethylene glycol occurred during equipment failure on July 2, 2019, and assigned Spill No. 1903366. According to a NYSDEC memo contained in the listing, the ethylene glycol leaked directly into the storm drain, and the union connector that leaked was repaired. The release was granted "case closed" status by NYSDEC on August 21, 2019.

According to the NY AST database, NYSDEC PBS No. 2-153192 was issued for two in-service 2,000-gallon ASTs containing lube oil and waste oil/used oil, one in-service 8,000-gallon #2 fuel oil AST, one in-service 1,000 gallon partially below ground lube oil storage tank, and one closed in place 1,000-gallon empty UST. The listing is active with an expiration date of July 10, 2025.

Consolidated Edison Co of NY Inc was identified in the RCRA VSQG database under EPA ID No. NYR000069682 as a conditionally exempt small quantity generator in 2007, and a historic very small quantity generator in 2006 and 2007. Con Edison was identified in the RCRA NonGen/NLR database under EPA ID No. NYP004206951 as not a generator in 2020, and historically as not a generator in 2010 and 2020. Con Edison – Manhole 26605 was identified in the RCRA LQG database under EPA ID No. NYP005095252 in 2018. No violations were noted for any of these RCRA listings. Consolidated Edison Co of NY Inc, Con Edison, and Con Edison – Manhole 26605 were identified in the NY MANIFEST database under EPA IDs NYR000069682, NYP004206951, and NYP005095252, for the transportation of waste associated with the disposal of hazardous wastes from the property.

CVS Pharmacy #10086 was identified in the RCRA VSQG database under EPA ID No. NYR000205542 as a conditionally exempt small quantity generator in 2019, a historic very small quantity generator in 2013, and a historic large quantity generator in 2015 and 2016. CVS Pharmacy #10086 was identified in the NY Manifest database under EPA ID NYR000205542 for the transportation of waste associated with the disposal of hazardous wastes from the property.

41 Flatbush Avenue (approximately 417 feet south of the subject property)

The south nearby property at 41 Flatbush Avenue was identified in the EDR Hist Auto database under the following listing:

US Gvrnment Mar Rcruiting Stn
41 Flatbush Avenue
Brooklyn, NY 11217

According to the EDR Hist Auto database, US Gvrnment Mar Rcruiting Stn was identified as a gasoline service station in 2005 and 2006. However, based on additional information from the historical records reviews, this listing is likely not representative of the property's previous use.

Based on the proximity to the subject property and details contained within the above listings, it is possible that a release of hazardous substances associated with the properties at 80 Dekalb Avenue, 30 Flatbush Avenue, and 565-585 Fulton Street may have impacted environmental conditions at the Site, and therefore constitutes a REC as detailed in Section 7.1.

4.4 Local Records Review

Information regarding Freedom of Information Act Law (FOIL) submittals and other agencies contacted, and records reviewed during the completion of this Phase I ESA is summarized below. Refer to **Appendix I** – Relevant Municipal Documents.

Office	Types of Information Available	Summary of Available Information
New York City Fire Department (FDNY)	Information regarding storage tanks, storage of hazardous material, the handling of flammable or toxic materials, etc.	VHB submitted a FOIL request to FDNY on February 11, 2025. FDNY provided a response on March 25, 2025, containing a list of open violations associated with the property and several tenants of commercial spaces, and the request subsequently closed.
New York City Department of Environmental Protection (DEP)	City permits, information regarding oil and chemical spills, generator registrations, Right-to-know information.	VHB submitted a FOIL request to NYCDEP on February 11, 2025. NYCDEP provided a response on February 13, 2025, containing a list of right-to-know chemicals associated with Verizon Communications, a building tenant, and the request subsequently closed.
New York State Department of Environmental Conservation (NYSDEC)	Information regarding oil and chemical spills, sites being addressed under DEC's Superfund, Brownfield Cleanup, etc., petroleum and chemical bulk storage, RCRA records, etc.	VHB submitted a FOIL request to NYSDEC on February 11, 2025. NYSDEC provided a response on February 25, 2025, containing documents related to the PBS database facility #2-344478, further discussed in **Section 4.3.1**.
New York City Department of Health and Mental Hygiene (NYCDOHMH)	Information regarding environmental quality data, including indoor air complaints	VHB submitted a FOIL request to NYCDOHMH on February 11, 2025. NYCDOHMH provided a response on February 19, 2025, that no records associated with the subject property were found, and the request subsequently closed.
New York City Department of Buildings (NYCDOB)	Building permit applications, building permits, site plans, surveys.	VHB searched for available information on the NYCDOB database in February 2025 as further discussed in **Section 4.4.1**.
New York City Department of Finance (DOF)	Tax assessment records, site tax history, parcel/building size, ownership.	Readily ascertainable information was provided via the ACRIS and NYCDOF Property Tax Public Access databases, which were accessed by VHB in February 2025 as further discussed in **Section 4.4.2.**

4.4.1 New York City Department of Buildings

The following is a summary of pertinent information obtained from the NYCDOB Buildings Information Search (BIS) databases accessed on February 17, 2025:

Several Certificates of Occupancy were available via the BIS database associated with the subject property, dating from 1919 until approximately 2014, indicating the subject property was used as stores, office space, restaurants, a school, warehouses, parking, and other commercial uses. Elevator records indicated fifteen elevators are present at the subject property, and boiler records indicated three boilers are present at the subject property. Permits filed included minor alterations and internal fit-outs for tenants to the building. No open DOB violations were listed.

Copies of the aforementioned documents are provided in **Appendix I.**

4.4.2 New York City Department of Finance

The following is a summary of pertinent information obtained from the Automated City Register Information System (ACRIS) and NYCDOF Property Tax Public Access databases accessed on February 17, 2025:

Several deeds were available via the ACRIS database associated with the subject property. According to the most recent deed, the Lot was purchased by Fulton Dekalb Associates, from the City of New York, on September 29, 1972. The remainder of the documents available via the ACRIS database for the subject property are associated with mortgage documents, sundry agreements, and release documents.

