

Crotona Park East/West Farms Rezoning and Related Actions FEIS

Table of Contents

EXECUTIVE SUMMARY	ES-1
1. PROJECT DESCRIPTION.....	ES-1
Project Identification.....	ES-1
Description of the Proposed Action and the Proposed Project	ES-3
Expected Sequencing of Construction	ES-22
Required Public Approvals	ES-22
Projected Development	ES-32
Reasonable Worst Case Development Scenario (RWCDS).....	ES-33
Public Review Process	ES-40
2. EXISTING AND FUTURE ENVIRONMENTAL CONDITIONS AND PROBABLE IMPACTS OF THE PROPOSED ACTION	ES-42
A Land Use, Zoning, and Public Policy	ES-42
B Socioeconomic Conditions	ES-42
C Community Facilities and Services	ES-44
D Open Space	ES-46
E Shadows.....	ES-46
F Historic and Cultural Resources	ES-47
G Urban Design and Visual Resources	ES-48
H Natural Resources.....	ES-48
I Hazardous Materials	ES-49
J Water and Sewer Infrastructure	ES-49
K Solid Waste and Sanitation Services	ES-51
L Energy.....	ES-51
M Transportation.....	ES-51
N Air Quality	ES-53
O Greenhouse Gas Emissions.....	ES-54
P Noise	ES-55
Q Public Health	ES-56
R Neighborhood Character.....	ES-57
S Construction Impacts	ES-57
3. MITIGATION.....	ES-60
Elementary Schools.....	ES-61
Traffic	ES-65
Construction	ES-67
4. UNAVOIDABLE ADVERSE IMPACTS	ES-68
Open Space	ES-69
Historic and Cultural Resources.....	ES-69
Transportation	ES-69
Construction	ES-70
5. ALTERNATIVES.....	ES-71
No-Action (As-of-Right) Alternative.....	ES-71
No-Impact Alternative	ES-72

Lesser Density Alternative.....	ES-73
6. GROWTH INDUCING ASPECTS OF THE PROPOSED ACTION	ES-74
7. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES.....	ES-74
<hr/>	
1. PROJECT DESCRIPTION	1-1
INTRODUCTION	1-1
DESCRIPTION OF THE PROPOSED ACTION AND PROPOSED PROJECT	1-3
Description of the Proposed Action	1-4
Purpose and Need of the Proposed Action.....	1-13
Description of the Proposed Project.....	1-15
Expected Sequencing of Construction	1-32
REQUIRED PUBLIC APPROVALS	1-34
Restrictive Declaration.....	1-43
PROJECTED DEVELOPMENT	1-43
General Criteria for Development Sites	1-44
Reasonable Worst Case Development Scenario (RWCDS).....	1-45
PUBLIC REVIEW PROCESS	1-51
Uniform Land Use Review Procedure (ULURP)	1-51
Environmental Review (CEQR)	1-51
<hr/>	
2. EXISTING AND FUTURE ENVIRONMENTAL CONDITIONS AND PROBABLE IMPACTS OF THE PROPOSED ACTION	
2.A LAND USE, ZONING, AND PUBLIC POLICY	A-1
INTRODUCTION	A-1
PRINCIPAL CONCLUSIONS	A-1
METHODOLOGY	A-1
Study Areas	A-3
Waterfront Revitalization Program	A-3
Preliminary Assessment	A-3
EXISTING CONDITIONS.....	A-10
Rezoning Area.....	A-10
Primary Study Area.....	A-12
Secondary Study Area.....	A-14
FUTURE NO ACTION CONDITIONS.....	A-15
Rezoning Area.....	A-15
Primary and Secondary Study Areas.....	A-16
FUTURE ACTION CONDITION.....	A-19
Rezoning Area.....	A-19
Primary and Secondary Study Areas.....	A-23
Waterfront Revitalization Program	A-23
Sustainability and PlaNYC	A-31
Sustainability and PlaNYC	A-32
CONCLUSION.....	A-35
<hr/>	
2.B SOCIOECONOMIC CONDITIONS	B-1
INTRODUCTION	B-1

PRINCIPAL CONCLUSIONS	B-2
Direct Residential Displacement.....	B-2
Direct Business Displacement.....	B-2
Indirect Residential Displacement	B-2
Indirect Business Displacement	B-3
Adverse Effects on Specific Industries	B-3
METHODOLOGY	B-3
Data Sources	B-3
Study Area Definitions.....	B-4
Assessment Methodology	B-9
PRELIMINARY ASSESSMENT	B-9
Direct Residential Displacement.....	B-9
Direct Business Displacement.....	B-11
Indirect Residential Displacement	B-21
Indirect Business Displacement	B-26
Adverse Effect on a Specific Industry.....	B-35
DETAILED ASSESSMENT OF THE POTENTIAL FOR INDIRECT RESIDENTIAL DISPLACEMENT	
B-36	
Introduction	B-36
Existing Conditions.....	B-37
Future Conditions without the Proposed Action	B-64
Future Conditions with the Proposed Action and Its Potential Impact	B-65
<hr/>	
2.C COMMUNITY FACILITIES AND SERVICES.....	C-1
INTRODUCTION	C-1
PRINCIPAL CONCLUSIONS	C-1
Libraries	C-1
Public Schools.....	C-2
Child Care Centers	C-2
METHODOLOGY	C-3
Libraries	C-3
Public Schools.....	C-3
Child Care Centers	C-4
Health Care Facilities.....	C-5
Police and Fire Protection Services.....	C-5
PRELIMINARY SCREENING	C-5
Libraries	C-6
Public Schools.....	C-6
Child Care Centers	C-6
Health Care Facilities.....	C-6
Police and Fire Protection Services.....	C-7
EXISTING CONDITIONS	C-7
Libraries	C-7
Public Schools.....	C-11
Child Care Facilities.....	C-20
Police Services	C-23
Fire Protection.....	C-23
FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION.....	C-25

Libraries	C-25
Public Schools.....	C-25
Child Care Facilities.....	C-29
FUTURE CONDITIONS WITH THE PROPOSED ACTION AND ITS POTENTIAL IMPACT	C-30
Libraries	C-30
Public Schools.....	C-30
Publicly Subsidized Child Care Centers	C-32
CONCLUSIONS.....	C-32
<hr/>	
2.D OPEN SPACE	D-1
INTRODUCTION	D-1
PRINCIPAL CONCLUSIONS	D-1
METHODOLOGY	D-2
Population	D-3
Residential Study Area Definition	D-4
Non-Residential Study Area Definition	D-4
EXISTING CONDITIONS.....	D-5
EXISTING CONDITIONS.....	D-6
EXISTING CONDITIONS.....	D-7
Residential Study Area Demographics	D-7
Non-Residential Study Area Demographics	D-11
Existing Open Space Inventory	D-13
Quantitative Analysis of Adequacy	D-20
<u>Qualitative Analysis of Adequacy</u>	<u>D-21</u>
THE FUTURE WITHOUT THE PROPOSED ACTION	D-24
Future No-Action User Population	D-24
Open Space Inventory	D-26
Quantitative Analysis of Adequacy	D-27
Qualitative Analysis of Adequacy	D-28
THE FUTURE WITH THE PROPOSED ACTION.....	D-29
User Population.....	D-29
Open Space Inventory	D-30
Quantitative Analysis of Adequacy	D-31
Qualitative Analysis of Adequacy	D-32
Determining Impact Significance	D-33
CONCLUSION.....	D-34
<hr/>	
2.E SHADOWS	E-1
INTRODUCTION	E-1
PRINCIPAL CONCLUSIONS	E-1
METHODOLOGY	E-2
PROPOSED ACTION CHARACTERISTICS.....	E-3
Results of the Screening Analysis.....	E-6
Description of the Detailed Analysis	E-10
Results of the Detailed Shadow Analysis	E-11
CONCLUSION.....	E-26

