City Environmental Quality Review

ENVIRONMENTAL ASSESSMENT STATEMENT FULL FORM

Please fill out, print and submit to the appropriate agency (see instructions)

PART I: GENERAL INFORMATION

PROJECT NAME NYULMC Kimmel Program

1. *Reference Numbers*

CEQR REFERENCE NUMBER (To Be Assigned by Lead Agency)	BSA REFERENCE NUMBER (If Applicable)
11-BSA-029M	**186-10-BZ**
ULURP REFERENCE NUMBER (If Applicable)	OTHER REFERENCE NUMBER(S) (If Applicable) (e.g., Legislative Intro, CAPA, etc.)

2a. *Lead Agency Information*

NAME OF LEAD AGENCY: **Board of Standards and Appeals**

NAME OF LEAD AGENCY CONTACT PERSON: **Jeff Mulligan, Executive Director**

ADDRESS: **40 Rector Street**

CITY: **New York** STATE: **NY** ZIP: **10006**

TELEPHONE: **(212) 788-8605** FAX: **(212) 788-8769**

EMAIL ADDRESS: **jmulligan@bsa.nyc.gov**

2b. *Applicant Information*

NAME OF APPLICANT: **NYU Langone Medical Center**

NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON: **Elise Wagner, Kramer Levin Naftalis & Frankel LLP**

ADDRESS: **1177 Avenue of the Americas**

CITY: **New York** STATE: **NY** ZIP: **10036**

TELEPHONE: **212-715-9189** FAX: **(212) 715-8208**

EMAIL ADDRESS: **ewagner@kramerlevin.com**

3. *Action Classification and Type*

SEQRA Classification

☐ UNLISTED ☑ TYPE I; SPECIFY CATEGORY *(see 6 NYCRR 617.4 and NYC Executive Order 91 of 1977, as amended):* **facility with over 240,000 gross square feet**

Action Type *(refer to Chapter 2, "Establishing the Analysis Framework" for guidance)*

☑ LOCALIZED ACTION, SITE SPECIFIC ☐ LOCALIZED ACTION, SMALL AREA ☐ GENERIC ACTION

4. *Project Description:*

NYU Langone Medical Center (NYULMC) proposes to develop two new buildings on its main campus, which is located on the superblock bounded by former East 30th Street and East 34th Street, the FDR Drive Service Road, and First Avenue. The proposed Kimmel Pavilion would house hospital functions and the proposed Energy Building would house a combined heat and power (CHP) plant to support the campus, as well as space for radiation oncology. Existing bulk oxygen storage tanks would also be relocated to an available site along former East 30th Street. Discretionary approvals are being sought from the Board of Standards and Appeals (BSA) subject to City Environmental Quality Review (CEQR) for variances to waive rear yard, rear yard equivalent, height and setback, tower coverage, parking, and curb cut requirements. See page 1a and Attachment A, "Project Description."

4a. *Project Location: Single Site* *(for a project at a single site, complete all the information below)*

ADDRESS: **560 First Avenue** NEIGHBORHOOD NAME: **Kips Bay**

TAX BLOCK AND LOT: **Block 962, Lots 80, 108, and 1001–1107** BOROUGH: **Manhattan** COMMUNITY DISTRICT: **6**

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS

NYULMC campus bounded by former East 30th and East 34th Streets, between the FDR Drive Service Road and First Avenue

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY: **R8** ZONING SECTIONAL MAP NO: **8d**

4b. *Project Location: Multiple Sites* *(Provide a description of the size of the project area in both City Blocks and Lots. If the project would apply to the entire city or to areas that are so extensive that a site-specific description is not appropriate or practicable, describe the area of the project, including bounding streets, etc.)*

5. *REQUIRED ACTIONS OR APPROVALS* *(check all that apply)*

City Planning Commission: YES ☐ NO ☑

- ☐ CITY MAP AMENDMENT
- ☐ ZONING MAP AMENDMENT
- ☐ ZONING TEXT AMENDMENT
- ☐ UNIFORM LAND USE REVIEW PROCEDURE (ULURP)
- ☐ CONCESSION
- ☐ UDAAP
- ☐ REVOCABLE CONSENT
- ☐ ZONING CERTIFICATION
- ☐ ZONING AUTHORIZATION
- ☐ HOUSING PLAN & PROJECT
- ☐ SITE SELECTION—PUBLIC FACILITY
- ☐ FRANCHISE
- ☐ DISPOSITION—REAL PROPERTY