Additionally, tax records were accessed by VHB via the NYCDOF Property Tax Public Access database. The subject property is zoned for commercial, and the building class is O6 – office with other commercial, GE 7 story, LT 20 stories. Copies of the aforementioned documents are provided in **Appendix I.**

4.4.3 Summary of Records Review

VHB reviewed the EDR computer database search results, the NYSDEC online database, and relevant municipal files for properties that have or could potentially have impacted environmental conditions at the Site. Nearby properties of interest and releases of petroleum and/or hazardous substances have been documented, which VHB has deemed as a REC/*de minimis* condition as noted in Section 7.

4.5 Historical Use Information

VHB reviewed the historical use information for the Site and nearby properties for conditions that have the potential to environmentally impact the Site.

4.5.1 Sanborn Maps

Sanborn maps are a uniform series of large-scale detailed maps, dating from 1867, that depict the commercial, industrial, and residential sections of cities. These maps historically assisted fire insurance agents in determining the degree of hazard associated with a particular property. Sanborn maps are currently used to track the changing landscape and property uses.

Summary of Sanborn Maps

Year(s)	Description	
1887	Site:	The subject property is depicted as several dwellings, stores, a hall, the Novelty Building at the Fulton Street lot line, a furniture store, a bakery, and a portion of old iron & metals yard at the Dekalb Avenue lot line. Flatbush Avenue Extension is not mapped.
	Surrounding Area:	The surrounding area appears densely developed, with stores and dwellings adjacent to the subject property. Notable uses depicted on the map include an old lumber yard is depicted to the west of the subject property, a paints and oils store, bakery, veterinary hospital, and the Brooklyn Museum are depicted to the south of the subject property, a furniture warehouse, a sausage factory, Bolton's Storage, an electric light station and coal and wood yards to the east of the subject property, and a furniture factory to the north of the subject property.
1904	Site:	The subject property is depicted in a similar configuration to the 1887 map. A portion of the Montauk Theatre is depicted in place of the portion of the old iron & metals yard, and a smithy is depicted along the Dekalb Avenue lot line. The furniture store and bakery are no longer depicted.
	Surrounding Area:	The surrounding property appears densely developed with stores and dwellings. The remaining portion of the Montauk Theatre is depicted west adjacent to the subject property. The Hanover Building is also depicted to the west of the subject property. Notable uses depicted on the map include the Orpheum Theater to the south of the subject property, a furniture warehouse, brass foundry and machine shop, Edison Electric Illuminating Co, glass storage, sash storage, Herman Chemical Co, and Benzinger Bros manufacturing of church ornaments to the east of the subject property, and a piano warerooms, carriage factory, builder, and furniture storage to the north of the subject property.
1915	Site:	The subject property is depicted as the Crescent Theater, several stores, a moving picture show, and Richard E Thibault Inc Peerless Wallpapers, in place of the configuration from the 1904 map. Flatbush Avenue Extension is depicted east adjacent to the subject property.
	Surrounding Area:	The surrounding area appears densely developed with stores and dwellings, and a covered platform elevated railroad station south adjacent to the subject property on Fulton Street. Notable uses depicted on the map include the Bureau of Weights and Measures to the west of the subject property, Kresses 5th and 10th Store, Woolworth's 5th and 10th Store, a repair shop, and the Orpheum Theater to the south of the subject property, a vacant wreck, Wells Fargo Express, Edison Electric Illuminating Co and Benzinger Bros to the east of the subject property, and Wellington Boarding and Livery, Pioneer Storage, American News Co, and Ex-Lax Manufacturing Co to the north of the subject property.
1938	Site:	The subject property is depicted in a similar configuration to the 1915 map, with auto parking with a vault in place of stores on the Dekalb Avenue lot line, Werba's Brooklyn Theatre in place of the Crescent Theater, and stores with offices and dining and dancing on the Flatbush Avenue Extension and Fulton Street lot lines.
	Surrounding Area:	The surrounding area remains similar to the 1915 map. Notable changes include the Fox Theater depicted to the south of the subject property, the Brooklyn Edison Co Inc depicted in place of Edison Electric Illuminating Co, a garage and the Strand Theater to the east of the subject property, a filling station to the northeast of the subject property, and a garage, the Paramount Theatre, a BRT Transforming Station and the Dime Savings Bank to the north of the subject property.