2.F HISTORIC AND CULTURAL RESOURCES.....	F-1
INTRODUCTION	F-1
PRINCIPAL CONCLUSIONS.....	F-1
Architectural Resources	F-1
Archaeological Resources.....	F-1
METHODOLOGY	F-2
Architectural Resources	F-2
Archaeological Resources.....	F-4
HISTORY	F-4
EXISTING CONDITIONS.....	F-6
Architectural Resources	F-6
Archaeological Resources.....	F-6
FUTURE NO-ACTION CONDITIONS	F-9
Architectural Resources	F-9
Archaeological Resources.....	F-9
FUTURE ACTION CONDITIONS.....	F-9
Architectural Resources	F-9
Archaeological Resources.....	F-9
CONCLUSION.....	F-12
2.G URBAN DESIGN AND VISUAL RESOURCES.....	G-1
INTRODUCTION	G-1
PRINCIPAL CONCLUSIONS.....	G-1
METHODOLOGY	G-1
Study Areas	G-2
PRELIMINARY ASSESSMENT.....	G-10
EXISTING CONDITIONS.....	G-10
Urban Design	G-10
Visual Resources.....	G-29
FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION.....	G-30
FUTURE CONDITIONS WITH THE PROPOSED ACTION.....	G-31
Proposed Zoning Map Changes	G-31
Development Scenario	G-37
CONCLUSION.....	G-63
CONCLUSION.....	G-64
CONCLUSION.....	G-65
Urban Design	G-65
Visual Resources.....	G-67
2.H NATURAL RESOURCES	H-1
INTRODUCTION	H-1
IMPACT SCREENING ANALYSIS FOR POTENTIAL NATURAL RESOURCE IMPACTS.....	H-4
Initial Impact Screening	H-4
Secondary Impact Screening.....	H-5
CONCLUSION.....	H-7

2.I HAZARDOUS MATERIALS	I-1
INTRODUCTION	I-1
PRINCIPAL CONCLUSIONS	I-1
METHODOLOGY	I-2
EXISTING CONDITIONS	I-2
FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION.....	I-3
FUTURE CONDITIONS WITH THE PROPOSED ACTION AND ITS POTENTIAL IMPACT	I-3
Impact Potential	I-3
E Designations	I-4
Review and Approval Procedures for the Proposed Project	I-7
CONCLUSION.....	I-7
2.J WATER AND SEWER INFRASTRUCTURE	J-1
INTRODUCTION	J-1
PRINCIPAL CONCLUSIONS	J-1
Water Supply.....	J-1
Wastewater Treatment	J-1
Sanitary and Storm water Drainage and Management.....	J-2
METHODOLOGY	J-2
Water Supply.....	J-2
Wastewater Treatment	J-3
Sanitary and Storm water Drainage Management.....	J-3
EXISTING CONDITIONS.....	J-6
Water Supply.....	J-6
Wastewater Treatment	J-7
Sanitary and Storm water Drainage Management.....	J-8
FUTURE WITHOUT THE PROPOSED ACTION	J-9
Water Supply and Wastewater Treatment.....	J-9
Sanitary and Storm water Drainage Management.....	J-10
FUTURE WITH THE PROPOSED ACTION	J-12
Water Supply.....	J-12
Wastewater Treatment	J-14
Sanitary and Storm water Drainage Management.....	J-14
Sanitary and Storm water Drainage Management.....	J-15
STORMWATER BEST MANAGEMENT PRACTICES CONCEPT PLAN SUMMARY	J-17
<u>Contextual Districts</u>	J-17
<u>Stormwater Source Controls</u>	J-17
Enterprise Green Communities	J-18
CONCLUSION.....	J-19
Water Supply.....	J-19
Wastewater Treatment	J-19
Sanitary and Storm water Drainage and Management.....	J-19
2.K SOLID WASTE AND SANITATION SERVICES.....	K-1
INTRODUCTION	K-1
PRINCIPAL CONCLUSIONS	K-1

METHODOLOGY	K-1
EXISTING CONDITIONS.....	K-2
FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION.....	K-3
FUTURE CONDITIONS WITH THE PROPOSED ACTION	K-4
CONCLUSIONS.....	K-5
<hr/>	
2.L ENERGY	L-1
INTRODUCTION	L-1
PRINCIPAL CONCLUSIONS	L-1
METHODOLOGY	L-1
EXISTING CONDITIONS.....	L-2
FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION.....	L-3
FUTURE CONDITIONS WITH THE PROPOSED ACTION	L-3
CONCLUSIONS.....	L-5
<hr/>	
2.M TRANSPORTATION.....	M-1
INTRODUCTION	M-1
PRINCIPAL CONCLUSIONS	M-1
METHODOLOGY	M-3
Preliminary Trip Generation Analysis	M-3
Detailed Transportation Analysis Parameters and Criteria for Impact Analyses.....	M-7
EXISTING CONDITIONS.....	M-15
Data Collection	M-15
Traffic	M-16
Transit Overview.....	M-31
Pedestrian Overview	M-32
Subway Station Analysis.....	M-33
Subway Line Haul Analysis.....	M-34
Pedestrian Elements	M-36
Parking	M-38
Safety	M-41
FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION.....	M-44
No Action Development and Background Growth	M-44
Changes in the Transportation Environment.....	M-46
Traffic	M-53
Summary of LOS Analysis	M-63
Transit and Pedestrians	M-68
Subway Station Analysis.....	M-68
Subway Line Haul Analysis.....	M-69
Pedestrian Analysis	M-70
Parking M-73	
FUTURE WITH THE PROPOSED ACTION CONDITION	M-74
With Action Increment.....	M-74
Traffic M-77	
Transit and Pedestrians	M-112
Parking M-117	
SUMMARY OF CONCLUSIONS	M-119

Traffic	M-119
Transit and Pedestrian	M-119
Parking	M-119
2.N AIR QUALITY.....	N-1
INTRODUCTION	N-1
PRINCIPAL CONCLUSIONS	N-1
Mobile Sources and Parking Facilities.....	N-1
Stationary Sources.....	N-1
Air Toxics	N-2
Odors	N-2
METHODOLOGY	N-2
Standards and Evaluation Criteria.....	N-2
<i>Parking Facilities</i>	N-11
Stationary Sources.....	N-13
EXISTING CONDITIONS.....	N-17
FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION.....	N-17
Projected Development	N-17
Mobile Sources	N-17
Parking Facilities.....	N-19
Stationary HVAC Sources	N-19
FUTURE CONDITIONS WITH THE PROPOSED ACTION	N-19
Mobile Sources	N-21
Parking Facilities.....	N-23
Stationary HVAC Sources	N-27
Impacts to the Surrounding Community	N-29
Project-on-Project Impacts.....	N-36
Air Toxics and Odors	N-47
E Designations and Restrictive Declarations, Proposed Action.....	N-50
2.O GREENHOUSE GAS EMISSIONS.....	O-1
INTRODUCTION	O-1
PRINCIPAL CONCLUSIONS	O-1
METHODOLOGY	O-2
ESTIMATED ANNUAL GREENHOUSE GAS EMISSIONS	O-3
Operations Emissions.....	O-3
Mobile Source Emissions.....	O-4
Construction Emissions.....	O-6
CONSISTENCY WITH THE GHG REDUCTION GOAL	O-8
CONCLUSIONS.....	O-11
Applicant-Controlled Development Sites	O-11
Non-Applicant Development Sites	O-12
Proposed Action (All Development Sites)	O-12
2.P NOISE	P-1
INTRODUCTION	P-1
PRINCIPAL CONCLUSIONS	P-1

Mobile Sources	P-1
Stationary Sources.....	P-2
NOISE FUNDAMENTALS	P-3
METHODOLOGY	P-6
Noise Monitoring	P-6
Modeling of Future Noise Levels	P-6
Impact Determination and Noise Standards and Guidelines.....	P-7
EXISTING CONDITIONS.....	P-9
Traffic Intersections	P-9
Highways	P-12
Rail	P-12
FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION.....	P-13
FUTURE CONDITIONS WITH THE PROPOSED ACTION.....	P-15
Intersection and Highway Noise	P-15
Rail Noise.....	P-18
Playground Noise	P-19
HVAC Noise	P-20
Supplemental Noise Monitoring for Window/Wall Attenuation	P-20
Required Noise Attenuation.....	P-23

2.Q PUBLIC HEALTH	Q-1
INTRODUCTION	Q-1
PRINCIPAL CONCLUSIONS	Q-1
METHODOLOGY	Q-1
SUMMARY OF AIR & NOISE POLLUTION SOURCES FROM THE PROPOSED ACTION	Q-2
<u>Construction</u>	Q-2
Operation	Q-3
AIR QUALITY POLLUTANTS OF CONCERN AND RELATED HEALTH EFFECTS.....	Q-4
Particulate Matter.....	Q-4
PM2.5-Related Health Effects	Q-5
LOCAL HEALTH STATISTICS	Q-7
REGULATIONS AND STANDARDS	Q-9
Air Quality	Q-9
Noise	Q-10
AIR QUALITY AND NOISE IMPACT CRITERIA	Q-10
Air Quality	Q-10
Noise	Q-11
IMPACT ASSESSMENT	Q-13
Operational Air Quality.....	Q-13
Operational Noise	Q-14
Construction Air Quality.....	Q-15
Construction Noise.....	Q-16
Rodent Control.....	Q-17
CONCLUSION	Q-17