ZONING SPECIAL PERMIT, SPECIFY TYPE

- ☐ MODIFICATION OF
- ☐ RENEWAL OF
- ☐ OTHER

Board of Standards and Appeals: YES ☑ NO ☐

- ☐ SPECIAL PERMIT

EXPIRATION DATE MONTH DAY YEAR

- ☐ VARIANCE (USE)
- ☑ VARIANCE (BULK)

SPECIFY AFFECTED SECTION(S) OF THE ZONING RESOLUTION **See page 1a**

BSA Actions

In order to build the Kimmel Pavilion and the Energy Building and relocation of existing bulk oxygen tanks as proposed, variances are being sought from BSA to waive the following:

- Required rear yard and rear yard equivalent pursuant to Section 24-36 and 24-382;
- Initial setback distance and sky exposure plane required pursuant to Section 24-522, and rear yard setback pursuant to Section 24-552;
- Tower coverage of previously approved towers under Section 24-54;
- Maximum permitted 100 accessory parking spaces required pursuant to Section 13-132 and minimum 200 square feet per accessory parking space required pursuant to Section 25-62; and
- Curb cuts to accessory parking on wide streets in Section 13-142.

Department of Environmental Protection: YES ☑ NO ☐

Other City Approvals: YES ☑ NO ☐

- ☐ LEGISLATION
- ☐ FUNDING OF CONSTRUCTION; SPECIFY
- ☐ POLICY OR PLAN; SPECIFY
- ☐ LANDMARKS PRESERVATION COMMISSION APPROVAL (not subject to CEQR)
- ☐ 384(B)(4) APPROVAL
- ☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMD) (*not subject to CEQR*)
- ☐ RULEMAKING
- ☐ CONSTRUCTION OF PUBLIC FACILITIES
- ☐ FUNDING OR PROGRAMS; SPECIFY
- ☑ PERMITS; SPECIFY **NYCDEP air permit**
- ☑ OTHER; EXPLAIN **NYCDEP modification of sewer easement**

6. ***State or Federal Actions/Approvals/Funding:*** YES ☑ NO ☐ IF "YES," IDENTIFY

Dormitory Authority of the State of New York—Funding
New York State Department of Environmental Conservation—Air Permit

7. ***Site Description:*** Except where otherwise indicated, provide the following information with regard to the directly affected area. The directly affected area consists of the project site and the area subject to any change in regulatory controls.

GRAPHICS *The following graphics must be attached and each box must be checked off before the EAS is complete. Each map must clearly depict the boundaries of the directly affected area or areas, and indicate a 400-foot radius drawn from the outer boundaries of the project site. Maps may not exceed 11x17 inches in size and must be folded to 8.5x11 inches for submission.*

☑ Site location map ☑ Zoning map ☑ Photographs of the project site taken within 6 months of EAS submission and keyed to the site location map

☑ Sanborn or other land use map ☑ Tax map ☐ For large areas or multiple sites, a GIS shape file that defines the project sites

PHYSICAL SETTING *(both developed and undeveloped areas) See Figures 1 through 7.*

Total directly affected area (sq. ft.):	Type of waterbody and surface area (sq. ft.):	Roads, building and other paved surfaces (sq. ft.):
408,511 (total zoning lot area)	**0**	**408,511**

Other, describe (sq. ft.): **Approximately 35,800 square feet landscaped area**

8. ***Physical Dimensions and Scale of Project*** *(if the project affects multiple sites, provide the total development below facilitated by the action)*

Size of project to be developed: **Kimmel Pavilion 895,801 gsf and Energy Building 113,756 gsf** (gross sq. ft.)

Does the proposed project involve changes in zoning on one or more sites? YES ☐ NO ☑

If 'Yes,' identify the total square feet owned or controlled by the applicant: Total square feet of non-applicant owned development:

Does the proposed project involve in-ground excavation or subsurface disturbance, including but not limited to foundation work, pilings, utility lines, or grading? YES ☑ NO ☐

If 'Yes,' indicate the estimated area and volume dimensions of subsurface disturbance (if known):

Area: **76,983** sq. ft. (width x length) Volume: **TBD** cubic feet (width x length x depth)

Does the proposed project increase the population of residents and/or on-site workers? YES ☐ NO ☑ Number of additional residents? Number of additional workers? *

Provide a brief explanation of how these numbers were determined:

*** The No Action (Complying) Building would have the same population as the proposed project. See Attachment A, "Project Description."**

Does the project create new open space? YES ☐ NO ☑ If Yes: (sq. ft)

Using Table 14-1, estimate the project's projected operation solid waste generation, if applicable: **See page 3 of Screening Analyses** (pounds per week)

Using energy modeling or Table 15-1, estimate the project's projected energy use: **See page 3 of Screening Analyses** (annual BTUs)

