

New Stapleton Waterfront Development Plan



Draft Environmental Impact Statement
CEQR #: 06DME001R

May 2006

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT
MAY 2006

CEQR No.: 06DME001R

ULURP Nos.: 060293 MMR
N060468 ZRR
060469 PPR
060470 PPR
060471 ZMR

Project Location: Staten Island, New York
The area generally bounded by Hannah Street to the north, the Staten Island Railway (SIR) tracks and Bay Street to the west, the U.S. Pierhead line to the east and the Front/Bay/Edgewater Street intersection to the south.

Lead Agency: Office of the Deputy Mayor for Economic Development and Rebuilding

Lead Agency Contact: Robert R. Kulikowski, Ph.D.
Assistant to the Mayor
100 Gold Street, 2nd Floor
New York, New York 10038
Phone (212) 788-2837

Prepared by: The Louis Berger Group, Inc.
Eng-Wong Taub & Associates

Table of Contents

Executive Summary	ES-1
Chapter 1: Project Description	1-1
1.1 Introduction.....	1-1
1.1.1 Project Overview	1-1
1.1.2 Purpose and Need	1-5
1.2 Description of the Proposed Action.....	1-7
1.2.1 Rezoning and Establishing the Special Stapleton Waterfront District.....	1-7
1.2.2 City Map Amendments.....	1-12
1.2.3 Disposition of Property	1-14
1.2.4 Related Actions.....	1-15
1.2.5 Homeport Site Development.....	1-15
1.2.6 Public Improvements	1-16
1.3 Development Framework.....	1-23
1.3.1 Reasonable Worst-Case Development Scenario.....	1-23
Chapter 2: Analytical Framework.....	2-1
2.1 Introduction.....	2-1
2.2 Environmental Review Process	2-1
2.2.1 Legislative Applicability.....	2-1
2.2.2 Environmental Impact Statement.....	2-2
2.2.3 Process Overview.....	2-2
2.2.4 Coordination with Other Review Processes	2-5
2.2.5 Uniform Land Use Review Procedure.....	2-5
2.3 Framework for Environmental Analysis.....	2-6
2.3.1 Scope of Environmental Analysis.....	2-6
2.3.2 Analysis Year.....	2-7
2.3.3 Study Areas.....	2-7
2.3.4 Baseline Conditions	2-7
2.3.5 Build Condition.....	2-8
2.3.6 Coordination with Environmental and Regulatory Agencies	2-28
2.3.7 Summary of Significant Adverse Impacts and Mitigation Measures	2-28
Chapter 3: Land Use, Zoning and Public Policy	3-1
3.1 Overview.....	3-1
3.2 Methodology	3-1
3.2.1 Development History	3-2
3.3 Existing Conditions.....	3-3
3.3.1 Land Use	3-3
3.3.2 Zoning.....	3-14
3.3.3 Public Policy	3-18
3.4 No Build Condition.....	3-20

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

3.4.1	Land Use	3-20
3.4.2	Zoning and Public Policy	3-23
3.5	Build Condition	3-23
3.5.1	Land Use	3-23
3.5.2	Zoning	3-25
3.5.3	Public Policy	3-29
3.6	Conclusion	3-29
3.6.1	Land Use	3-29
3.6.2	Zoning	3-30
3.6.3	Public Policy	3-30
Chapter 4:	Socioeconomic Conditions.....	4-1
4.1	Overview	4-1
4.2	Methodology	4-1
4.3	Preliminary Analyses	4-3
4.3.1	Direct Residential Displacement	4-3
4.3.2	Indirect Residential Displacement	4-3
4.3.3	Direct Business Displacement	4-3
4.3.4	Indirect Business Displacement	4-4
4.4	Existing Conditions	4-5
4.4.1	Population and Demographics	4-5
4.4.2	Housing Characteristics	4-6
4.4.3	Income and Education	4-8
4.4.4	Economic Activities	4-8
4.4.5	Population Trends	4-9
4.5	No Build Condition	4-9
4.5.1	No Build Population	4-9
4.5.2	No Build Employment Population	4-12
4.6	Build Condition	4-13
4.6.1	Direct Residential Impact	4-13
4.6.2	Indirect Residential Impact	4-13
4.6.3	Direct Business Displacement	4-17
4.6.4	Indirect Business Displacement	4-20
4.6.5	Adverse Effects on Specific Industries	4-25
4.7	Conclusion	4-25
Chapter 5:	Community Facilities and Services	5-1
5.1	Overview	5-1
5.2	Methodology	5-1
5.3	Existing Conditions	5-2
5.3.1	Public Schools	5-4
5.4	No Build Condition	5-5
5.4.1	Public Schools	5-5
5.5	Build Condition	5-7
5.5.1	Public Schools	5-7
5.6	Conclusion	5-9