2.R NEIGHBORHOOD CHARACTER.....	R-1
INTRODUCTION	R-1

PRINCIPAL CONCLUSIONS	R-1
METHODOLOGY	R-1
EXISTING CONDITIONS	R-4
Proposed Rezoning Area.....	R-4
Crotona Park East.....	R-7
West Farms	R-8
Bronx River Valley	R-9
Relationship between the Rezoning Area and the Rest of the Study Area	R-9
THE FUTURE WITHOUT THE PROPOSED ACTION	R-10
THE FUTURE WITH THE PROPOSED ACTION AND ITS POTENTIAL IMPACT	R-10
Redevelopment under the RWCDS	R-10
Technical Area Significant Adverse Impacts and Moderate Adverse Effects	R-11
Potential to Affect a Defining Feature of the Neighborhood	R-13
2.S CONSTRUCTION IMPACTS	S-1
INTRODUCTION	S-1
PRINCIPAL CONCLUSIONS	S-2
Traffic – Construction Peak Period Analysis.....	S-2
Parking	S-3
Transit and Pedestrians Analysis	S-3
Air Quality and Noise	S-3
Other Technical Areas.....	S-4
METHODOLOGY	S-5
Regulatory Framework:	S-5
Reasonable Worst Case Construction Sequencing.....	S-6
Transportation-Related Analysis Assumptions.....	S-9
Air Quality-Related Analysis Assumptions	S-10
Noise-Related Analysis Assumptions	S-10
ASSESSMENT OF THE NEED FOR A PRELIMINARY OR DETAILED ASSESSMENT	S-11
Transportation	S-11
Air Quality or Noise.....	S-13
EVALUATION CRITERIA	S-13
Transportation	S-14
Air Quality	S-14
Noise	S-14
CONSTRUCTION IMPACTS ASSESSMENT	S-15
Preliminary Traffic Assessment.....	S-15
Detailed Traffic Analysis	S-24
Preliminary Parking Assessment.....	S-35
Preliminary Transit and Pedestrian Assessment	S-35
Preliminary Assessment of Air Quality and Noise	S-36
Detailed Construction Noise Analysis	S-65
Preliminary Assessment of other Impact Areas	S-71
3. MITIGATION.....	3-1
INTRODUCTION	3-1
ELEMENTARY SCHOOLS	3-1
Impact	3-1

Proposed Mitigation Measures.....	3-1
Potential Impacts of the New School Mitigation	3-4
OPEN SPACE	3-85
Impact	3-85
Proposed Mitigation Measures.....	3-85
ARCHAEOLOGICAL RESOURCES.....	3-87
Impact	3-87
Proposed Mitigation Measures.....	3-87
TRAFFIC	3-88
Impacts	3-88
Proposed Mitigation Measures.....	3-88
CONSTRUCTION.....	3-102
Impacts	3-102
Proposed Mitigation Measures.....	3-102
4. UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS.....	4-1
INTRODUCTION	4-1
OPEN SPACE	4-1
HISTORIC AND CULTURAL RESOURCES	4-1
TRANSPORTATION.....	4-2
CONSTRUCTION.....	4-3
Traffic	4-3
Noise	4-3
5. ALTERNATIVES TO THE PROPOSED ACTION	5-1
INTRODUCTION	5-1
PRINCIPAL CONCLUSIONS	5-1
No-Action (As-of-Right) Alternative.....	5-1
No-Impact Alternative	5-3
Lesser Density Alternative.....	5-4
NO-ACTION ALTERNATIVE.....	5-5
Description	5-5
Comparison with the Proposed Action	5-5
Changes in the Transportation Environment.....	5-11
THE NO-IMPACT ALTERNATIVE	5-24
Description	5-24
Comparison with the Proposed Action	5-25
THE LESSER DENSITY ALTERNATIVE.....	5-28
Description	5-28
Comparison with the Proposed Action	5-37
8. RESPONSE TO COMMENTS ON THE DRAFT SCOPE OF WORK AND THE DRAFT ENVIRONMENTAL IMPACT STATEMENT	8-1
INTRODUCTION	8-1
LIST OF ELECTED OFFICIALS, GOVERNMENTAL AGENCIES, AND ORGANIZATIONS WHO COMMENTED ON THE DRAFT SCOPE	8-1
Elected Officials and Governmental Agencies	8-1

Organizations	8-1
RESPONSE TO DRAFT SCOPE OF WORK COMMENTS	8-2
General Comments.....	8-2
Review Process, Analytical Framework, Project Description	8-2
Socioeconomic Conditions.....	8-4
Community Facilities and Services.....	8-7
Open Space	8-7
Shadows	8-8
Historic and Cultural Resources.....	8-8
Urban Design and Visual Resources.....	8-8
Hazardous Materials.....	8-9
Water and Sewer Infrastructure	8-9
Transportation	8-11
Greenhouse Gas Emissions	8-12
Neighborhood Character	8-12
LIST OF ELECTED OFFICIALS, COMMUNITY BOARDS, ORGANIZATIONS AND THE INTERESTED PUBLIC WHO COMMENTED ON THE DEIS	8-12
Elected Officials and Community Boards.....	8-12
Organizations and Interested Public.....	8-12
RESPONSE TO DRAFT ENVIRONMENTAL IMPACT STATEMENT COMMENTS	8-13
General Comments.....	8-13
Comments on the Proposed Action and the Proposed Project	8-13
Comments on Socioeconomic Conditions	8-14
Comments on Open Space	8-16
Comments on Urban Design and Visual Resources.....	8-19
Comments on Construction Impacts	8-20

APPENDICES

1. ZONING TEXT AMENDMENT
2. AGENCY CORRESPONDENCE:
 - a. LPC Final Sign-off
 - b. SHPO Final Letter
 - c. SCA Letter of Intent
 - d. Library Letter
3. SHADOWS
4. WRP FORM AND ASSESSMENT
5. ARCHAEOLOGICAL PROTOCOL
6. CONSTRUCTION SCHEDULE AND CORDON MAPS
7. TRANSPORTATION
 - 7.1 Transportation Planning Assumptions
 - 7.2 Lesser Density Traffic Analysis
8. HAZARDOUS MATERIALS REPORT
9. WRITTEN COMMENTS ON THE DRAFT SCOPE
10. WRITTEN COMMENTS ON THE DEIS

List of Tables

EXECUTIVE SUMMARY

Table ES-1: List of Blocks and Lots Affected by Crotona Park East/West Farms Rezoning	ES-6
Table ES-2: Proposed Project: Summary of Proposed Program.....	ES-10
Table 3: Expected Sequencing of Development and Accessory Parking	ES-22
Table ES-4: Summary of Existing Conditions, the Future without the Proposed Action and the Future with the Proposed Action.....	ES-36
Table ES-5: Archaeologically Sensitive Lots for Sites not under Applicant Control.....	ES-48
Table ES-6: Summary of Significantly Impacted Intersections.....	ES-52
Table ES-7: 2022 Future with Action Elementary School Enrollment, Capacity, and Utilization - Comparison of No-School and With-School Scenarios.....	ES-62

PROJECT DESCRIPTION

Table 1-1: List of Blocks and Lots Affected by Crotona Park East/West Farms Rezoning	1-7
Table 1-2: Proposed Project: Summary of Proposed Program	1-15
Table 1-3: Expected Sequencing of Development and Accessory Parking	1-32
Table 1-4: Summary of Existing Conditions, the Future without the Proposed Action and the Future with the Proposed Action	1-47

2.A LAND USE, ZONING, AND PUBLIC POLICY

Table A-1: Land Uses in the Proposed Rezoning Area	A-6
Table A-2: Summary of Existing Allowed Density and Building Form within the Proposed Rezoning Area.....	A-6
Table A-3: Project Increment on Projected Development Sites	A-8
Table A-4: Summary of Proposed Allowed Density and Building Form within the Rezoning Area.....	A-8
Table A-5: Summary of Proposed Zoning District Changes	A-8
Table A-6: No Build Projects within the Secondary Study Area (1/4 mile).....	A-17