9. ***Analysis Year*** *CEQR Technical Manual, Chapter 2*

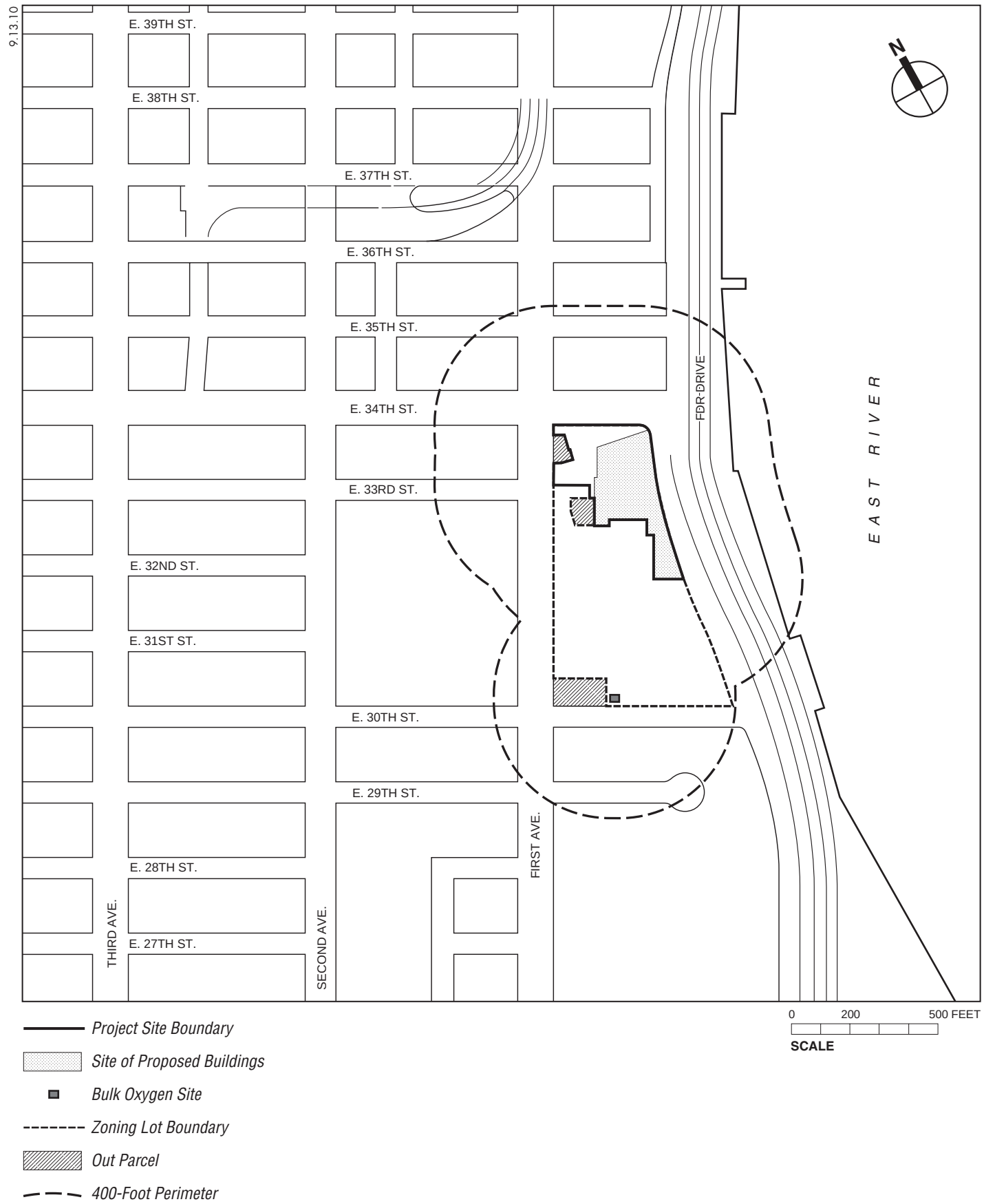
ANTICIPATED BUILD YEAR (DATE THE PROJECT WOULD BE COMPLETED AND OPERATIONAL):	ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS:
2017	**Approximately 78 months**

WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? YES ☑ NO ☐ IF MULTIPLE PHASES, HOW MANY PHASES:

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: **See Attachment J, "Construction."**