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

5.6.1	Public Schools.....	5-9
Chapter 6:	Open Space	6-1
6.1	Overview.....	6-1
6.2	Methodology	6-1
6.3	Existing Conditions.....	6-2
6.3.1	Residential Study Area	6-2
6.3.2	Commercial Study Area.....	6-9
6.4	No Build Condition.....	6-10
6.5	Build Condition.....	6-10
6.5.1	Residential Study Area	6-11
6.5.2	Commercial Study Area.....	6-11
6.6	Conclusion	6-11
Chapter 7:	Shadows	7-1
7.1	Overview.....	7-1
7.2	Methodology	7-1
7.2.1	Preliminary Shadow Screening Analysis.....	7-1
7.3	Build Condition.....	7-3
7.4	Conclusion	7-4
Chapter 8:	Neighborhood Character.....	8-1
8.1	Overview.....	8-1
8.2	Methodology	8-2
8.3	Existing Conditions.....	8-3
8.3.1	Land Use	8-3
8.3.2	Urban Design and Visual Resources.....	8-15
8.3.3	Historic Resources	8-23
8.3.4	Socioeconomic Conditions	8-27
8.3.5	Traffic	8-27
8.3.6	Noise	8-28
8.4	No Build Condition.....	8-29
8.4.1	Land Use	8-29
8.4.2	Urban Design and Visual Resources.....	8-30
8.4.3	Historic Resources	8-30
8.4.4	Socioeconomic Conditions	8-30
8.4.5	Traffic	8-30
8.4.6	Noise	8-30
8.5	Build Condition.....	8-30
8.5.1	Land Use	8-31
8.5.2	Urban Design and Visual Resources.....	8-32
8.5.3	Historic Resources	8-32
8.5.4	Socioeconomic Conditions	8-33
8.5.5	Traffic	8-34
8.5.6	Noise	8-34
8.6	Conclusion	8-35

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Chapter 9:	Urban Design and Visual Resources	9-1
9.1	Overview.....	9-1
9.2	Methodology	9-1
9.3	Existing Conditions.....	9-1
9.3.1	Project Area	9-1
9.3.2	Northern and Southern Boundaries of Study Area	9-4
9.3.3	Bay Street Corridor	9-6
9.3.4	Tappen Park Area	9-7
9.4	No Build Condition.....	9-7
9.4.1	Project Area	9-8
9.4.2	Northern and Southern Boundaries of Study Area	9-8
9.4.3	Bay Street Corridor	9-9
9.4.4	Tappen Park Area	9-9
9.5	Build Condition.....	9-9
9.5.1	Project Area	9-10
9.5.2	Northern and Southern Boundaries of Study Area	9-11
9.5.3	Bay Street Corridor	9-12
9.5.4	Tappen Park Area	9-12
9.6	Conclusion	9-13
Chapter 10:	Historic Resources	10-1
10.1	Overview.....	10-1
10.2	Methodology	10-1
10.3	Existing Conditions.....	10-5
10.3.1	Background History	10-5
10.3.2	Potential for Archaeological Resources in Study Area.....	10-7
10.3.3	Potential for Historic Architectural Resources in Study Area	10-11
10.4	No Build Condition.....	10-20
10.4.1	Archaeological Resources.....	10-20
10.4.2	Historic Architectural Resources	10-20
10.5	Build Condition.....	10-20
10.5.1	Archaeological Resources.....	10-20
10.5.2	Historic Architectural Resources	10-21
10.6	Conclusion	10-21
Chapter 11:	Natural Resources	11-1
11.1	Overview.....	11-1
11.2	Methodology	11-1
11.3	Existing Conditions.....	11-3
11.3.1	Tidal and Freshwater Wetlands	11-3
11.3.2	Floodplains.....	11-3
11.3.3	Threatened, Endangered and Rare Species.....	11-6
11.3.4	Coastal Resources	11-8
11.3.5	Geology	11-10
11.3.6	Groundwater	11-10
11.4	No Build Condition.....	11-11

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

11.5	Build Condition.....	11-11
11.5.1	Freshwater and Tidal Wetlands	11-13
11.5.2	Floodplains.....	11-13
11.5.3	Threatened, Endangered and Rare Species	11-13
11.5.4	Coastal Resources	11-13
11.5.5	Geology.....	11-14
11.5.6	Groundwater	11-15
11.6	Regulatory Actions	11-15
11.6.1	Federal.....	11-15
11.6.2	State.....	11-16
11.7	Conclusion	11-16
Chapter 12:	Hazardous Materials	12-1
12.1	Overview.....	12-1
12.2	Methodology	12-1
12.2.1	Assessment Methods.....	12-1
12.2.2	Regulations and Guidance Values	12-4
12.3	Existing Conditions.....	12-7
12.3.1	General Site History.....	12-7
12.3.2	Homeport Site	12-7
12.3.3	West of Front Street (Current and Historic Conditions).....	12-10
12.3.4	Potential Contaminants of Concern	12-15
12.3.5	Location of Potential Sources of Contaminants in Study Area	12-17
12.3.6	Additional Investigations	12-19
12.4	No Build Condition.....	12-20
12.5	Build Condition.....	12-20
12.6	Management Measures	12-21
12.6.1	Health and Safety Plan.....	12-21
12.6.2	Soil Management Plan	12-22
12.6.3	Soil Gas Management Plan.....	12-26
12.6.4	Groundwater Management Plan	12-27
12.6.5	Petroleum Storage Tank Management Plan.....	12-28
12.6.6	Asbestos-Containing Building Materials Management Plan...	12-28
12.6.7	Lead-Base Paint Management Plan	12-28
12.6.8	PCB-Containing Equipment Management Plan	12-28
12.7	Conclusion	12-28
Chapter 13:	Waterfront Revitalization Program	13-1
13.1	Overview.....	13-1
13.2	Methodology	13-2
13.3	New York City's Coastal Policies	13-2
13.4	Conclusion	13-6
Chapter 14:	Infrastructure.....	14-1
14.1	Overview.....	14-1
14.2	Methodology	14-1