2.B SOCIOECONOMIC CONDITIONS

Table B-1: Residents and Households in 2010: Quarter-Mile Study Area	B-10
Table B-2: Housing Units in 2010 Quarter-Mile Study Area	B-11
Table B-3: Businesses and Vacant Commercial and Industrial Space in the Proposed Rezoning Area (Existing Conditions)	B-13
Table B-4: Anticipated Direct Displacement of Currently Non-Residential Properties, by Type of Business	B-16
Table B-5: Anticipated Direct Displacement on Currently Non-Residential Properties, by Development Parcel	B-17
Table B-6: Auto Repair and Maintenance Establishments	B-20
Table B-7: Income Levels and Poverty Rates in 1999 and 2000: Quarter-Mile Study Area.....	B-23
Table B-8: Residents and Households in 2010: Half-Mile Study Area	B-24
Table B-9: Housing Units in 2010: Half-Mile Study Area	B-25
Table B-10: Employment in 2000: Quarter-Mile Study Area	B-28
Table B-11: Workers in 2000 by Economic Sector: Quarter-Mile Study Area	B-29
Table B-12: Business Establishments in 1998 and 2008 in Zip Codes 10459 and 10460.....	B-30
Table B-13: Details for Certain Economic Categories	B-32
Table B-14: Business Establishments in 1998 and 2008 in Zip Codes 10459 and 10460, the Bronx, and New York City	B-33
Table B-15: Residents and Households in 2000 and 2010	B-37

Table B-16: Age Distribution in 2010	B-38
Table B-17: Income Levels, Poverty Rate, and Labor Force Data in 1999 and 2000	B-39
Table B-18: 1999 Median Incomes and Poverty Rates by Census Tract.....	B-41
Table B-19: Income Levels in 1989 and 1999	B-44
Table B-20: Housing Units and Tenure in 2010	B-45
Table B-21: Contract Rents in 2000	B-46
Table B-22: Gross Rents in 2000.....	B-48
Table B-23: Gross Rent as Percentage of Income in 2000	B-49
Table B-24: Rents in 2000 by Census Tract	B-53
Table B-25: Income Restricted Housing.....	B-62
Table B-26: Unprotected Housing Units in 2000	B-67
Table B-27: Renter Average Household Incomes by Building Size.....	B-69
Table B-28: Income Comparisons Between Study Area Tracts and the Bronx	B-70
Table B-29: Rental Units in Small Buildings Constructed Before 1990	B-73
Table B-30: Households at Risk	B-79
Table B- <u>31</u> : Indirect Residential Displacement Potential.....	B-80

2.C COMMUNITY FACILITIES AND SERVICES

Table C-1: Preliminary Screening Analysis Criteria	C-6
Table C-2: Library Study Area Population	C-10
Table C-3: CSD 12 Elementary Schools within Sub-District 2	C-13
Table C-4: CSD 12 Elementary Schools within a Half-Mile of the Proposed Rezoning Area 2009-2010 Enrollment, Capacity, and Utilization Data	C-14
Table C-5: CSD 12 Intermediate Schools within Sub-District 2	C-15
Table C-6: CSD 12 Intermediate Schools within a Mile of the Proposed Rezoning Area 2009-2010 Enrollment, Capacity, and Utilization Data	C-16
Table C-7: 2009-2010 High School Enrollment, Capacity, and Utilization Data the Bronx.....	C-16
Table C-8: Public High Schools within One Mile of the Proposed Rezoning Area	C-19
Table C-9: Publicly Funded Child Care Programs in 1 1/2 Mile Study Area.....	C-20
Table C-10: Fire Protection and EMS Services	C-23
Table C-11: No-Action Developments and Student Generation.....	C-26
Table C-12: 2022 Future No-Action Elementary School Enrollment, Capacity, and Utilization Data ..	C-28
Table C-13: 2022 Future No-Action Intermediate School Enrollment, Capacity, and Utilization Data ..	C-29
Table C-14: 2022 Future No-Action High School Enrollment, Capacity, and Utilization Data in the Bronx	C-29
Table C-15: 2022 Future With-Action Elementary School Enrollment, Capacity, and Utilization Data ..	C-31
Table C-16: 2022 Future With-Action Intermediate School Enrollment, Capacity, and Utilization Data ..	C-31
Table C-17: 2022 Future With-Action High School Enrollment, Capacity, and Utilization Data in The Bronx	C-32

2.D OPEN SPACE

Table D-1: Residential Study Area <u>2010 Census Residential</u> Population	D-7
Table D-2: Residential Study Area Age Distribution	D-8
Table D-3: Residential Study Area 2000 Worker Population	D-9
Table D-4: Residential Study Area Commercial Development Since 2000	D-10
Table D-5: Residential Study Area Population.....	D-10
Table D-6: Non-Residential Study Area 2010 Census Residential Population	D-11
Table D-7: Non-Residential Study Area Age Distribution	D-11

Table D-8: Non-Residential Study Area 2000 Worker Population.....	D-12
Table D-9: Non-Residential Study Area Commercial Development Since 2000.....	D-12
Table D-10: Non-Residential Study Area Population.....	D-13
Table D-11: Existing Open Space Resources, Residential Study Area	D-15
Table D-12: Existing Open Space Resources, Residential Study Area	D-18
Table D-13: Analysis of Adequacy – Existing Conditions, Residential Study Area.....	D-21
Table D-14: Analysis of Adequacy – Existing Conditions, Non-Residential Study Area.....	D-22
Table D-15: Anticipated Development in the Study Areas -- 2022 Future No-Action Condition	D-25
Table D-16: Study Area Populations – 2022 Future No-Action Condition	D-26
Table D-17: 2022 Open Space Inventory - New Open Spaces in the Future No-Action Condition.....	D-27
Table D-18: Analysis of Adequacy – 2022 Future No-Action Condition, Residential Study Area	D-28
Table D-19: Analysis of Adequacy – Future No-Action Condition, Non-Residential Study Area	D-28
Table D-20: Projected Population -- 2022 Future Action Condition	D-30
Table D-21: 2022 Open Space Inventory -- New Open Spaces under the Future Action Condition	D-31
Table D-22: Analysis of Adequacy – 2022 Future Action Condition, Residential Study Area.....	D-31
Table D-23: 2022 Future Action Condition Analysis of Adequacy – Non-Residential Study Area	D-32
Table D-24: Comparison, 2022 Action and No Action Conditions, Residential Study Area.....	D-34
Table D-25: Comparison of 2022 Action and No Action Conditions, Non-Residential Study Area	D-34

2.E SHADOWS

Table E-1: Height of Proposed Buildings Analyzed.....	E-5
Table E-2: Incremental Shadow Durations	E-12
Table E-3: Estimated Annual Power Loss for the Bronx River House As a Result of Proposed Action Shadows	E-26

2.F HISTORIC AND CULTURAL RESOURCES

Table F-1: Archaeologically Sensitive Lots for Sites NOT Under Control of the Project Applicant Crotona Park East / West Farms Rezoning APE	F-2
Table F-2: Archaeologically Sensitive Lots within the Crotona Park East / West Farms Rezoning APE F-7	
Table F-3: Archaeologically Sensitive Lots Recommended for Archaeological Field Testing, for Sites under Control of the Project Applicant	F-11
Table F-4: Archaeologically Sensitive Lots for Sites NOT Under Control of the Project Applicant. Crotona Park East / West Farms Rezoning APE	F-11

2.I HAZARDOUS MATERIALS

Table I-1: Finding Recommendations for Parcels within the Proposed Rezoning Area.....	I-6
---	-----

2.J WATER AND SEWER INFRASTRUCTURE

Table J-1 : Existing Water Consumption and Wastewater Generation.....	J-7
Table J-2: Existing Surface Calculations	J-8
Table J-3: Existing Storm water and Wastewater Generation	J-8
Table J-4: Existing Storm water and Wastewater Generation	J-9
Table J-5: 2022 No-Action Condition Water Consumption and Wastewater Generation	J-10
Table J-6: No Action Surface Calculations.....	J-11
Table J-7: 2022 No Action Storm water and Wastewater Generation For HP-003 Drainage Area.....	J-11
Table J-8: 2022 No Action Storm water and Wastewater Generation For HP-004 Drainage Area.....	J-12
Table J-9: 2022 Proposed Action Water Consumption and Wastewater Generation	J-13
Table J-10: Summary of Water Consumption	J-14
Table J-11: 2022 Proposed Action Surface Calculations.....	J-15
Table J-12: Proposed Action Storm water and Wastewater Generation For HP-003 Drainage Area.....	J-15

Table J-13: Proposed Action Storm water and Wastewater Generation For HP-004 Drainage Area.....	J-16
Table J-14: Existing and Proposed Action Comparison For HP-003 Drainage Area	J-16
Table J-15: Existing and Proposed Action Comparison For HP-004 Drainage Area.....	J-17

2.K SOLID WASTE AND SANITATION SERVICES

Table K-1 : Existing Conditions: Estimated Weekly Solid Waste Generation on Projected Development Parcels	K-3
Table K-2 : Future No-Action Conditions: Estimated Weekly Solid Waste Generation on Projected Development Parcels	K-3
Table K-3 : Future Action Condition: Estimated Weekly Solid Waste Generation on Projected Development Parcels	K-4
Table K-4 Future Action Condition Increment: Estimated Weekly Solid Waste Generation on Projected Development Parcels as Compared to Future No-Action Conditions	K-5