Year(s)		Description
1950	Site:	The subject property is depicted in a similar configuration to the 1938 map, with parking depicted in place of the Werba Brooklyn Theater and stores and upholstering in place of the Richard E Thibault Inc Peerless Wallpapers.
	Surrounding Area:	The surrounding area remains similar to the 1938 map. Notable changes include C&A Brenninkmayer depicted in place of Kresses 5th and 10th Stores, stores and bowling depicted in place of Woolworth's 5th and 10th Stores to the south of the subject property, a Candy Warehouse and Manufacturing, furniture stores, and Barton Inc Candy Manufacturing depicted in place of Brooklyn Edison Co Inc to the west of the subject property, an auto service, plumber, and a filling station depicted in addition to the garage to the north of the subject property. The covered platform and elevated railroad station is no longer depicted on Fulton Street.
1969	Site:	The subject property appears undeveloped with the exception of several stores in the northwest of the parcel.
	Surrounding Area:	The surrounding area remains similar to the 1950 map. Notable changes include a billiards hall depicted in place of bowling and parking depicted in place of the Orpheum Theater to the south of the subject property, candy manufacturing and storage depicted in place of stores west adjacent to the subject property, Brooklyn Strand Bowling depicted in place of the Strand Theater and Barton's Inc depicted west of the subject property. LIU is depicted in place of the Paramount Theater, auto service, and stores and dwellings to the north of the subject property.
1977, 1979	Site:	The subject property appears developed with a New York Telephone Co building covering the entire parcel, with a garage in the basement and a subbasement.
	Surrounding Area:	The surrounding area appears similar to the 1969 map. Notable changes include Consolidated Edison Co of New York Inc with a garage in the basement and subbasement depicted in place of the Fox Theater to the south of the subject property, the New York Telephone Co offices depicted in place of a store east adjacent to the subject property, a manufacturing flat depicted in place of the garage and filling station north of the subject property,
1980	Site:	The subject property appears similar to the 1979 map.
	Surrounding Area:	The surrounding area appears similar to the 1979 map. Notable changes include Goodwins depicted in place of C&A Brenninkmayer to the south of the subject property.
1981, 1982	Site:	The subject property appears similar to the 1980 map.
	Surrounding Area:	The surrounding area appears similar to the 1980 map. Notable changes include a store depicted in place of the banquet hall and tennis courts depicted to the north of the subject property.
1982	Site:	The subject property appears similar to the 1981 map.
	Surrounding Area:	The surrounding area appears similar to the 1981 map. Notable changes include a banquet hall depicted in place of the store to the north of the subject property.
1986	Site:	The subject property appears similar to the 1982 map.
	Surrounding Area:	The surrounding area appears similar to the 1982 map. Notable changes include a recruitment & training program depicted in place of the Brooklyn Strand Bowling to the east of the subject property.
	Site:	The subject property appears similar to the 1986 map.

Year(s)	Description	
1987, 1988, 1989	Surrounding Area:	The surrounding area appears similar to the 1986 map. Notable changes include a 30-story residential building depicted in place of a portion of Barton Inc to the east of the subject property.
1991	Site:	The subject property appears similar to the 1989 map.
	Surrounding Area:	The surrounding area appears similar to the 1989 map. Notable changes include public parking depicted in place of the flat used for manufacturing.
1992, 1993	Site:	The subject property appears similar to the 1991 map.
	Surrounding Area:	The surrounding area appears similar to the 1991 map. Notable changes include Gov't offices depicted in place of Barton's Inc Candy Manufacturing east-adjacent to the subject property.
1995, 1996	Site:	The subject property appears similar to the 1993 map. New York Telephone Co is depicted under the name NYNEX.
	Surrounding Area:	The surrounding area appears similar to the 1993 map. Notable changes include commercial buildings depicted in place of the billiards to the south of the subject property.
2001, 2002, 2003, 2004, 2005, 2006, 2007	Site:	The subject property appears similar to the 1996 map. NYNEX is depicted under the name Verizon.
	Surrounding Area:	The surrounding area appears similar to the 1996 map. Notable changes include the LIU Health Sciences Center depicted in place of tennis courts to the north of the subject property.

A copy of the Sanborn map report is provided in **Appendix D**.

4.5.2 City Directory Abstracts

The City Directory Abstracts provided by EDR were reviewed; these provide address and owner or business name information from available City Directory data for the area. City Directory reports for Flatbush Avenue Extension, Fulton Street, and Hudson Avenue were provided for the years 1928 through 2020 at approximately 5-year intervals.

Notable on-site and adjacent listings from the directories have been listed below.

Listing(s)	Year(s)	Source
395 Flatbush Avenue Extension		
Peerless Wall Paper Co, Thibaut Richard E Inc wall papers, Turf Restaurant Inc	1940	New York Telephone
Papa Pinocchios Heros	1970, 1973	New York Telephone
Brooklyn Bergen Systems Inc, Chembank Card Information	1985	NYNEX Information Resources Company

Edison Parking, For Goodness Steaks, Ideal Hallmark Shop, Latimer Woods Economic Development Assn Inc, McDonalds Family Restaurant, Nathan's Famous, Opex Business Machine, SNB Universal Fashions Corp, Universal Fashions, Chemical Bank 24 Hour Banking Centers, Chemical Bank Brooklyn Branch Offices,	1992	Cole Information/NYNEX Information Resources Company
Edison Parking, For Goodness Steaks, Ideal Hallmark Shop, Latimer Woods Economic Development Assn Inc, McDonalds Family Restaurant, Nathan's Famous, Opex Business Machine	1995	Cole Information
Edison Parking, For Goodness Steaks, Ideal Hallmark Shop, Latimer Woods Economic Development Assn Inc, McDonalds Family Restaurant, Nathan's Famous, Opex Business Machine, Palm Court	1997	NYNEX
Edison Parking, Executive Tax Service, For Goodness Steaks, H&R Block, Ideal Hallmark Shop, Latimer Woods Economic Development Assn Inc, Lucky Partners of Flatbush Avenue Extension, McDonalds Family Restaurant, Nathan's Famous, Opex Business Machine, Palm Court, Small Business Development Center	2000	Cole Information
Applebees Neighborhood Grill, Central Parking System, For Goodness Steaks, Frank Spadafina, Greyhound Lines, H&R Block, Household Finance, Ideal Hallmark Shop, McDonalds Family Restaurant, Opex Business Machine, Rose Pluchinotta, Vincent Longobardi,	2005	Cole Information/Hill-Donnelly Corporation
Applebees Neighborhood Grill, Manhattan Parking, McDonalds	2010	Cole Information
2 Brothers Pizza, Cohens Fashion Optical, Manhattan Parking, McDonalds, Starbucks Coffee, Tishman Interiors Corporation, USA Locksmith	2014	Cole Information

2 Brothers Pizza, 7 Eleven, several locksmiths, Apple Metro Inc, Applebees Neighborhood Grill & Bar, , Cohens Fashion Optical, Douglas Elliman Real Estate, H&R Block, Manhattan Parking, McDonalds, Prudential Real Estate, Starbucks Coffee	2017	Cole Information
7-Eleven, ATM, Cohen's Fashion Optical, H&R Block, Honey Baked Ham, McDonalds, Starbucks	2020	EDR Digital Archive