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

14.3	Existing Conditions.....	14-2
14.3.1	Water Supply	14-2
14.3.2	Sanitary Sewer System	14-2
14.3.3	Stormwater.....	14-3
14.4	No Build Condition.....	14-4
14.4.1	Water Supply	14-4
14.4.2	Sanitary Sewer System	14-5
14.4.3	Stormwater.....	14-5
14.5	Build Condition.....	14-5
14.5.1	Water Supply	14-5
14.5.2	Sanitary Sewer System	14-6
14.5.3	Stormwater.....	14-6
14.6	Conclusion	14-8
Chapter 15:	Solid Waste and Sanitation Services	15-1
15.1	Overview.....	15-1
15.2	Methodology	15-3
15.3	Existing Conditions.....	15-3
15.4	No Build Condition.....	15-4
15.5	Build Condition.....	15-4
15.6	Conclusion	15-5
Chapter 16:	Energy	16-1
16.1	Overview.....	16-1
16.2	Methodology	16-1
16.3	Existing Conditions.....	16-1
16.4	No Build Condition.....	16-2
16.5	Build Condition.....	16-2
16.6	Conclusion	16-3
Chapter 17:	Traffic and Parking	17-1
17.1	Overview.....	17-1
17.2	Existing Conditions.....	17-2
17.2.1	Roadway Network and Traffic Study Area	17-2
17.2.2	Existing Traffic Volumes.....	17-4
17.2.3	Existing Traffic Levels of Service	17-5
17.2.4	Parking.....	17-12
17.3	No Build Condition.....	17-14
17.3.1	Background Traffic Generation and Assignments.....	17-14
17.3.2	Levels of Service.....	17-28
17.3.3	Parking.....	17-34
17.4	Build Condition.....	17-36
17.4.1	Trip Generation and Traffic Assignments	17-36
17.4.2	Design Improvements	17-47
17.4.3	Levels of Service.....	17-52
17.4.3	Parking.....	17-60

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

17.5	Traffic Mitigation.....	17-61
17.5.1	Traffic Capacity and Operational Improvements	17-61
17.5.2	Parking Prohibitions.....	17-63
17.6	Conclusion	17-64
Chapter 18:	Transit and Pedestrians.....	18-1
18.1	Overview.....	18-1
18.2	Methodology	18-1
18.2.1	Transit Analysis Methodology.....	18-1
18.2.2	Pedestrian Analysis Methodology	18-2
18.3	Existing Conditions.....	18-4
18.3.1	Transit	18-4
18.3.2	Pedestrians	18-9
18.4	No Build Condition.....	18-14
18.4.1	No Build Transit and Pedestrian Volume Development.....	18-14
18.4.2	Transit	18-20
18.4.3	Pedestrian Analysis.....	18-24
18.5	Build Condition.....	18-26
18.5.1	Trip Generation.....	18-26
18.5.2	Transit	18-26
18.5.3	Pedestrians	18-34
18.6	Mitigation Measures	18-38
18.6.1	Transit	18-38
18.6.2	Pedestrians	18-38
18.7	Conclusion	18-42
Chapter 19:	Air Quality	19-1
19.1	Overview.....	19-1
19.1.1	National Ambient Air Quality Standards.....	19-1
19.1.2	Compliance Status	19-2
19.1.3	New York State Implementation Plan	19-3
19.1.4	Significant Adverse Impact Criteria	19-3
19.1.5	Conformity Rules.....	19-3
19.1.6	Project Relevant Criteria Pollutants.....	19-4
19.2	Methodology	19-4
19.2.1	Stationary Sources Analysis	19-5
19.2.2	Mobile Sources Carbon Monoxide Analysis	19-6
19.2.3	Mobile Sources Particulate Matter Analysis.....	19-7
19.2.4	Parking Facility Analysis.....	19-8
19.3	Existing Conditions.....	19-10
19.3.1	Stationary Sources Screening Analysis	19-10
19.3.2	Mobile Sources Screening Analysis	19-11
19.3.3	Mobile Sources	19-11
19.4	No Build Condition.....	19-12
19.4.1	Stationary Sources	19-12
19.4.2	Mobile Sources	19-13