2.L ENERGY

Table L-1: Floor Area: Existing Conditions	L-2
Table L-2: Annual Energy Consumption: Existing Conditions.....	L-2
Table L-3: Floor Area: Future Conditions without the Proposed Action	L-3
Table L-4: Annual Energy Consumption: Future Conditions without the Proposed Action	L-3
Table L-5: Floor Area: Future Action Conditions	L-4
Table L-6: Annual Energy Consumption: Future Action Conditions	L-4

2.M TRANSPORTATION

Table M-1: Summary of Significantly Impacted Intersections.....	M-2
Table M-2: Transportation Assumption Factors	M-5
Table M-3: Proposed Garage Entrance/Exit Locations	M-6
Table M-4: Intersection Level of Service Criteria	M-9
Table M-5: Level of Service Criteria for Subway Station Elements	M-12
Table M-6: Level of Service Criteria for Pedestrian Elements.....	M-14
Table M-7: Number of Approach Movements with Substandard Level of Service in Existing Conditions	M-27
Table M-8: Existing LOS Table Signalized Intersections	M-28
Table M-9: Existing LOS Table Unsignalized Intersections	M-29
Table M-10: Summary of Bus Routes in Study Area	M-32
Table M-11: 2009 Existing Subway Stairs Operations.....	M-34
Table M-12: 2009 Existing Subway Turnstile Operations	M-34
Table M-13: 2009 Existing Subway Line Haul Conditions.....	M-35
Table M-14: 2009 Existing Corner and Crosswalk Level of Service Table	M-36
Table M-15: 2009 Existing Sidewalk Level of Service Table	M-37
Table M-16: Existing Parking Utilization.....	M-38
Table M-17: Parking Regulations	M-41
Table M-18: Reportable Accidents in Study Area Overview	M-42
Table M-19: Pedestrian and Bicycle Related Accidents in Study Area.....	M-43
Table M-20: Projects Expected to Be Completed in Study Area before 2022	M-44
Table M-21: East 177 th Street at the Sheridan Expressway Signal Timing Changes - AM	M-47
Table M-22: East 177 th Street at the Sheridan Expressway Signal Timing Changes - Midday	M-47
Table M-23: East 177 th Street at the Sheridan Expressway Signal Timing Changes - PM	M-48
Table M-24: Westchester Avenue at Sheridan Expressway Service Road and Whitlock Avenue Signal Timing Changes	M-50

Table M-25: Westchester Avenue at Sheridan Expressway Service Road and Sheridan Off-Ramp Signal Timing Changes	M-51
Table M-26: West Farms Road at Longfellow Avenue and Home Street Signal Timing Changes.....	M-51
Table M-27: West Farms Road at Freeman Street Signal Timing Changes	M-52
Table M- <u>28</u> : Number of Approach Movements with Substandard Level of Service in No Action Condition	M-63
Table M- <u>29</u> : No Action Level of Service Analysis	M-64
Table M- <u>30</u> : No Action Unsignalized Level of Service Analysis Tables	M-65
Table M- <u>31</u> : 2022 No-Action Subway Stairs Operations	M-69
Table M- <u>32</u> : 2022 No-Action Subway Turnstile Operations	M-69
Table M- <u>33</u> : 2022 No Action Subway Line Haul Conditions	M-70
Table M- <u>34</u> : 2022 No-Action Corners and Crosswalk Level of Service Table.....	M-71
Table M- <u>35</u> : 2022 No-Action Sidewalk Level of Service Table	M-72
Table M- <u>36</u> : 2022 No-Action Parking Demand and Utilization.....	M-73
Table M- <u>37</u> : Project Size Allocated to each Garage Entrance Location.....	M-74
Table M- <u>38</u> : Project Generated Person Trip by Entrance Location.....	M-75
Table M- <u>39</u> : Project Eliminated Person Trip by Entrance Location.....	M-75
Table M- <u>40</u> : Net Project Person Trip by Entrance Location	M-76
Table M- <u>41</u> : Vehicle Trip by Land Use.....	M-77
Table M- <u>42</u> : Number of Approach Movements with Substandard Level of Service in Proposed Action Condition	M-102
Table M- <u>43</u> : Number of Impacts Created by the Proposed Action.....	M-102
Table M- <u>44</u> : No Action and Proposed Action LOS for Signalized Intersections - AM Peak Period .	M-106
Table M- <u>45</u> : No Action and Proposed Action LOS for Signalized Intersections - Midday Peak Period .	M-107
Table M- <u>46</u> : No Action and Proposed Action LOS for Signalized Intersections - PM Peak Period..	M-108
Table M- <u>47</u> : No Action and Proposed Action LOS for Unsignalized Intersections - AM Peak Period... M-	109
Table M- <u>48</u> : No Action and Proposed Action LOS for Unsignalized Intersections - Midday Peak Period	M-110
Table M- <u>49</u> : No Action and Proposed Action LOS for Unsignalized Intersections - PM Peak Period ... M-	111
Table M- <u>50</u> : Projected Transit and Pedestrian Trips By Parcel for the Proposed Action.....	M-112
Table M- <u>51</u> : 2022 With Action Subway Stairs Operations	M-113
Table M- <u>52</u> : 2022 With Action Subway Turnstile Operations	M-114
Table M- <u>53</u> : 2022 With Action Subway Line Haul Conditions	M-115
Table M- <u>54</u> : 2022 With Action Corner and Crosswalk Level of Service Tables	M-115
Table M- <u>55</u> : 2022 With-Action Sidewalk Level of Service Tables.....	M-116
Table M- <u>56</u> : Proposed Action Parking Accumulation by Land Use	M-117
Table M- <u>57</u> : Proposed Action Parking Accumulation.....	M-118
Table M- <u>58</u> : Proposed Action Parking Utilization	M-119

2.N AIR QUALITY

Table N-1: National and New York State Ambient Air Quality Standards and Monitored Values	N-4
Table N-2: Monitored CO Values (ppm)	N-6
Table N-3: Traffic Volume Increments for CO Screening Analysis	N-8
Table N-4: PM _{2.5} Screening Analysis	N-12
Table N- <u>5</u> : Generic Pollutant Concentrations for Industrial Source Screen	N-17
Table N- <u>6</u> : Eight-Hour Mobile Source CO (ppm), No Action Conditions.....	N-18
Table N- <u>7</u> : No-Action PM ₁₀ Concentrations at E. 174th St./Boone Avenue (ug/m ³)	N-18

Table N- <u>8</u> : No Action Conditions, PM ₁₀ at Cross Bronx Expressway (ug/m ³)	N-19
Table N- <u>9</u> : Eight-Hour Mobile Source CO Concentrations (ppm), Action Conditions.....	N-21
Table N- <u>10</u> : Action Conditions, PM10 at E. 174th St./Boone Avenue (ug/m ³)	N-21
Table N- <u>11</u> : Action Conditions, PM2.5 at E. 174th St./Boone Avenue (ug/m ³)	N-22
Table N- <u>12</u> : Action Conditions, PM10 at Cross Bronx Expressway (ug/m ³).....	N-22
Table N- <u>13</u> : Action Conditions, PM2.5 at Cross Bronx Expressway (ug/m ³).....	N-23
Table N- <u>14</u> : Proposed Parking Facilities	N-23
Table N- <u>15</u> : CO Concentrations from Largest Garage	N-26
Table N- <u>16</u> : Screening Analysis for Project on Project Impacts, Proposed Action.....	N-37
Table N- <u>17</u> : HVAC AERMOD Modeling for 24-Hour SO ₂ (ug/m ³), Proposed Action	N-40
Table N- <u>18</u> : HVAC AERMOD Modeling for Annual NO _x (ug/m ³), Proposed Action.....	N-43
Table N- <u>19</u> : HVAC AERMOD Cluster Modeling for 24-Hour SO ₂ (ug/m ³), Proposed Action	N-46
Table N- <u>20</u> : HVAC AERMOD Cluster Modeling for Annual NO ₂ (ug/m ³), Proposed Action	N-46
Table N- <u>21</u> : Industrial Sites with Air Quality Permits.....	N-48
Table N- <u>22</u> : Non-Criteria Pollutant Concentrations (ug/m ³) at 1743 West Farms Road Compared with NYSDEC Standards.....	N-50
Table N- <u>23</u> : Restrictive Declarations and (E) Designations for Proposed Action.....	N-50

2.O GREENHOUSE GAS EMISSIONS

Table O-1: Annual Operational GHG Emissions and Carbon Intensity	O-4
Table O-2: Estimated Annual VMTs for the Proposed Action.....	O-5
Table O-3: Estimated Annual Mobile Source GHG Emissions (in metric tons)	O-6
Table O-4: Construction Carbon Calculator Inputs and Results.....	O-8