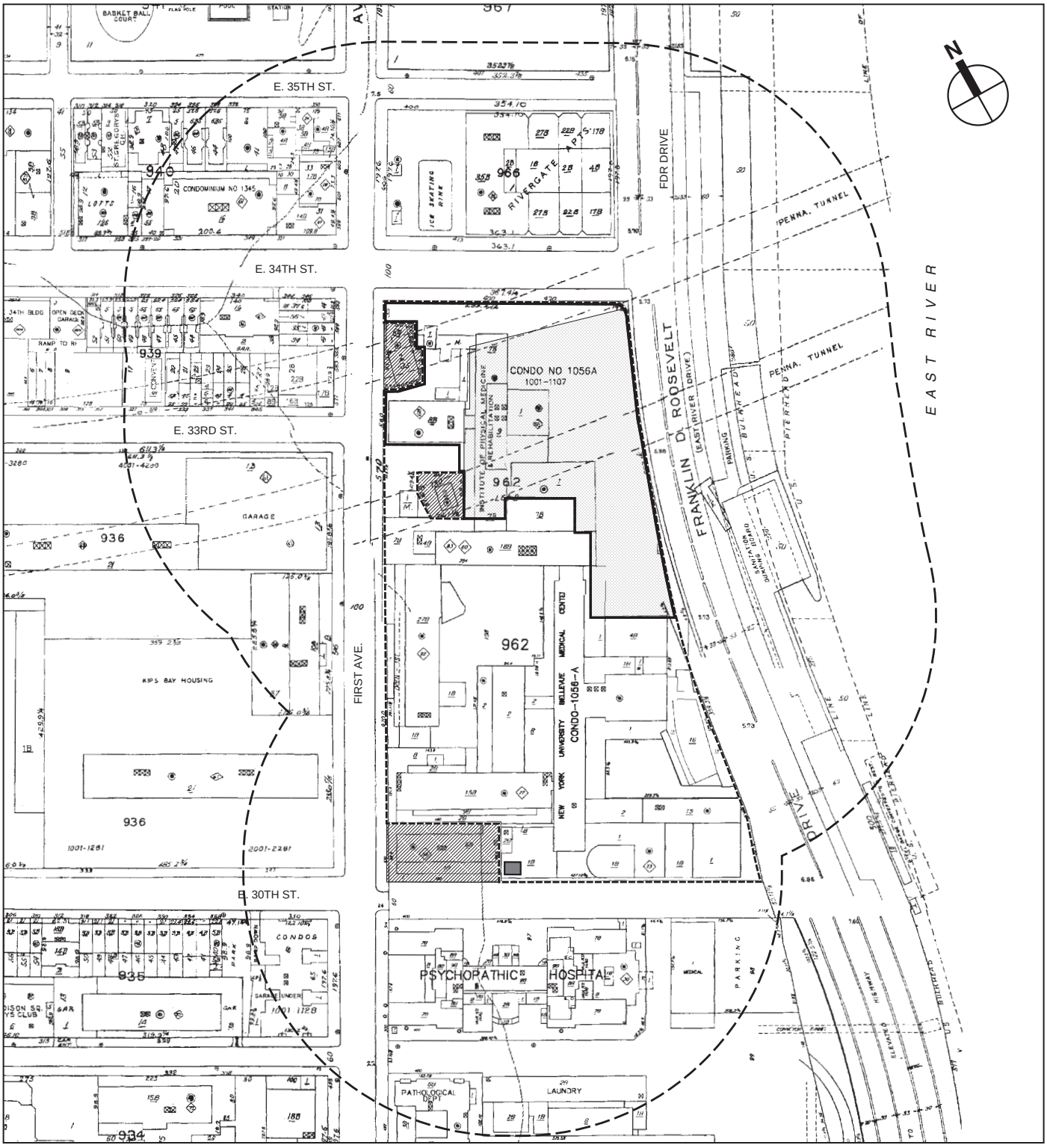
10. ***What is the Predominant Land Use in Vicinity of Project?*** *(Check all that apply)*

☑ RESIDENTIAL ☐ MANUFACTURING ☑ COMMERCIAL ☐ PARK/FOREST/OPEN SPACE ☑ OTHER, Describe: **Institutional, Transportation**