City Directories also indicated the following notable historical uses in the surrounding area: Long Island University, the Brooklyn Edison Company, municipal offices, government offices, garages, service garages, furniture stores, sign companies, tinsmiths, haberdasheries, bowling alleys and billiards halls, manufacturing, watch companies, iron and metal works and rolling mills, bottling companies, slaughterhouses and butchers, trucking companies, glass companies, doctor's offices, theaters, clothing manufacturers, knitting mills, printing companies, candy manufacturing, and dry cleaners. Copies of City Directory Abstracts are included as **Appendix E.**

4.5.3 Topographic Maps

Historical U.S. Geological Survey (USGS) topographic maps showing the Site for the years 1897, 1898, 1900, 1947, 1955, 1956, 1967, 1979, 1981, 1995, 2013, 2014, 2016 and 2019 were obtained from EDR and reviewed. Relevant information obtained from these maps is summarized below.

Summary of Topographic Maps

Year(s)		Description
1897, 1898, 1900	Site:	The subject property appears developed.
	Surrounding Area:	The surrounding area appears developed, with Fort Greene Park to the northeast and the Navy Yard and Wallabout Bay to the north.
1947	Site:	The subject property is shaded black, indicating the presence of developed land.
	Surrounding Area:	The surrounding area is shaded black indicating developed land. Brooklyn Tech High School is depicted to the east of the subject property, Fort Greene Park is depicted to the northeast, and the Navy Yard and Wallabout Bay to the north.
1955, 1956, 1967, 1979, 1981, 1995	Site:	The subject property is shaded pink, indicating densely developed land.
	Surrounding Area:	The surrounding area is shaded pink, indicating densely developed land. Brooklyn Technical High School is depicted to the east of the subject property, Fort Greene Park is depicted to the northeast, and Brooklyn Hospital, and Long Island University to the north.
2013, 2014, 2016. 2019	Site:	With the exception of schools, hospitals, police stations, fire stations, cemeteries, courthouses, and post offices, developed land use, including structures, is not depicted on the topographic maps. The subject property is shaded white, indicating densely developed land.
	Surrounding Area:	The surrounding area is shaded white indicating densely developed land. A hospital is depicted north of the subject property.

Copies of the historical topographic maps are included as **Appendix F**.

4.5.4 Aerial Photography

Aerial photographs were obtained from EDR for the Site and vicinity and were reviewed. Relevant information obtained from these photographs is detailed below.

Summary of Aerial Photographs

Year(s)	Description	
1924, 1951, 1954	Site:	The subject property appears developed.
	Surrounding Area:	The adjoining properties appear developed. Fort Greene Park is depicted to the northeast of the subject property.
1960	Site:	The subject property appears undeveloped.
	Surrounding Area:	The adjoining properties appear developed. Fort Greene Park is depicted to the northeast of the subject property.
1966, 1971, 1974, 1980, 1984, 1991, 1994, 1995, 2002, 2006, 2011, 2015, 2019	Site:	The subject property appears developed.
	Surrounding Area:	The adjoining properties appear developed. Fort Greene Park is depicted to the northeast of the subject property.

Copies of the aerial photographs are included as **Appendix G**.

4.6 Site History Overview

According to the historical data review, the subject property was first developed prior to 1887 with several dwellings, stores, a hall, the Novelty Building at the Fulton Street lot line, a furniture store, a bakery, and a portion of old iron & metals yard at the Dekalb Avenue lot line. By 1904, the old iron & metals yard became a theater, and by 1915, a theater, several stores, a moving picture show, and Richard E Thibault Inc Peerless Wallpapers were present on the subject property, with few changes until at least 1969 when the subject property became undeveloped. The current building was constructed in 1974, and remains in the same configuration to date.

The surrounding area was first developed by at least 1887 with residential buildings, commercial and manufacturing operations, automotive uses, and institutional uses including Long Island University.

4.7 Evaluation of Potential Vapor Encroachment

As part of this Phase I ESA, VHB conducted an Evaluation of Potential Vapor Encroachment (EPVE) in order to determine whether or not a Vapor Encroachment Condition (VEC) exists at the Site. A VEC is the presence or likely presence of Chemical(s) of Concern (COC) vapors in the vadose zone of the Site caused by the release of vapors from contaminated soil and/or groundwater either on or near the Site. This EPVE consisted of the review of information presented in previous or subsequent sections of this document such as:

- The Site's physical setting and features that may impact vapor migration;
- Documented storage and releases of volatile COCs at the Site and/or nearby properties; and
- Potential preferential pathways for vapor migration such as subsurface utility corridors.

VHB has concluded that:

- According to the historical data review, several nearby properties within a 500-foot radius of the subject property were identified with petroleum-related storage, manufacturing operations, and dry-cleaning operations with documented releases from at least 1887 through the present. The handling, storage, and/or disposal of materials and substances used during the historic operations at the nearby properties are unknown. Therefore, the historic operations at the nearby properties represent a potential source of off-site vapor intrusion impact.
- The subject property is unlikely to be impacted by vapor migration from the remaining off-site adjoining properties, as no open spill cases, releases of hazardous substances and/or petroleum products were documented to date. However, the potential for vapor migration may exist from unknown or unclassified sources on site and/or upgradient or side gradient of the subject property.

There is the potential that volatile COCs have impacted the vadose zone at the Site as a result of the historic operations at the nearby properties. Therefore, VHB has concluded that a VEC exists at the Site in connection with REC #1 as detailed in Section 7.1.