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

19.5	Build Condition.....	19-14
19.5.1	Stationary Sources	10-14
19.5.2	Mobile Sources	19-15
19.6	Conclusion	19-22
Chapter 20:	Noise	20-1
20.1	Overview.....	20-1
20.2	Methodology	20-4
20.2.1	Mobile Sources	20-5
20.2.2	Stationary Sources	20-5
20.2.3	Train Noise Sources.....	20-5
20.3	Existing Conditions.....	20-6
20.3.1	Monitoring Sites.....	20-8
20.4	No Build Condition.....	20-10
20.5	Build Condition.....	20-12
20.5.1	Mobile Sources	20-12
20.5.2	Stationary Sources	20-13
20.5.3	Noise Attenuation within the Project Area	20-13
20.5.4	(E) Designation	20-14
20.6	Conclusion	20-15
Chapter 21	Construction Impacts	21-1
21.1	Overview.....	21-1
21.2	Methodology	21-1
21.3	Construction Scenario.....	21-1
21.4	Schedule and Sequencing	21-2
21.5	Key Resource Areas.....	21-3
21.5.1	Air Quality	21-3
21.5.2	Noise	21-4
21.5.3	Wetlands	21-6
21.5.4	Floodplains.....	21-6
21.5.5	Threatened, Endangered and Rare Species.....	21-7
21.5.6	Coastal Resources	21-7
21.5.7	Geology.....	21-7
21.5.8	Groundwater	21-7
21.5.9	Area Land Uses.....	21-8
21.5.10	Hazardous Materials	21-8
21.6	Potential Construction Impacts	21-8
21.6.1	Infrastructure, Open Space and Parking	21-8
21.6.2	Homeport Site	21-9
21.6.3	West of Front Street	21-10
21.7	Conclusion	21-11
Chapter 22:	Public Health.....	22-1
22.1	Overview.....	22-1
22.2	Methodology	22-1

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

22.3	Analysis.....	22-1
22.4	Conclusion	22-4
Chapter 23:	Alternatives	23-1
23.1	Overview.....	23-1
23.2	Alternatives Evaluation Process	23-1
23.3	No Action Alternative.....	23-2
23.3.1	Land Use, Zoning and Public Policy	23-2
23.3.2	Socioeconomic Conditions	23-3
23.3.3	Community Facilities.....	23-3
23.3.4	Open Space and Recreation	23-3
23.3.5	Shadows	23-3
23.3.6	Neighborhood Character	23-3
23.3.7	Urban Design and Visual Resources.....	23-3
23.3.8	Historic Resources	23-4
23.3.9	Natural Resources	23-4
23.3.10	Hazardous Materials	23-4
23.3.11	Coastal Zone/Waterfront Revitalization Program	23-4
23.3.12	Infrastructure.....	23-4
23.3.13	Solid Waste and Sanitation	23-5
23.3.14	Energy	23-5
23.3.15	Traffic and Parking	23-5
23.3.16	Transit and Pedestrians	23-5
23.3.17	Air Quality	23-5
23.3.18	Noise	23-5
23.3.19	Construction Impacts	23-6
23.3.20	Public Health.....	23-6
23.4	Studio Use Alternative.....	23-6
23.4.1	Land Use, Zoning and Public Policy	23-6
23.4.2	Socioeconomic Conditions	23-7
23.4.3	Community Facilities.....	23-7
23.4.4	Open Space and Recreation	23-7
23.4.5	Shadows	23-8
23.4.6	Neighborhood Character	23-8
23.4.7	Urban Design and Visual Resources.....	23-9
23.4.8	Historic Resources	23-9
23.4.9	Natural Resources	23-9
23.4.10	Hazardous Materials	23-9
23.4.11	Coastal Zone/Waterfront Revitalization Program	23-10
23.4.12	Infrastructure.....	23-10
23.4.13	Solid Waste and Sanitation	23-10
23.4.14	Energy	23-11
23.4.15	Traffic and Parking	23-11
23.4.16	Transit and Pedestrians	23-11
23.4.17	Air Quality	23-12
23.4.18	Noise	23-12

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

23.4.19 Construction Impacts	23-12
23.4.20 Public Health.....	23-13
Chapter 24: Mitigation	24-1
24.1 Overview	24-1
24.2 Measures Used to Avoid Significant Impacts.....	24-1
24.2.1 Hazardous Materials	24-1
24.2.2 Traffic and Parking	24-2
24.2.3 Transit and Pedestrians	24-4
24.2.4 Noise	24-5
24.3 Conclusion	24-6
Chapter 25: Unavoidable Significant Adverse Impacts.....	25-1
25.1 Overview	25-1
25.2 Unavoidable Significant Adverse Impact	25-1
Chapter 26: Growth-Inducing Aspects of the Proposed Action	26-1
Chapter 27: Irreversible and Irretrievable Commitments of Resources	27-1
Chapter 28 References.....	28-1

APPENDICES

Appendix contained within Draft Environmental Impact Statement

Appendix A – Correspondence

Technical Appendices Volume 1

Appendix B – Waterfront Revitalization Program Form

Appendix C – Traffic and Parking Technical Back-up

Appendix D – Transit and Pedestrians Technical Back-up

Technical Appendices Volume 2

Appendix E – Air Quality Technical Back-up

Appendix F – Noise Technical Back-up

LIST OF TABLES

Table 1-1	Proposed Rezoning Area and Special District – Block and Lot List.....	1-7
Table 1-2	Project Area – Block and Lot List	1-23
Table 1-3	Reasonable Worst-Case Development Scenario.....	1-25
Table 2-1	Projects Expected to be Complete by 2015 in the Primary and Secondary Study Areas	2-9
Table 2-2	Projected and Potential Development Sites	2-12