2.P NOISE

Table P-1: Sound Pressure Level and Loudness of Typical Noises in Indoor & Outdoor Environments	P-5
Table P-2: Noise Exposure Guidelines for Use in City Environmental Impact Review	P-7
Table P-3: Required Attenuation Values to Achieve Acceptable Interior Noise Levels	P-8
Table P-4: HUD Acceptability Standards for Noise	P-9
Table P-5: Monitored Noise Levels (dBA).....	P-11
Table P-6: Intersection, Rail, and Highway Noise (dBA), No Action Conditions	P-14
Table P-7: Mobile Source Noise Screen, 2022 Traffic Volumes.....	P-16
Table P-8: Noise Levels (dBA), Future Conditions with the Proposed Action	P-17

2.Q PUBLIC HEALTH

Table Q-1: Noise Exposure Guidelines for Use in City Environmental Impact Review.....	Q-12
Table Q-2: Required Attenuation Values to Achieve Acceptable Interior Noise Levels	Q-13

2.S CONSTRUCTION IMPACTS

Table S-1: Regulatory Framework in New York City	S-6
Table S-2: Detailed Phasing Study	S-16
Table S-3: Construction Activities by Building Type.....	S-17
Table S-4: Construction Activity Analysis, By Cordon Line	S-19
Table S-5: Analysis of Construction-Related and Project-Related Off-Peak Vehicular Trips Compared to Peak Hour Volumes for Build Conditions	S-21
Table S-6: East 177 th Street at the Sheridan Expressway Signal Timing Changes - AM	S-26
Table S-7: East 177th Street at the Sheridan Expressway Signal Timing Changes - PM.....	S-26
Table S-8: Westchester Avenue at Sheridan Expressway Service Road and Whitlock Avenue Signal Timing Changes	S-28

Table S-9: Westchester Avenue at Sheridan Expressway Service Road and Sheridan Off-Ramp Signal Timing Changes	S-29
Table S-10: West Farms Road at Longfellow Avenue and Home Street Signal Timing Changes	S-29
Table S-11: West Farms Road at Freeman Street Signal Timing Changes	S-30
Table S-12: Baseline Construction Traffic and Level-of-Service Analysis.....	S-33
Table S-13: Parking Supply And Demand at the Peak Construction Cordon.....	S-35
Table S-14: Comparison of Peak Construction Bus, Subway and Walk Trips With the Proposed Action Peak Periods.....	S-36
Table S-15: Distribution of Employees' Vehicles for Air and Noise Cordons 8.1 and 8.2	S-38
Table S-16: Average Hourly Truck Trips for Air and Noise Cordons 5 through 8.1	S-39
Table S-17: On-Site Truck Trips and Diesel Equipment by Air and Noise Cordon.....	S-42
Table S-18: Hourly Truck Trips and PCEs for Air and Noise Cordons 5 through 7	S-46
Table S-19: Equipment Noise (Leq) by Construction Stage.....	S-50
Table S-20: Duration of Leq Equipment Noise Levels > 62.0 dBA	S-51
Table S-21: On-Site Diesel Equipment by Air and Noise Cordon	S-52
Table S-22: Cumulative Construction Noise at Boone Avenue & E. 172nd Street, Air and Noise Cordons 4 – 12.1	S-55
Table S-23: Cumulative Construction Noise at Southern Longfellow Ave., E. 172nd to E. 173rd Streets,S-56	
Table S-24: Cumulative Construction Noise at, Northern Longfellow Ave., E. 172nd to E. 173rd Streets,	S-57
Table S-25: Cumulative Construction Noise at Southern Longfellow Ave., E. 173rd to E. 174th Streets, Air and Noise Cordons 4 – 12.1	S-58
Table S-26: Cumulative Construction Noise at E. 173rd Street, Boone Ave – West Farms Road, Air and Noise Cordons 4 – 12.1.....	S-59
Table S-27: Cumulative Construction Noise at Parcel 2S, Air and Noise Cordons 4 – 12.1	S-60
Table S-28: Cumulative Construction Noise at Longfellow Avenue, E. 173 – E. 174 Streets, Air and Noise Cordons 14 – 21.....	S-61
Table S-29: Cumulative Construction Noise at Parcel 3A, Air and Noise Cordons 14 - 21	S-62
Table S-30: Cumulative Construction Noise at Parcel 5E, Air and Noise Cordons 14 - 21	S-63
Table S-31: Cumulative Construction Noise at Parcel 4A, Air and Noise Cordons 14 - 21	S-64
Table S-32: Modeled Sources and Receivers	S-66
Table S-33: RCNM Construction Noise Results	S-70

3. MITIGATION OF PROJECT IMPACTS

Table 3-1: 2022 Future Elementary School Enrollment, Capacity, and Utilization with and without the New School	3-4
Table 3-3: 2022 Action Condition per the RWCDS: Water Demand and Effluent Flow	3-20
Table 3-4: Future Action Condition with School: Estimated Weekly Solid Waste Generation on Projected Development Parcels	3-21
Table 3-5: Future Action Condition per RWCDS: Estimated Weekly Solid Waste Generation on Projected Development Parcels	3-21
Table 3-6: Floor Area: Future Action Condition with School	3-22
Table 3-7: Floor Area: Future Action Condition per the RWCDS	3-22
Table 3-8: Annual Energy Consumption: Future Action Condition with School	3-22
Table 3-9: Annual Energy Consumption: Future Action Condition per the RWCDS	3-23
Table 3-10: 7:30-8:30 AM Student Trip Generation and Modal Split.....	3-24
Table 3-11: 7:30-8:30 AM Staff Trip Generation and Mode Split	3-24
Table 3-12: Comparison of Person Trips Generated by Mode for the Proposed Action with and without the New School	3-25

Table 3-13: Comparison of Vehicle Trips Generated by the Proposed Action with and without the School Mitigation, Signalized Intersections, AM Peak Period.....	3-25
Table 3-14: Level of Service Table Comparing No-Action, Proposed Action, and New School Mitigation, Signalized Intersections, AM Peak Period.....	3-51
Table 3-15: Level of Service Table Comparing No-Action, Proposed Action, and New School Mitigation, Signalized Intersections, Midday Peak Period.....	3-52
Table 3-16: Level of Service Table Comparing No-Action, Proposed Action, and New School Mitigation, Signalized Intersections, PM Peak Period.....	3-53
Table 3-17: Level of Service Table Comparing No-Action, Proposed Action, and New School Mitigation, Unsignalized Intersections, AM Peak Period.....	3-54
Table 3-20: LOS Table for Proposed Traffic Mitigation Measures for the New School Mitigation Scenario, Signalized Intersections, AM Peak Period.....	3-57
Table 3-21: LOS Table for Proposed Traffic Mitigation Measures for the New School Mitigation Scenario, Signalized Intersections, Midday Peak Period.....	3-58
Table 3-22: LOS Table for Proposed Traffic Mitigation Measures for the New School Mitigation Scenario, Signalized Intersections, PM Peak Period	3-59
Table 3-26: Proposed Traffic Mitigation Measures for the New School Mitigation Scenario, AM Peak Period	3-63
Table 3-27: Proposed Traffic Mitigation Measures for the New School Mitigation Scenario, Midday Peak Period	3-63
Table 3-28: Proposed Traffic Mitigation Measures for the New School Mitigation Scenario, PM Peak Period.....	3-64
Table 3-30: 2022 Proposed Action with School Sidewalk LOS Tables	3-67
Table 3-31: Reportable Accidents Occurring at Intersections near Proposed School	3-68
Table 3-32: Pedestrian and Bicycle Accidents Occurring at Intersections near Proposed School	3-68
Table 3-33: Traffic Volume Increments for CO Screen, New School Mitigation	3-70
Table 3-34: Eight-Hour Mobile Source CO Concentrations (ppm), New School Mitigation	3-71
Table 3-35: New School Mitigation, PM10 Concentrations (ug/m ³).....	3-71
Table 3-36: New School Mitigation, PM2.5 Concentrations (ug/m ³).....	3-72
Table 3-37: Future Action Conditions per School Mitigation Scenario: GHG Emission Summary	3-75
Table 3-38: School Mitigation: Annual Operational GHG Emissions and Carbon Intensity	3-76
Table 3-39: School Mitigation: Estimated Annual VMT	3-77
Table 3-40: School Mitigation: Estimated Annual Mobile Source GHG Emissions.....	3-78
Table 3-41: New School Mitigation: Construction Carbon Calculator Input and Results.....	3-79
Table 3-43: Total GHG Emissions: New School Mitigation Compared with RWCDS	3-80
Table 3-44: Comparison of Vehicular Volumes, No-Action and New School Mitigation Conditions ..	3-82
Table 3-45: Comparison of Noise Levels, No-Action and New School Mitigation Conditions.....	3-83
Table 3-46: Proposed Traffic Mitigation Measures – AM Peak Period	3-94
Table 3-47: Proposed Traffic Mitigation Measures – Midday Peak Period	3-94
Table 3-48: Proposed Traffic Mitigation Measures – PM Peak Period	3-95
Table 3-49: Level of Service Table for Proposed Traffic Mitigation Measures Signalized Intersections – AM Peak Period.....	3-96
Table 3-50: Level of Service Table for Proposed Traffic Mitigation Measures Signalized Intersections – MD Peak Period.....	3-97
Table 3-51: Level of Service Table for Proposed Traffic Mitigation Measures Signalized Intersections – PM Peak Period.....	3-98
Table 3-52: Level of Service Table for Proposed Traffic Mitigation Measures Unsignalized Intersections – AM Peak Period.....	3-99
Table 3-53: Level of Service Table for Proposed Traffic Mitigation Measures Unsignalized Intersections – Midday Peak Period.....	3-100