5

Site Reconnaissance

5.1 Methodology and Limiting Conditions

Anna Brooks of VHB conducted a Site reconnaissance on February 25, 2025, for visual and reasonably identifiable indications of RECs as defined by ASTM E 1527-21. VHB was accompanied by Jonathan Con, facilities engineer for Verizon, associated with the Site for approximately six months, and George Goodwin, a representative for Verizon, associated with the Site since 2016. Weather conditions did not limit observations during the Site reconnaissance. VHB was not able to obtain access to three commercial tenant spaces on the first floor: an accountant's office, an eyewear retailer, and a nail salon. Visual observations in these spaces were made from the sidewalk outside the building.

VHB's Site observations and information obtained at the time of the Site reconnaissance are presented in the following sections. Photographs taken during the Site Reconnaissance visit are provided in **Appendix J**.

Observation	Observed or Suspected
Areas of petroleum or hazardous substances product storage and use / Drums / Hazardous Substance and Petroleum Products Containers	› Two cylinders of CO_2 and associated cylinders for the production of soft drinks were observed in the McDonald's tenant space. › Containers of various sizes of disinfectants and cleaning supplies were observed in use and stored in the accessible tenant spaces and janitor's storage cage on the second floor. › Several containers of gear oil were observed in the elevator mechanical room. › Containers of ethylene glycol, refrigerant, and fire extinguishers were observed in a locked storage cage in the subcellar. › Containers of paint, sheetrock, enamel, propylene, cooling tower inhibitor, lithium bromine, and ammonia were observed in use and stored in the chiller space on the 8th floor. › Containers of ice melt were observed in the Verizon lobby.
Above Ground Storage Tanks (ASTs)	One aboveground storage tank was observed in the subcellar boiler room. Building representatives indicated it contained water.
Underground Storage Tanks (USTs)	None observed.
Odors	None observed.
Pools of liquid	Negligible amounts of water were observed near the boilers in the subcellar.
Unidentified Substance Containers	Containers of unknown contents were observed in the chiller space on the 8th floor.
Transformers and any identified PCB-containing equipment	Minor staining was observed near the boilers in the subcellar.
Heating/Cooling systems	The building is heated via three natural gas-fired boilers located in the cellar and cooled via two chiller units and cooling towers on the 8th floor.
Interior stains or corrosion	Cellar, subcellar, and 1st floor slabs were observed to be in good condition with some evidence of wear from use and age.
Interior drains, sumps, and below grade conveyances	Several floor drains were observed on the cellar garage floor, connected to the municipal sewer. A sump was observed in the boiler room and a sump was observed in the fire pump room.
Exterior pits/ponds/lagoons	None observed.
Pesticide use	None observed.
Stained soil or pavement	None observed.
Stressed vegetation	None observed.
Evidence of solid waste disposal on the Site	Solid waste is disposed of via private waste haulers.
Evidence of fill materials	None observed.
Wastewater discharges	None observed.
Wells	None observed.
Septic systems	None observed.
Evidence of spills/releases	None observed.
Hazardous waste	Petroleum spill kits were observed in the boiler room in the subcellar and in the chiller space on the 8th floor.
Non-Hazardous waste	Non-hazardous waste is disposed of by private waste haulers.
Air Emissions	None observed.

Observation	Observed or Suspected
Adjacent Properties	Adjacent properties were residential, commercial and institutional in use and appeared to be storing waste appropriately. The adjacent properties across Flatbush Avenue and Hudson Avenue were both observed to be under construction at the time of visit.
Other	Not applicable.

5.2 Heating, Water, and Sewer Systems

The subject property is heated by three natural gas-fired boiler located in the subcellar boiler room of the building and cooled by two chiller units and cooling towers on the 8th floor of the building. The building is serviced with regionally supplied electricity from Consolidated Edison and municipal water and sanitary sewer services by NYCDEP.

5.3 Interior Observations

The interior of the building appeared to be in good condition and contained six passenger automatic push elevators. The subcellar contained utility rooms, a boiler room with three boilers, and a water filtration system. The cellar contained a parking garage for passenger vehicles that covered the entire footprint of the subject property. The first floor contained several commercial tenant spaces, including a McDonalds restaurant, a deli, a Starbucks cafe, an H&R Block accountant's office, a nail salon, an eyewear retailer, and a 7-11 convenience store, and two vacant commercial spaces. The second floor through seventh floors contained office space for Verizon customer service operations, including office floors, break rooms, janitor's closet, and restrooms on each floor. The eighth floor of the building contained chiller units and cooling towers for the building.

5.4 Exterior Observations

The exterior of the building appeared to be in good condition, with a concrete exterior. The building footprint covers the entire site and is surrounded by concrete sidewalks.

6

Interviews

6.1 Interview with Owner, Site Manager, Occupants, or Knowledgeable Person

During the Site reconnaissance, VHB interviewed Jonathan Con, facilities engineer for Verizon, associated with the Site for approximately six months; George Goodwin, a representative for Verizon, associated with the Site since 2016; and the Client's superintendent at the Subject Property. The information obtained during the interview has been incorporated throughout this report.

6.2 Interviews with Local Government Officials

Information obtained from Local Government Officials is described in Section 4.2. No other local government officials were contacted as part of this Phase I ESA.

7

Conclusions and Opinions

The goal of the Phase I ESA is to identify RECs as defined in Section 1.1. This section identifies known or suspected RECs, Controlled RECs, Historical RECs as well as additional Site considerations. During the Phase I ESA, VHB identified [#/no] RECs in connection with the Site. VHB's opinion is limited by the conditions prevailing at the time the work was performed and the applicable regulatory requirements in effect.

7.1 Recognized Environmental Conditions

To meet the requirements of Section 12.7.1 of the Standard, the statement below has been included to preface the conclusions of this report.