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Table 3-1	Zoning Designations in the Primary Study Area	3-16
Table 3-2	Zoning Designations in the Secondary Study Area	3-17
Table 4-1	Demographics in the Study Area	4-5
Table 4-2	Age Distribution of the Study Area, 2000	4-6
Table 4-3	Housing Unit Structure	4-6
Table 4-4	Year Structure Built	4-7
Table 4-5	Housing Characteristics by Block Group in Study Area, 2000	4-8
Table 4-6	Study Area Population change, 1990-2000	4-9
Table 4-7	Average Household Size in Buildings with 50 or More Units on Staten Island.....	4-10
Table 4-8	Projected Population of Projects in the Study Area, No Build Condition.....	4-11
Table 4-9	Projected Population for Study Area, No Build Condition.....	4-12
Table 4-10	Number of Employees from New Commercial Developments in Study Area, No Build Condition.....	4-13
Table 4-11	Number of Employees in Study Area in No Build Condition	4-13
Table 4-12	Number of Bedrooms in Housing Units	4-14
Table 4-13	Total Population for Reasonable Worst-Case Development Scenario ..	4-15
Table 4-14	Businesses Directly Impacted by the Proposed Action	4-19
Table 4-15	Vacant and Improved Manufacturing Space on Staten Island.....	4-20
Table 4-16	Number of Employees under the Proposed Action.....	4-20
Table 4-17	Retail Ratio Under No Build and Build Condition.....	4-24
Table 5-1	Public School Enrollment, Capacity and Utilization, 2004-2005.....	5-4
Table 5-2	Projected New Housing Unites and Estimated Number of Students Generated by New Housing Units (No Build Condition).....	5-6
Table 5-3	Estimated Public Elementary and Intermediate School Enrollment, Capacity and Utilization (No Build Condition).....	5-7
Table 5-4	Estimated Public Elementary and Intermediate School Enrollment, Capacity and Utilization (Build Condition).....	5-8
Table 5-5	Planned New School Seats for CSD 31	5-9
Table 6-1	Open Space Resources within the Residential Open Space Study Area .	6-5
Table 6-2	Residential and Commercial Open Space Ratios.....	6-10
Table 7-1	Building Heights and Setbacks	7-2
Table 7-2	Shadows on December 21.....	7-3
Table 7-3	Shadows on March 21.....	7-3
Table 7-4	Shadows on May 6.....	7-4
Table 7-5	Shadows on June 21.....	7-4
Table 10-1	Known Archaeological Sites within One Mile of Project Area.....	10-9
Table 10-2	Previously Recorded Historic Architectural Resources Adjacent to the Architectural APE	10-12
Table 10-3	Historic Architectural Resources Surveyed Within the Study Area	10-14

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Table 11-1	Vegetation Observed within the Project Area	11-4
Table 11-2	CSO Outfall Locations within Project Area	11-10
Table 12-1	RCRA Regulatory Limits	12-5
Table 12-2	Petroleum Storage at the Homeport Site.....	12-9
Table 12-3	Project and Potential Development Sites.....	12-11
Table 12-4	Summary of Potential Sources of Contaminants within Study Area...	12-18
Table 12-5	Sites to Receive (E) Designations.....	12-23
Table 14-1	Estimated Sewage Generation and Water Usage for Project Area, Existing Condition	14-4
Table 14-2	Estimated Sewage Generation and Water Usage for Project Area, Build Condition.....	14-8
Table 15-1	Project Area Solid Waste Generation, Existing Conditions	15-4
Table 15-2	Project Area Solid Waste Generation, Build Condition	15-5
Table 16-1	Estimated Annual Operational Energy Consumption for Project Area (Existing Conditions).....	16-2
Table 16-2	Estimated Annual Operational Energy Consumption for Project Area (Build Condition).....	16-3
Table 17-1	Intersection Levels of Service Summary 2005 Existing Condition.....	17-7
Table 17-2	Parking Utilization for Public Parking Lots 2005 Existing Condition	17-12
Table 17-3	Summary of On-Street Parking Inventory 2005 Existing Condition...	17-14
Table 17-4	Approved Developments 2015 No Build Condition.....	17-15
Table 17-5	Weekday Travel Demand Characteristics: No Build Condition.....	17-18
Table 17-6	Saturday Travel Demand Characteristics: No Build Condition.....	17-20
Table 17-7	Vehicular Trip Generation: Weekday AM Peak Hour No Build Condition.....	17-25
Table 17-8	Vehicular Trip Generation: Weekday Midday Peak Hour No Build Condition.....	17-26
Table 17-9	Vehicular Trip Generation: Weekday PM Peak Hour No Build Condition.....	17-26
Table 17-10	Vehicular Trip Generation: Saturday Midday Peak Hour No Build Condition.....	17-27
Table 17-11	Traffic Levels of Service Summary 2005 Existing vs. 2015 No Build	17-33
Table 17-12	Projected Weekday Parking Occupancies for Public Parking Lots No Build Condition.....	17-35
Table 17-13	Projected On-Street Parking Summary No Build Condition	17-35
Table 17-14	Weekday Travel Demand Characteristics Build Condition.....	17-37
Table 17-15	Saturday Travel Demand Characteristics Build Condition.....	17-38
Table 17-16	Vehicle Trips Generated by the Proposed Action: Weekday AM Peak Hour Build Condition	17-45
Table 17-17	Vehicle Trips Generated by the Proposed Action: Weekday Midday Peak Hour Build Condition	17-46