Table 3-54: Level of Service Table for Proposed Traffic Mitigation Measures Unsignalized Intersections – PM Peak Period.....3-101

5. ALTERNATIVES TO THE PROPOSED ACTION

Table 5-1: 2022 Sub-district 2 Elementary School Enrollment, Capacity, and Utilization Data.....	5-7
Table 5-2: East 177th Street at the Sheridan Expressway Signal Timing Changes - AM	5-12
Table 5-3: East 177 th Street at the Sheridan Expressway Signal Timing Changes - Midday	5-13
Table 5-4: East 177 th Street at the Sheridan Expressway Signal Timing Changes - PM	5-13
Table 5-5: Westchester Avenue at Sheridan Expressway Service Road and Whitlock Avenue Signal Timing Changes	5-15
Table 5-6: Westchester Avenue at Sheridan Expressway Service Road and Sheridan Off-Ramp Signal Timing Changes	5-16
Table 5-7: West Farms Road at Longfellow Avenue and Home Street Signal Timing Changes	5-17
Table 5-8: West Farms Road at Freeman Street Signal Timing Changes.....	5-17
Table 5-9: Number of Approach Movements with Substandard Level of Service in No-Action Conditions	5-19
Table 5-10: Number of Approach Movements with Substandard Level of Service in No-Action Conditions	5-20
Table 5-11: Comparison of Noise Levels (dBA) under the No-Action Alternative and the Proposed Action.....	5-22
Table 5-12: Reasonable Worst Case Development Scenarios, Proposed Action vs. Lesser Density Alternative	5-30
Table 5-13: 2022 Sub-district 2 Elementary School Enrollment, Capacity, and Utilization Data.....	5-39
Table 5-14: Comparison of Person Trips Generated by the Proposed Project and the Lesser Density Alternative	5-43
Table 5-15: Comparison of Vehicular Trips Generated by the Proposed Project and the Lesser Density Alternative	5-44
Table 5-16: Summary of Impacted Intersections under the Proposed Action	5-44
Table 5-17: Restrictive Declarations and (E) Designations for the Lesser Density Alternative.....	5-46

List of Figures

EXECUTIVE SUMMARY

Figure ES-1: Development Parcels and Proposed Rezoning	ES-2
Figure ES-2: Existing and Proposed Zoning.....	ES-7
Figure ES-4: LSGD Buildings and Building 4 - Boone Avenue Massing Diagram.....	ES-12
Figure ES-5: Buildings 3A, 3B and 3C -- Boone Avenue Rendering (without School).....	ES-14
Figure ES-6: Buildings 5 and 6 - Illustrative Site Plan.....	ES-19
Figure ES-7: Buildings 5 and 6 - Conceptual Massing Diagram.....	ES-20
Figure ES-8: Building 6 - Rendering	ES-21
Figure ES-9: LSGD Buildings - Proposed Lot Coverage Waivers	ES-24
Figure ES-10: Delineation of Projected and Potential Development Sites.....	ES-39

1. PROJECT DESCRIPTION

Figure 1-1: Development Parcels and Proposed Rezoning.....	1-2
Figure 1-2: Existing and Proposed Zoning	1-8
Figure 1-3: LSGD Buildings - Site Plan	1-16
Figure 1-4: LSGD Buildings -- Boone Avenue Elevation	1-17
Figure 1-5: LSGD Buildings and Building 4 - Boone Avenue Massing Diagram	1-19
Figure 1-6: Buildings 3A, 3B and 3C -- Boone Avenue Rendering (without School)	1-21
Figure 1-7: Buildings 5 and 6 - Illustrative Site Plan.....	1-28
Figure 1-8: Buildings 5 and 6 - West Farms Road Elevation	1-29
Figure 1-9: Buildings 5 and 6 - Conceptual Massing Diagram	1-30
Figure 1-10: Building 6 - Rendering	1-31
Figure 1-11: Anticipated Construction Sequencing for the Proposed Project	1-33
Figure 1-12: LSGD Buildings - Proposed Lot Coverage Waivers	1-35
Figure 1-13: Delineation of Projected and Potential Development Sites.....	1-50

2.A LAND USE, ZONING, AND PUBLIC POLICY

Figure A-1: Land Use, Zoning, and Public Policy Study Areas	A-2
Figure A-2: Existing Land Use	A-4
Figure A-3: Existing Zoning	A-5
Figure A-4: Existing and Proposed Zoning	A-7
Figure A-5: No Build Projects	A-18
Figure A-6: Delineation of Projected and Potential Development Sites.....	A-21
Figure A-7: Coastal Boundary of New York	A-31

2.B SOCIOECONOMIC CONDITIONS

Figure B-1: Proposed Rezoning Area	B-5
Figure B-2: Socioeconomic Study Area	B-6
Figure B-3: Zip Codes 10459 and 1046.....	B-8
Figure B-4: Median Household Income in 1999	B-42
Figure B-5: Poverty Rates in 1999.....	B-43
Figure B-6: Median Contract Rents in 2000	B-50
Figure B-7: Median Gross Rents in 2000	B-51
Figure B-8: Median Gross Rent as a Percentage of Income	B-52
Figure B-9: NYCHA Public Housing	B-54
Figure B-10: Section 202 Housing.....	B-56
Figure B-11: Mitchell-Lama Housing.....	B-58

Figure B-12: Recent Income Limited and Supportive Housing.....	B-59
Figure B-13: Phipps, MBD, HELP, and Unique People Services Housing.....	B-61
Figure B-14: Census Tracts where the Percentage of Unprotected Rental Units is Very Low	B-68
Figure B-15: Census Tracts where the Average Incomes of Renters in Small Buildings are Higher Than Those of Bronx Rental Households	B-71
Figure B-16: Census Tracts with At-Risk Population.....	B-74

2.C COMMUNITY FACILITIES AND SERVICES

Figure C-1: Libraries.....	C-9
Figure C-2: Existing Public Elementary and Intermediate Schools.....	C-12
Figure C-3 : Public High Schools	C-18
Figure C-4: Publicly Funded Child Care Program Locations.....	C-22
Figure C-5: Police, Fire, and Emergency Medical Services	C-24