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 for 395 Flatbush Avenue Extension, Brooklyn, NY 11201, the subject property. Any exceptions to, or deletions from, this practice are described in Section 8.1 of this report. This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the subject property except for the following:

7.1.1 REC No. 1 – Historical Operations at Nearby Properties

According to the historical data review, several nearby properties within a 500-foot radius of the subject property were identified with petroleum-related storage, manufacturing operations, and dry-cleaning operations with documented releases from at least 1887 through the present. The handling, storage, and/or disposal of materials and substances used during the historical operations at the nearby properties are unknown. Therefore, the historical operations at the nearby properties represent a potential source of off-site impact to the subsurface of the subject property.

> Opinion: It is the Environmental Professional's opinion that the historical operations at the nearby properties constitutes an REC.

7.2 Vapor Encroachment Condition

A Vapor Encroachment Condition (VEC) is the presence or likely presence of COC vapors in the vadose zone of the Site caused by the release of vapors from contaminated soil or groundwater either on or near the target property. VHB has concluded that a VEC exists at the Site in conjunction with REC No.1, described above.

7.3 Historic Recognized Environmental Condition

A historic recognized environmental condition (HREC) represents a past release of hazardous substances or petroleum products that has occurred in connection with the Site and has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities, without subjecting the Site to any controls (e.g., activity and use limitations).

This assessment has revealed no HRECs in connection with the subject property.

7.4 Controlled Recognized Environmental Conditions

Controlled recognized environmental conditions (CRECs) represent a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations.

This assessment has revealed no evidence of CRECs in connection with the subject property.

7.5 Business Environmental Risks

The following business environmental risks (BERs) represent conditions at the Site that may have an environmentally driven impact on the current or planned use of the Site, but do not constitute RECs or *de minimis* conditions as defined in the Standard. However, the Environmental Professional views these as potential risks that should be considered when making decisions regarding the Site.

7.5.1 BER No. 1 - Urban Historic Fill

Based upon the soil classification and development history of the Site, urban historic fill may be present beneath the Site. Urban historic fill is commonly found throughout the New York City metropolitan area and can contain contaminants such as hazardous building materials (e.g., asbestos containing materials), heavy metals, and semi-volatile organic compounds. If required to be removed from the Site, urban fill should be appropriately characterized prior to following appropriate transportation and disposal/recycling procedures.

7.5.2 BER No. 2 - Potential for Historic USTs

According to the historical data review, the subject property was first developed by at least 1887 with several structures along Dekalb Avenue, until 1974 when the current building was constructed. Supporting

documentation regarding the former heating source(s) of the former structures were not identified or provided to VHB; therefore, the potential exists for out-of-service UST(s) to be present at the subject property.

8

Data Gaps and Limitations

Other than those limitations expressly provided in **Appendix A** and/or specified herein, completion of this Phase I ESA was not subject to significant assumptions, limitations, or exceptions to the Standard.

8.1 Significant Assumptions, Limitations, Exceptions and Data Gaps.

VHB identified one data gap at the Site during the course of this Phase I ESA. The Environmental Professional's assessment as to whether these data gaps are considered significant is outlined below.

Data Gap	Assessment
Due to limited access to several office floors and tenant spaces at the Site, some interior spaces were not observed.	VHB believes that observations of accessible interior spaces were likely representative of interior portions of inaccessible office floors and tenant spaces, and thus the data gap is not significant.

As described above and when appropriate, these data gaps have been conservatively incorporated into the findings of this report. Should additional data become available, the findings of this report should be reevaluated.

9

References/Informational Sources

Aerial Photographs dated 1924, 1951, 1954, 1961, 1966, 1971, 1974, 1980, 1984, 1991, 1994, 1995, 2002, 2006, 2011, 2015, 2019. Obtained from Environmental Data Resources, Inc.

Environmental Data Resource, Inc. Radius Map Report with GeoCheck, Prepared using Field Check, dated February 11, 2025.

Environmental Data Resources, Inc. Certified Sanborn Map Report, dated February 11, 2025.

Environmental Data Resources, Inc. City Directory Image Report, dated February 21, 2025.

Topographic Maps, Brooklyn, Jersey City, and Staten Island Quadrangles dated, 1897, 1898, 1900, 1947, 1955, 1956, 1967, 1979, 1981, 1995, 2013, 2014, 2016, 2019. Obtained from Environmental Data Resources, Inc.

10

Signature and Qualifications of Environmental Professional

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 C.F.R. § 312.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 C.F.R. Part 312.

Environmental Professional:

Anna Brooks
Environmental Scientist
Date: March 4, 2025

Environmental Professional:

Rachael Barr
Project Manager
Date: March 4, 2025

11

List of Acronyms

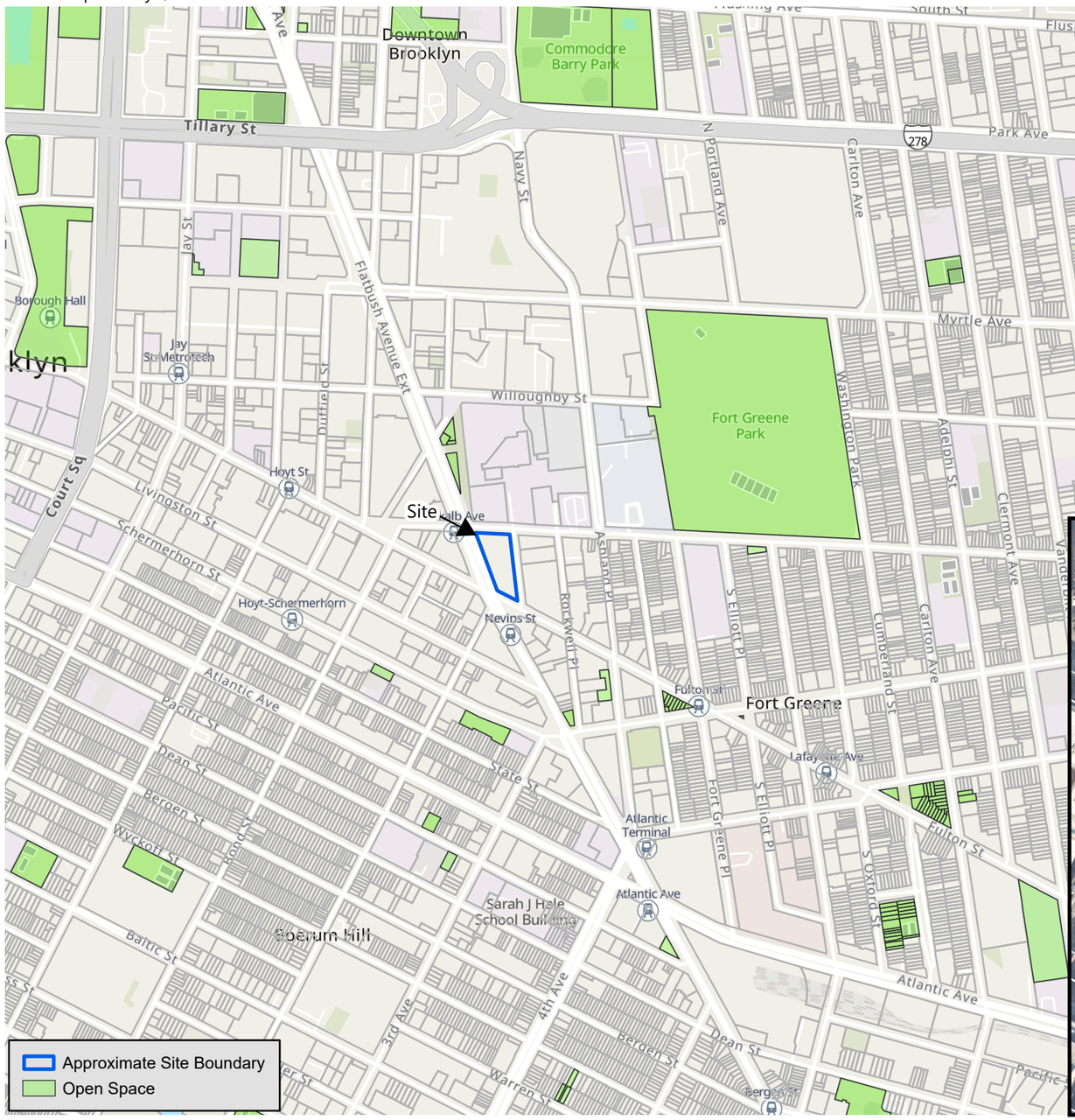
AAI	All Appropriate Inquires
AST	Aboveground Storage Tank
ASTM	American Society of Testing and Materials
COC	Contaminant of Concern
CORRACTS	Corrective Action
EDR	Environmental Data Resources
EPVE	Evaluation of Potential Vapor Encroachment
ESA	Environmental Site Assessment
FIFRA	Federal Insecticide, Fungicide & Rodenticide Act
FINDS	Facility Indexing System
LLP	Landowner Liability Protections
LUST	Leaking UST
NPL	National Priorities List
OHM	Oil and/or Hazardous Materials
PADS	PCB Activity Database
PCB	Polychlorinated Biphenyl
RCRA	Resource Conservation and Recovery Act
RECs	Recognized Environmental Conditions
SEMS	Superfund Enterprise Management System
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substance Controls Act
USGS	United States Geological Survey
UST	Underground Storage Tank
VEC	Vapor Encroachment Screening

Figures

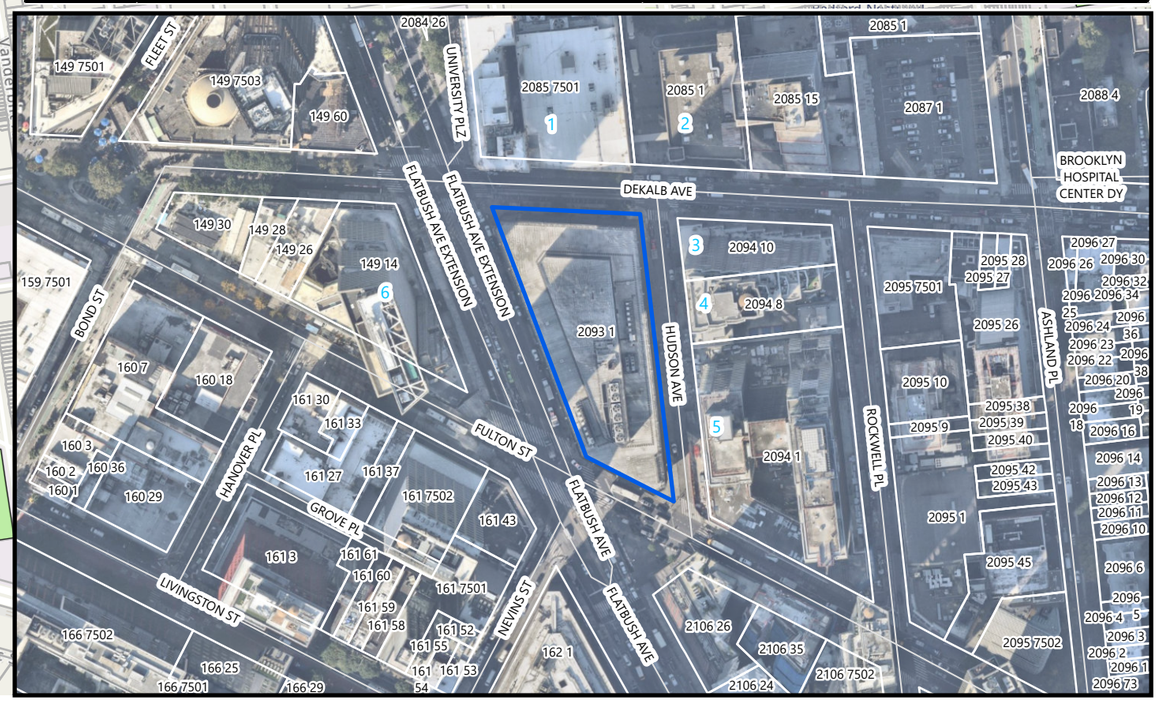
Figure 1 - Site Location Map

21820.00 | Brooklyn, New York

March 03, 2025



Key No.	Property Address	Property Type
1	371 Flatbush Avenue Extension	Public Facilities & Institutions
2	75 Deklab Avenue	Public Facilities & Institutions
3	80 Deklab Avenue	Mixed Residential & Commercial Buildings
4	12 Rockwell Place	Multi-Family Elevator Buildings
5	625 Fulton Street	Mixed Residential & Commercial Buildings
6	589 Fulton Street	Mixed Residential & Commercial Buildings