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Table 17-18	Vehicle Trips Generated by the Proposed Action: Weekday PM Peak Hour Build Condition.....	17-46
Table 17-19	Vehicle Trips Generated by the Proposed Action: Saturday Midday Peak Hour Build Condition	17-46
Table 17-20	Traffic Level of Service Summary No Build vs. Build Condition	17-58
Table 17-21	Development Program Weekday Parking Accumulation Summary Build Condition.....	17-60
Table 17-22	Levels of Service.....	17-65
Table 18-1	LOS Criteria for Stairways, Corridors, and Ramps	18-2
Table 18-2	LOS Criteria for Crosswalks at Signalized Intersections	18-3
Table 18-3	LOS Criteria for Crosswalks at Unsignalized Intersections	18-4
Table 18-4	2004 Existing Condition SIR Line Haul Capacity Analysis.....	18-6
Table 18-5	Level of Service for Stairways 2005 Existing Condition	18-7
Table 18-6A	AM Peak Hour Bus Capacity Analysis 2005 Existing Condition	18-10
Table 18-6B	Midday Peak Hour Bus Capacity Analysis 2005 Existing Condition .	18-10
Table 18-6C	PM Peak Hour Bus Capacity Analysis 2005 Existing Condition	18-11
Table 18-6D	Saturday Midday Peak Hour Bus Capacity Analysis 2005 Existing Condition	18-11
Table 18-7	Pedestrian Crosswalk Analysis Intersections.....	18-13
Table 18-8	Level of Service for Crosswalks at Signalized Intersection 2005 Existing Condition	18-14
Table 18-9	2005 Existing Conditions Level of Service for Crosswalks at Unsignalized Intersections	18-15
Table 18-10A	Person Trip Generation by Mode Weekday AM Peak Hour No Build Condition.....	18-16
Table 18-10B	Person Trip Generation by Mode Weekday Midday Peak Hour No Build Condition.....	18-17
Table 18-10C	Person Trip Generation by Mode Weekday PM Peak Hour No Build Condition.....	18-18
Table 18-10D	Person Trip Generation by Mode Saturday Midday Peak Hour No Build Condition.....	18-19
Table 18-11	SIR Line Haul Capacity Analysis No Build Condition	18-20
Table 18-12	Level of Service for Stairways No Build Condition	18-21
Table 18-13A	AM Peak Hour Bus Capacity No Build Condition.....	18-22
Table 18-13B	Midday Peak Hour Bus Capacity No Build Condition.....	18-22
Table 18-13C	PM Peak Hour Bus Capacity No Build Condition.....	18-23
Table 18-13D	Saturday Midday Peak Hour Bus Capacity No Build Condition.....	18-23
Table 18-14	Level of Service for Crosswalks at Signalized Intersection No Build Condition.....	18-24
Table 18-15	Level of Service for Crosswalks at Unsignalized Intersections No Build Condition.....	18-25
Table 18-16A	Person Trip Generation by Mode Weekday AM Peak Hour Build Condition.....	18-27
Table 18-16B	Person Trip Generation by Mode Weekday Midday Peak Hour Build Condition.....	18-27