2.D OPEN SPACE

Figure D-1: Open Space Study Areas	D-5
Figure D-2: Open Space Resources	D-14

2.E SHADOWS

Figure E-1: Preliminary Screening Analysis	E-27
Figure E-2: Shadow Study, March 21/September 21 (Spring/Fall Equinox) - 8:30 AM.....	E-28
Figure E-3: Shadow Study, March 21/September 21 (Spring/Fall Equinox) - 10:30 AM.....	E-28
Figure E-4: Shadow Study, March 21/September 21 (Spring/Fall Equinox) – 12 PM.....	E-29
Figure E-5: Shadow Study, March 21/September 21 (Spring/Fall Equinox) – 3:15 PM.....	E-29
Figure E-6: Shadow Study, March 21/September 21 (Spring/Fall Equinox) – 3:59 PM.....	E-30
Figure E-7: Shadow Study, March 21/September 21 (Spring/Fall Equinox) – 4:25 PM.....	E-30
Figure E-8: Shadow Study, March 21/September 21 (Spring/Fall Equinox) – 4:39 PM.....	E-31
Figure E-9: Shadow Study, March 21/September 21 (Spring/Fall Equinox) – 5:39 PM.....	E-31
Figure E-10: Shadow Study, May 6/August 6- 7:19 AM	E-32
Figure E-11: Shadow Study, May 6/August 6- 11:45 AM	E-32
Figure E-12: Shadow Study, May 6/August 6- 12:00 PM	E-33
Figure E-13: Shadow Study, May 6/August 6- 3:00 PM	E-33
Figure E-14: Shadow Study, May 6/August 6- 3:40 PM	E-34
Figure E-15: Shadow Study, May 6/August 6- 4:55 PM	E-34
Figure E-16: Shadow Study, May 6/August 6- 5:00 PM	E-35
Figure E-17: Shadow Study, May 6/August 6- 6:26 PM	E-35
Figure E-18: Shadow Study, June 21 (Summer Solstice)- 7:00 AM	E-36
Figure E-19: Shadow Study, June 21 (Summer Solstice)- 7:45 AM	E-36
Figure E-20: Shadow Study, June 21 (Summer Solstice)- 12:00 PM.....	E-37
Figure E-21: Shadow Study, June 21 (Summer Solstice)- 12:45 PM	E-37
Figure E-22: Shadow Study, June 21 (Summer Solstice)- 3:00 PM	E-38
Figure E-23: Shadow Study, June 21 (Summer Solstice)- 3:45 PM	E-38
Figure E-24: Shadow Study, June 21 (Summer Solstice)- 5:15 PM	E-39
Figure E-25: Shadow Study, June 21 (Summer Solstice)- 5:30 PM	E-39
Figure E-26: Shadow Study, June 21 (Summer Solstice)- 7:00 PM	E-40
Figure E-27: Shadow Study, December 21 (Winter Solstice)- 8:45 AM.....	E-41
Figure E-28: Shadow Study, December 21 (Winter Solstice)- 9:30 AM.....	E-41
Figure E-29: Shadow Study, December 21 (Winter Solstice)- 12:00 PM	E-42
Figure E-30: Shadow Study, December 21 (Winter Solstice)- 2:10 PM	E-42
Figure E-31: Shadow Study, December 21 (Winter Solstice)- 3:00 PM	E-43

Figure E-32: Shadow Study, March 21/September 21 (Spring/Fall Equinox)- 5:35 PM	E-44
Figure E-33: Shadow Study, March 21/September 21 (Spring/Fall Equinox)- 5:39 PM	E-44
Figure E-34: Shadow Study, June 21 (Summer Solstice)- 6:55 PM.....	E-45
Figure E-35: Shadow Study, June 21 (Summer Solstice)- 7:00 PM.....	E-45
Figure E-36: Shadow Study for Existing NYCHA Buildings east Bronx River - March 21/September 21 - 8:30 AM.....	E-46
Figure E-37: Shadow Study for Existing NYCHA Buildings east Bronx River - May 6/August 6 – 7:19 AM	E-47
Figure E-38: Shadow Study for Existing NYCHA Buildings east Bronx River – June 21 – 7:00 AM. E-48	
Figure E-39: Shadow Study for Existing NYCHA Buildings east Bronx River – December 21 – 8:45 AM	E-49
Figure E-40: Shadow Study for Existing NYCHA Buildings east Bronx River – December 21 – 10:15 AM	E-50

2.F HISTORIC AND CULTURAL RESOURCES

Figure F-1: 400 Foot Study Area	F-3
Figure F-2: Approximate Locations of Potential Archaeological Sensitivity	F-10

2.G URBAN DESIGN AND VISUAL RESOURCES

Figure G-1: Aerial Photograph of Proposed Rezoning & Study Area.....	G-3
Figure G-2: Existing and Proposed Zoning	G-32
Figure G-3: Illustrative Bulk Diagrams	G-33
Figure G-4: Proposed and Projected Development Sites.....	G-44
Figure G-5: Massing Diagram for Southern Applicant Development Sites (GLSD)	G-45
Figure G-6: Southern Applicant Development Sites (LSGD) Elevations and Perspectives.....	G-48
Figure G-7: LSGD Site Plan - Jennings St. to East 173rd St.....	G-52
Figure G-8: Massing Diagrams for Northern Development Sites	G-55
Figure G-9: Elevation for Northern Applicant Sites	G-57
Figure G-10: Site Plan - North of Cross Bronx Expressway	G-60
Figure G-11: Streetscape Representations	G-61

2.H NATURAL RESOURCES

Figure H-1: Natural Resource Study Area	H-3
---	-----

2.I HAZARDOUS MATERIALS

Figure I-1: Block and Lot Numbers	I-5
---	-----

2.J WATER AND SEWER INFRASTRUCTURE

Figure J-1: Subcatchment Areas	J-5
--------------------------------------	-----

2.M TRANSPORTATION

Figure M-1: Crotona Park Traffic Study Area and Study Intersections	M-8
Figure M-2: Existing AM Traffic Volume Network.....	M-18
Figure M-3: Existing Midday Traffic Volume Network.....	M-22
Figure M-4: Existing PM Traffic Volume Networks.....	M-24
Figure M-5: Pedestrian Element Analysis Locations.....	M-33
Figure M-6: Existing Parking Regulation Map.....	M-39
Figure M-7: Projects to be Completed by 2022	M-45
Figure M-8: No Action AM Traffic Volume Network	M-54
Figure M-9: No Action MD Traffic Volume Network	M-57

Figure M-10: No Action PM Traffic Volume Network.....	M-59
Figure M-11: AM Project Generated	M-78
Figure M-12: Midday Project Generated Vehicle Trips	M-82
Figure M-13: PM Project Generated Vehicle Trips.....	M-86
Figure M-14: Proposed Action AM Traffic Network	M-90
Figure M-15: Proposed Action Midday Traffic Volume Network	M-94
Figure M-16: Proposed Action PM Traffic Volume Network.....	M-98

2.N AIR QUALITY

Figure N-1: Intersections Modeled for CO	N-9
Figure N-2: Delineation of Projected and Potential Development Sites.....	N-20
Figure N-3: Parking Facility Layout, Building 1	N-25
Figure N-4: 400- and 1,000- foot Radii from Rezoning Boundaries	N-27
Figure N-5: Locations of Boiler Permits with \geq 20 million BTU	N-28
Figure N-6: Blocks 3013, 3014, & 3009.....	N-30
Figure N-7: Blocks 3013, 3014, & 3009.....	N-31
Figure N-8: Blocks 3015, 3010 & 2998.....	N-32
Figure N-9: Blocks 3015, 3010 & 2998.....	N-33
Figure N-10: Block 3016	N-34
Figure N-11: Block 3016	N-35
Figure N-12: Sites with Operating Permits for Processes.....	N-48

2.P NOISE

Figure P-1: Traffic Noise Monitoring Locations	P-10
Figure P-2: Rail and Elevated Highway Noise Monitoring Locations (Northern End of the Proposed Rezoning Area)	P-12
Figure P-3: Rail Noise Monitoring Locations (Southern End of Rezoning Area).....	P-13
Figure P-4: Elevated Rail Noise at West Farms Sq. and E. Tremont Ave. subway platform.....	P-13
Figure P-5: Playground Location at Parcel 2 South.....	P-20
Figure P-6: Blocks 3013, 3014, & 3009	P-29
Figure P-7: Blocks 3013, 3014, & 3009	P-30
Figure P-8: Blocks 3015, 3010 & 2998	P-31
Figure P-9: Blocks 3015, 3010 & 2998	P-32
Figure P-10: Block 3016.....	P-33
Figure P-11: Block 3016.....	P-34

2.R NEIGHBORHOOD CHARACTER

Figure R-1: Neighborhood Character Study Area	R-3
---	-----

2.S CONSTRUCTION IMPACTS

Figure S-1: Projected Development by Building Type.....	S-8
---	-----

3. MITIGATION OF PROJECT IMPACTS

Figure 3-1: New School Location	3-3
Figure 3-4: AM Project with School Mitigation Generated Vehicle Trips	3-26
Figure 3-5: Midday Project with School Mitigation Generated Vehicle Trips.....	3-30
Figure 3-6: PM Project with School Mitigation Generated Vehicle Trips	3-34
Figure 3-7: Proposed Action with School Mitigation AM Traffic Volume Network.....	3-38
Figure 3-8: Proposed Action with School Mitigation Midday Traffic Volume Network.....	3-42
Figure 3-9: Proposed Action with School Mitigation PM Traffic Volume Network	3-46

Figure 3-10: Buildings 3A, 3B and 3C with and without the School3-73

5. ALTERNATIVES TO THE PROPOSED ACTION

Figure 5-1: Proposed Action and Lower Density Alternative Zoning5-28

Figure 5-2: Massing of the Lesser Density Alternative Applicant Properties5-33

Figure 5-3: Massing of the Lesser Density Alternative North of the Cross Bronx Expressway5-36