0 1,000 2,000 3,000 Feet

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

395 Flatbush Avenue Extension
Block 2093, Lot 1
Brooklyn, New York

Path: \\vhb.com\gis\proj\NewYorkCity\21820.00 CONF Rabina - Brooklyn\Project\figs - site location-site features-site vicinity map\figs - site location-site features-site

Figure 2 - Site Features Map

21820.00 | Brooklyn, New York

March 03, 2025



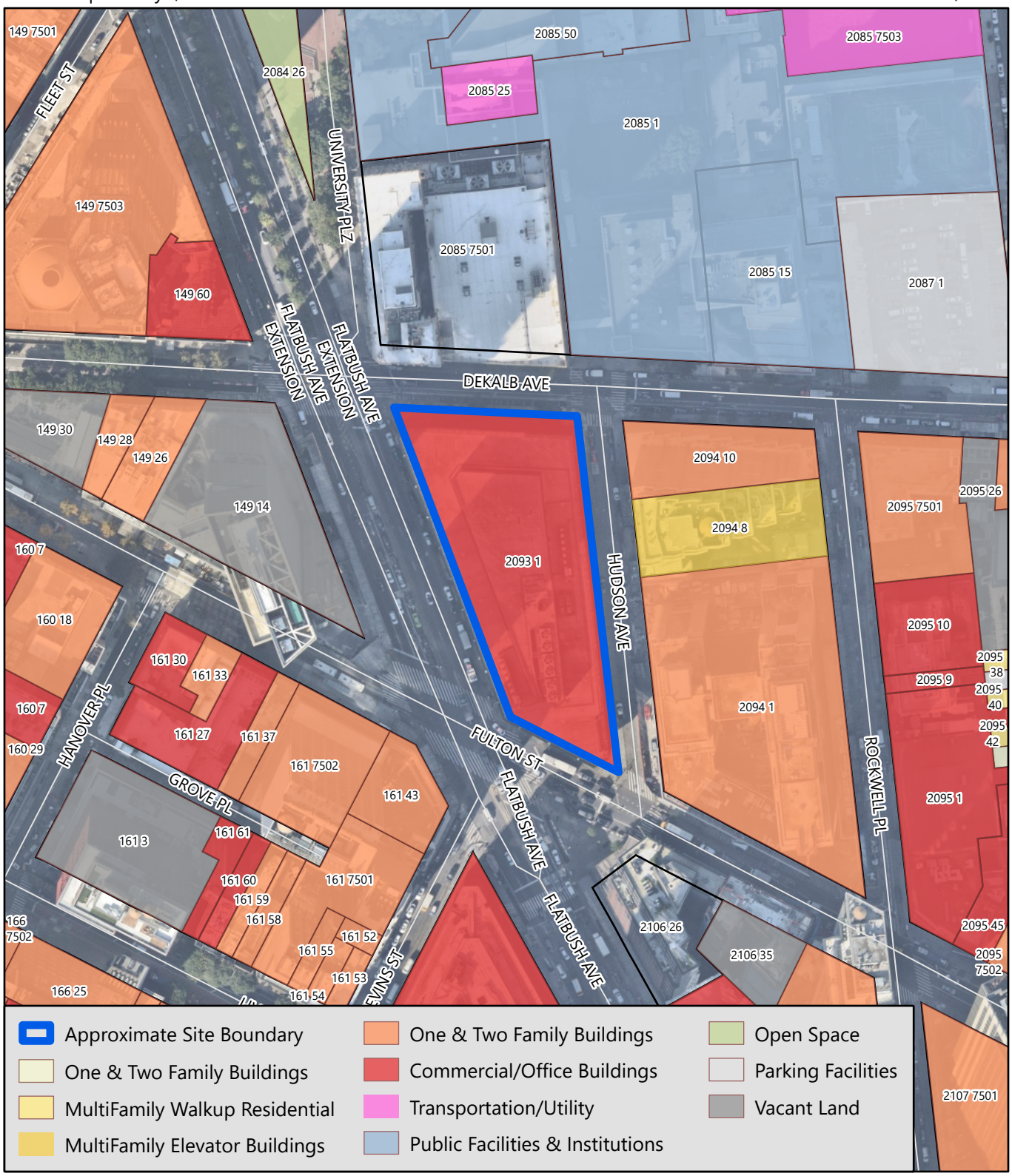
395 Flatbush Avenue Extension
Block 2093, Lot 1
Brooklyn, New York

Path: \\vhb.com\gis\proj\NewYorkCity\21820.00 CONF Rabina - Brooklyn\Project\figs - site location-site features-site vicinity map\figs - site location-site features-site

Figure 3 - Site Vicinity Map

21820.00 | Brooklyn, New York

March 03, 2025



N

0 70 140 210 Feet

395 Flatbush Avenue Extension
Block 2093, Lot 1
Brooklyn, New York

Path: \\vhb.com\gis\proj\NewYorkCity\21820.00 CONF Rabina - Brooklyn\Project\figs - site location-site features-site vicinity map\figs - site location-site features-site