Project Location
Figure 1

9.13.10



Project Site Boundary

Site of Proposed Buildings

Bulk Oxygen Site

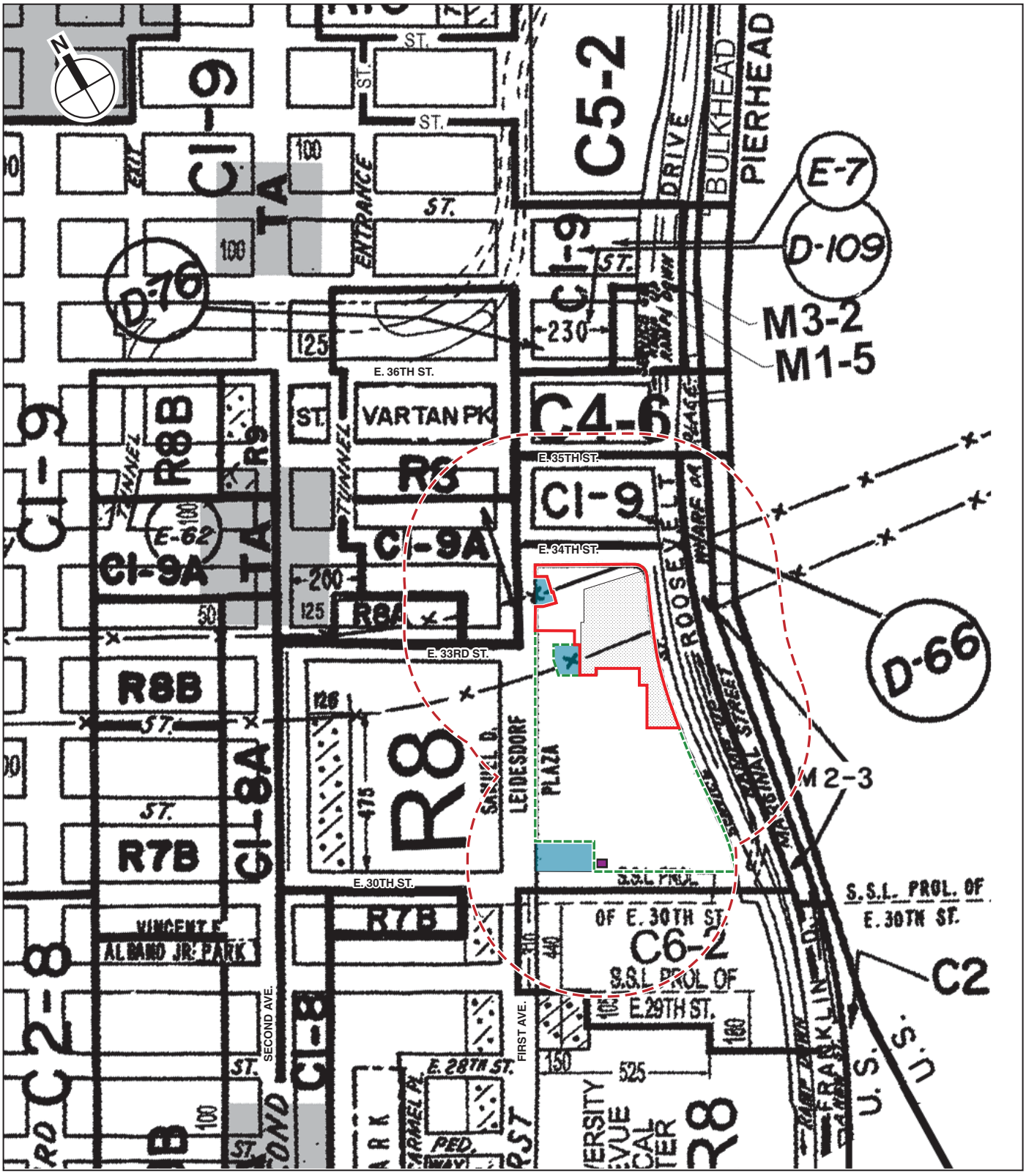
Zoning Lot Boundary

Out Parcel

400-Foot Perimeter

Sanborn Map
Figure 2

9.13.10



Project Site Boundary

Site of Proposed Buildings

Bulk Oxygen Site

Zoning Lot Boundary

Out Parcel

400-Foot Perimeter

Zoning District Boundary

Special Purpose District

C2-5 Overlay

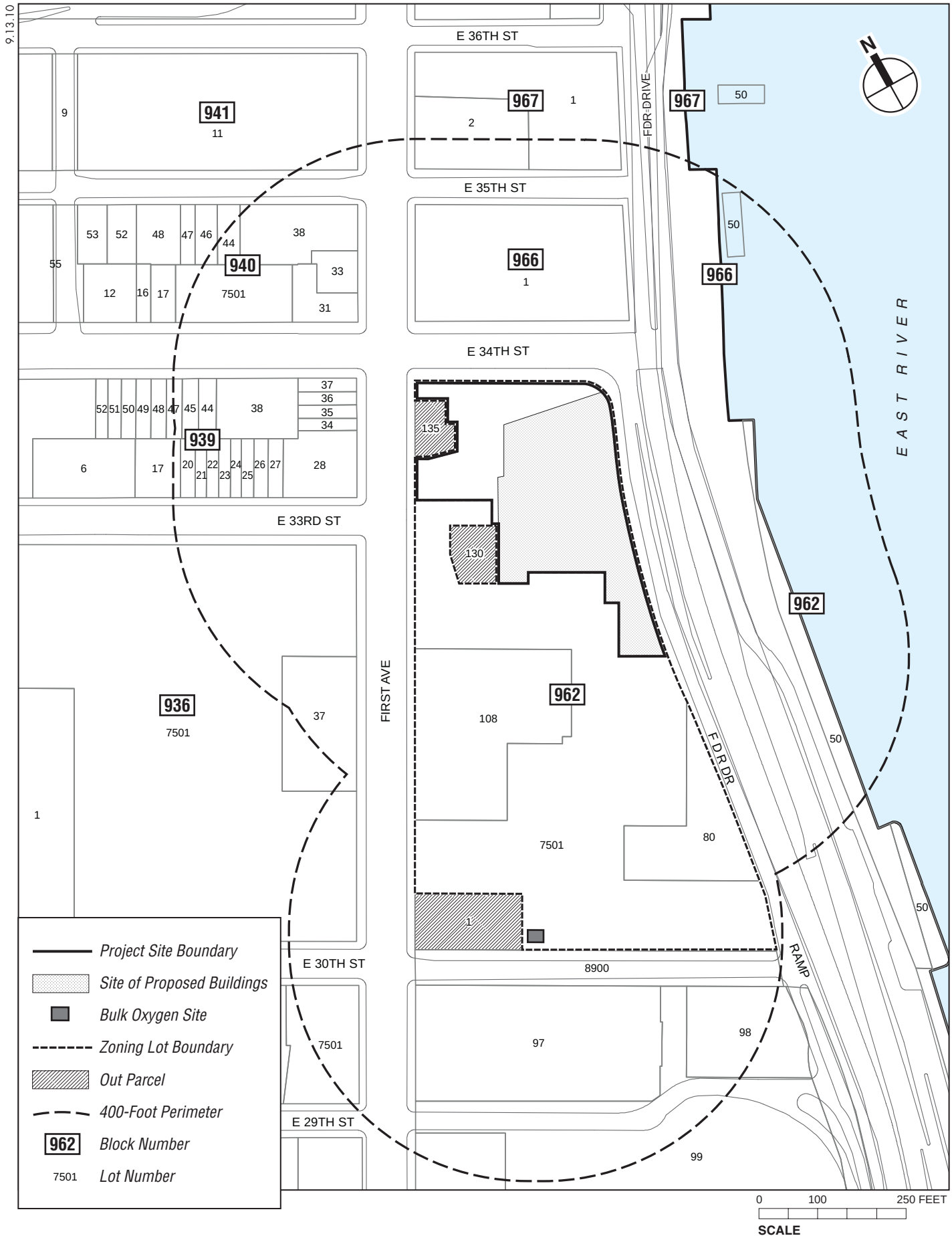
0 200 500 FEET

SCALE

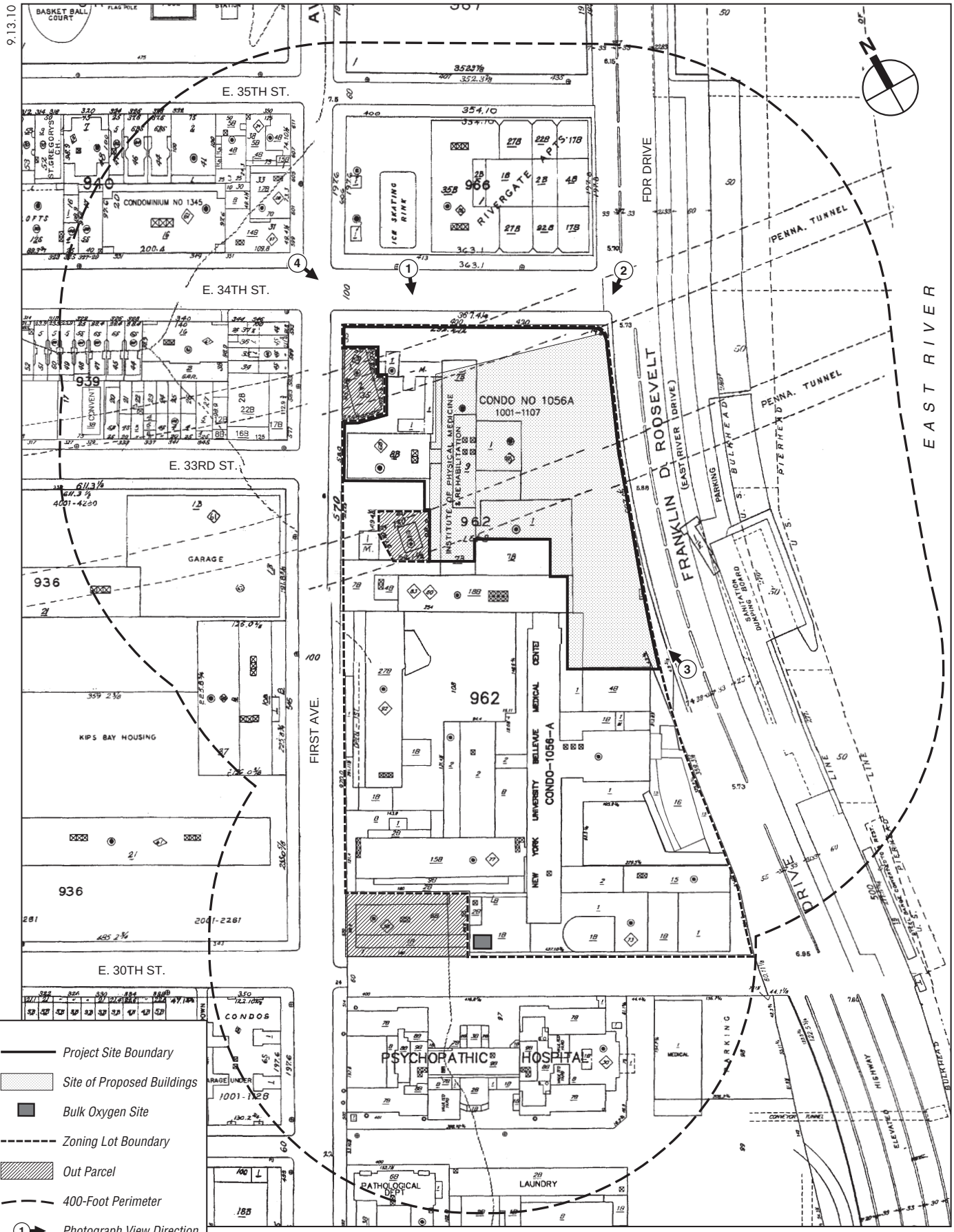
NYU Langone Medical Center Kimmel Pavilion and Energy Building

Zoning

Figure 3



Tax Map
Figure 4



Key to Photographs

Figure 5

View south from East 34th Street **1**

View southwest from East 34th Street and FDR Service Road **2**

Views of Project Site

Figure 6

View northwest from FDR Service Road **3**

View southwest from East 34th Street and First Avenue **4**

Views of Project Site

Figure 7

DESCRIPTION OF EXISTING AND PROPOSED CONDITIONS