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Table 18-16C	Person Trip Generation by Mode Weekday PM Peak Hour Build Condition.....	18-28
Table 18-16D	Person Trip Generation by Mode Saturday Midday Peak Hour Build Condition.....	18-28
Table 18-17	SIR Line Haul Capacity Analysis Build Condition	18-29
Table 18-18	Level of Service for Stairways Build Condition.....	18-30
Table 18-19A	AM Peak Hour Bus Capacity Build Condition.....	18-32
Table 18-19B	Midday Peak Hour Bus Capacity Build Condition.....	18-32
Table 18-19C	PM Peak Hour Bus Capacity Build Condition	18-33
Table 18-19D	Saturday Midday Peak Hour Bus Capacity Build Condition.....	18-33
Table 18-20	Level of Service for Crosswalks at Signalized Intersection Build Condition.....	18-36
Table 18-21	Level of Service for Crosswalks at Unsignalized Intersections Build Condition.....	18-37
Table 18-22A	Level of Service for Crosswalks AM Peak 15-Minute Period 2015 Future Conditions.....	18-39
Table 18-22B	Level of Service for Crosswalks Midday Peak 15-Minute Period 2015 Future Conditions.....	18-40
Table 18-22C	Level of Service for Crosswalks PM Peak 15-Minute Period 2015 Future Conditions.....	18-41
Table 18-22D	Level of Service for Crosswalks Saturday Midday Peak 15-Minute Period 2015 Future Conditions	18-42
Table 19-1	National and New York State Ambient Air Quality Standards	19-2
Table 19-2	Representative Monitored Ambient Air Quality Data (2005)	19-10
Table 19-3	Predicted Existing Ambient CO Concentrations	19-12
Table 19-4	Predicted Existing Ambient PM ₁₀ Concentrations	19-12
Table 19-5	Predicted No Build Ambient CO Concentrations	19-13
Table 19-6	Predicted No Build Ambient PM ₁₀ Concentrations	19-14
Table 19-7	Stationary Sources Screening	19-15
Table 19-8	Predicted Build Ambient CO Concentrations.....	19-16
Table 19-9	Predicted Build Ambient PM ₁₀ Concentrations	19-17
Table 19-10	Predicted Project-Induced Impact PM ₁₀ Concentrations (Build/No-Build Comparison)	19-18
Table 19-11	Predicted Project-Induced Impact PM _{2.5} Concentrations (Build/No-Build Comparison)	19-18
Table 19-12	Predicted Ambient CO Concentrations 1-hour	19-20
Table 19-13	Predicted Ambient CO Concentrations 8-hour	19-20
Table 19-14	Predicted Ambient PM ₁₀ Concentrations 24-hour	19-21
Table 19-15	Predicted Ambient PM ₁₀ Concentrations Annual Average	19-21
Table 19-16	Predicted Parking-Related Impact PM ₁₀ Concentrations (Build/No-Build Comparison)	19-22
Table 19-17	Predicted Parking-Related Impact PM _{2.5} Concentrations (Build/No-Build Comparison)	19-22

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Table 20-1	A-Weighted (dBA) Sound Levels of Typical Noise Environments	20-2
Table 20-2	CEQR Noise Exposure Standards.....	20-3
Table 20-3	CEQR Exterior Noise Standards and Attenuation Values.....	20-4
Table 20-4	Measured Existing Noise Levels	20-8
Table 20-5	Existing, No Build and Build Noise Levels from Mobile Sources AM Peak Period.....	20-11
Table 20-6	Existing, No Build and Build Noise Levels from Mobile Sources Midday Peak Period.....	20-11
Table 20-7	Existing, No Build and Build Noise Levels from Mobile Sources PM Peak Period.....	20-12

LIST OF FIGURES

Figure 1-1	Location Map	1-2
Figure 1-2	Project Area Map	1-3
Figure 1-3	Existing Buildings on Homeport Site	1-4
Figure 1-4	Existing and Proposed Zoning.....	1-8
Figure 1-5	Special Stapleton Waterfront District and Rezoning Boundary	1-9
Figure 1-6	Project Area Tax Lots	1-10
Figure 1-7	Proposed Street Mapping Actions	1-13
Figure 1-8	Reasonable Worst-Case Development Scenario.....	1-17
Figure 1-9	Existing Conditions Photographs.....	1-18
Figure 1-10	Existing Conditions Photographs.....	1-19
Figure 1-11	Existing Conditions Photographs.....	1-20
Figure 1-12	Proposed Public Open Space – Conceptual Renderings.....	1-21
Figure 2-1	Project Area Map (Rezoning Area)	2-10
Figure 2-2	Projected and Potential Development Sites West of Front Street.....	2-11
Figure 2-3	Existing Conditions Photographs.....	2-16
Figure 2-4	Existing Conditions Photographs.....	2-17
Figure 2-5	Existing Conditions Photographs.....	2-18
Figure 2-6	Existing Conditions Photographs.....	2-19
Figure 2-7	Existing Conditions Photographs.....	2-20
Figure 2-8	Existing Conditions Photographs.....	2-21
Figure 2-9	Existing Conditions Photographs.....	2-22
Figure 2-10	Existing Conditions Photographs.....	2-23
Figure 2-11	Existing Conditions Photographs.....	2-27
Figure 3-1	Land Use Map.....	3-4
Figure 3-2	Typical Land Uses Found in Study Area.....	3-5
Figure 3-3	Typical Land Uses Found in Study Area.....	3-6
Figure 3-4	Typical Land Uses Found in Study Area.....	3-7
Figure 3-5	Tax Block and Lot Numbers for Project Area West of Front Street	3-9
Figure 4-1	Socioeconomic Study Area – Census Block Groups.....	4-2