The information requested in this table applies to the directly affected area. The directly affected area consists of the project site and the area subject to any change in regulatory control. The increment is the difference between the No-Action and the With-Action conditions.

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Land Use				
Residential	Yes ☐ No ☑	Yes ☐ No ☑	Yes ☐ No ☑	
If yes, specify the following				
No. of dwelling units				
No. of low- to moderate-income units				
No. of stories				
Gross Floor Area (sq. ft.)				
Describe Type of Residential Structures				
Commercial	Yes ☐ No ☑	Yes ☐ No ☑	Yes ☐ No ☑	
If yes, specify the following:				
Describe type (retail, office, other)				
No. of bldgs				
GFA of each bldg (sq. ft.)				
Manufacturing/Industrial	Yes ☐ No ☑	Yes ☐ No ☑	Yes ☐ No ☑	
If yes, specify the following:				
Type of use				
No. of bldgs				
GFA of each bldg (sq. ft.)				
No. of stories of each bldg.				
Height of each bldg				
Open storage area (sq. ft.)				
If any unenclosed activities, specify				
Community Facility	Yes ☑ No ☐	Yes ☑ No ☐	Yes ☑ No ☐	
If yes, specify the following				
Type	**Hospital**	**Hospital**	**Hospital**	
No. of bldgs	**28**	**22**	**23**	
GFA of each bldg (sq. ft.)	**See Page 4a**	**See Page 4a**	**See Page 4a**	
No. of stories of each bldg	**See Page 4a**	**See Page 4a**	**See Page 4a**	
Height of each bldg	**See Page 4a**	**See Page 4a**	**See Page 4a**	
Vacant Land	Yes ☐ No ☑	Yes ☐ No ☑	Yes ☐ No ☑	
If yes, describe				
Publicly Accessible Open Space	Yes ☐ No ☑	Yes ☐ No ☑	Yes ☐ No ☑	
If yes, specify type (mapped City, State, or Federal Parkland, wetland—mapped or otherwise known, other)				
Other Land Use	Yes ☑ No ☐	Yes ☑ No ☐	Yes ☑ No ☐	
If yes, describe				
Parking				
Garages	Yes ☑ No ☐	Yes ☑ No ☐	Yes ☑ No ☐	
If yes, specify the following:				
No. of public spaces	**110**	**110**	**250**	**+40**
No. of accessory spaces	**N/A**	**N/A**	**N/A**	
Operating hours	**24, hours, 7 days**	**24, hours, 7 days**	**24, hours, 7 days**	
Attended or non-attended	**Attended**	**Attended**	**Attended**	