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Figure 5-1	Public Schools.....	5-3
Figure 6-1	Residential Open Space Study Area	6-3
Figure 6-2	Commercial Open Space Study Area	6-4
Figure 6-3	Open Space Inventory	6-6
Figure 7-1	Maximum Potential Shadow Exposure December 21	7-5
Figure 7-2	Maximum Potential Shadow Exposure March 21	7-6
Figure 7-3	Maximum Potential Shadow Exposure May 6	7-7
Figure 7-4	Maximum Potential Shadow Exposure June 21	7-8
Figure 8-1	Neighborhood Character: Stapleton Project Area Eastward View	8-4
Figure 8-2	Neighborhood Character: Stapleton Project Area Westward View.....	8-5
Figure 8-3	Neighborhood Character: Homeport Site at Front Street	8-6
Figure 8-4	Neighborhood Character: Homeport Site Building Character.....	8-7
Figure 8-5	Neighborhood Character: Stapleton Study Area Front Street.....	8-9
Figure 8-6	Neighborhood Character: Stapleton Study Area Bay Street Corridor...	8-10
Figure 8-7	Neighborhood Character: Stapleton Study Area Bay Street Corridor...	8-11
Figure 8-8	Neighborhood Character: Stapleton Study Area Bay Street Corridor...	8-12
Figure 8-9	Neighborhood Character: Stapleton Study Area Northern Perimeter....	8-13
Figure 8-10	Neighborhood Character: Stapleton Study Area Greenfield & Bay Street Intersection	8-14
Figure 8-11	Neighborhood Character: Homeport Site/Project Area Shoreline/ Northward View.....	8-16
Figure 8-12	Neighborhood Character: Homeport Site/Project Area Southern Perimeter	8-17
Figure 8-13	Neighborhood Character: Homeport Site/Project Area Northern Perimeter	8-18
Figure 8-14	Neighborhood Character: Stapleton Project Area Northwest View	8-20
Figure 8-15	Neighborhood Character: Stapleton Study Area Bay Street Corridor...	8-21
Figure 8-16	Neighborhood Character: Stapleton Study Area Bay Street Corridor...	8-22
Figure 8-17	Neighborhood Character: Stapleton Study Area Bay Street Southern Sector	8-24
Figure 8-18	Neighborhood Character: Stapleton Study Area Southern Sector Bayley Seton Hospital.....	8-25
Figure 8-19	Neighborhood Character: Stapleton Study Area Bay Street Southern Perimeter.....	8-26
Figure 9-1	Homeport Site	9-3
Figure 10-1	Archaeological Area of Potential Effect (APE).....	10-3
Figure 10-2	Architectural Area of Potential Effect (APE)	10-4
Figure 10-3	Known Archaeological Sites Within One Mile of Project Site	10-8
Figure 10-4	1844 View of Stapleton Waterfront and Project Area.....	10-10
Figure 10-5	Recorded Historic Architectural Resources Adjacent to Project Area	10-13
Figure 10-6	Surveyed Historic Architectural Resources	10-16

NEW STAPLETON WATERFRONT DEVELOPMENT PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Figure 10-7	Photograph of 144 Front Street.....	10-17
Figure 10-8	Photograph of 150 Front Street.....	10-18
Figure 10-9	Photograph of 691 Bay Street (Edgewater Hall)	10-19
Figure 11-1	Coastal Zone Boundary.....	11-2
Figure 11-2	Homeport Site Photographs	11-5
Figure 11-3	Floodplains.....	11-7
Figure 11-4	Combined Sewer Overflow Outfall Locations	11-9
Figure 12-1	Hazardous Material Survey Project and Study Area	12-8
Figure 12-2	Location of Projected and Potential Development Sites and MGP Site.....	12-12
Figure 17-1	Traffic Analysis Study Area	17-3
Figure 17-2	Existing Weekday AM Peak Hour Traffic Levels of Service.....	17-8
Figure 17-3	Existing Weekday Midday Peak Traffic Levels of Service.....	17-9
Figure 17-4	Existing Weekday PM Peak Traffic Levels of Service	17-10
Figure 17-5	Existing Saturday Midday Peak Traffic Levels of Service.....	17-11
Figure 17-6	Off-Street Parking Facilities	17-13
Figure 17-7	Anticipated Projects – 2015.....	17-16
Figure 17-8	2015 No Build Weekday AM Peak Traffic Levels of Service	17-29
Figure 17-9	2015 No Build Weekday Midday Peak Traffic Levels of Service	17-30
Figure 17-10	2015 No Build Weekday PM Peak Traffic Levels of Service.....	17-31
Figure 17-11	2015 No Build Saturday Midday Peak Traffic Levels of Service	17-32
Figure 17-12	Proposed 2015 Build Development Program	17-39
Figure 17-13	2015 Build Weekday AM Trip Assignments.....	17-48
Figure 17-14	2015 Build Weekday Midday Trip Assignments.....	17-49
Figure 17-15	2015 Build Weekday PM Trip Assignments	17-50
Figure 17-16	2015 Build Saturday Midday Trip Assignments	17-51
Figure 17-17	2015 Build Weekday AM Peak Hour Traffic Levels of Service.....	17-53
Figure 17-18	2015 Build Weekday Midday Peak Hour Traffic Levels of Service...	17-54
Figure 17-19	2015 Build Weekday PM Peak Hour Traffic Levels of Service.....	17-55
Figure 17-20	2015 Build Saturday Midday Peak Hour Traffic Levels of Service....	17-56
Figure 18-1	Transit Study Area Map.....	18-5
Figure 18-2	Pedestrian Analysis Location Map	18-12
Figure 18-3	Parcel Map	18-25
Figure 19-1	Air Quality Analysis Sites	19-9
Figure 20-1	Noise Monitoring Sites	20-7
Figure 20-2	Noise (E) Designation Parcels	20-16