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Parking *(continued)*				
Lots	Yes ☑ No ☐	Yes ☐ No ☑	Yes ☐ No ☑	
If yes, specify the following:				
No. of public spaces	**128**	**125**	**0**	**N/A**
No. of accessory spaces	**N/A**	**N/A**	**N/A**	
Operating hours	**24 hours, 7 days**	**N/A**	**N/A**	
Other (includes street parking)	Yes ☑ No ☐	Yes ☑ No ☐	Yes ☑ No ☐	
If yes, describe	**limited on-street, metered parking**			
Storage Tanks				
Storage Tanks	Yes ☑ No ☐	Yes ☑ No ☐	Yes ☑ No ☐	
If yes, specify the following:				
Gas/Service stations:	Yes ☐ No ☑	Yes ☐ No ☑	Yes ☐ No ☑	
Oil storage facility:	Yes ☐ No ☑	Yes ☐ No ☑	Yes ☐ No ☑	
Other; identify:	Yes ☑ No ☐	Yes ☑ No ☐	Yes ☑ No ☐	
If yes to any of the above, describe:	**See page 4b, Table 2**	**See Page 4b, Table 2**	**See Page 4b, Table 2**	
Number of tanks				
Size of tanks				
Location of tanks				
Depth of tanks				
Most recent FDNY inspection date				
Population ***(see page 4b, Table 3)***				
Residents	Yes ☐ No ☑	Yes ☐ No ☑	Yes ☐ No ☑	
If any, specify number				
Briefly explain how the number of residents was calculated				
Businesses	Yes ☐ No ☑	Yes ☐ No ☑	Yes ☐ No ☑	
If any, specify the following:				
No. and type				
No. and type of workers by business				
No. and type of non-residents who are not workers				
Briefly explain how the number of businesses was calculated				
Zoning*				
Zoning classification	**R8**	**R8**	**R8**	
Maximum amount of floor area that can be developed (in terms of bulk)	**2,655,322**	**2,655,322**	**2,655,322**	**No change**
Predominant land use and zoning classification within a 0.25-radius of proposed project	**Inst, resid, trans, R8, C6-2**	**Inst, resid, trans, R8, C6-2**	**Inst, resid, trans, R8, C6-2**	**No change**

Attach any additional information as may be needed to describe the project.

If your project involves changes in regulatory controls that affect one or more sites not associated with a specific development, it is generally appropriate to include the total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.

**This section should be completed for all projects, except for such projects that would apply to the entire city or to areas that are so extensive that site-specific zoning information is not appropriate or practicable.*

Table 1
NYU Langone Medical Center
Existing, Proposed and Complying Building Area Summary

	Facility	Height	Number of Stories	GSF Existing	GSF Proposed	GSF Complying
Existing to be Demolished:						
1	Greenhouse	12	1	2,671	0	0
2	Visitor's Pavilion	12	1	2,511	0	0
3	Horizon House	12	1	1,195	0	0
4	Perelman Building	136	10	72,648	0	0
5	Rusk Institute	114	9	124,116	0	0
6	Auxiliary Pavilion	12	1	5,215	0	0
7	North Service Wing	12	1	11,256	0	0
Existing to Remain[1]:						
8	Milhauser Labs	86	7	51,548	51,548	51,548
9 24	Tisch Hospital (ASIP) Tisch Hospital (ASIP Addition)	105	8	116,550	116,550	116,550
10	Tisch Hospital	264	21	446,133	446,133	446,133
11	Medical Science Building – Berg	114	10			
12	Medical Science Building	97	8			
13	Service Wing East	12	1			
15	Library	12	1			
16	Medical Science Building - East	127	11			
17	Lounge	12	1			
18	Cafeteria	12	1			
19	Dean’s Suite	25	2	324,432	324,432	324,432
14	Cole’s Student Labs	68	4	33,398	33,398	33,398
20	Rubin Hall	179	17	97,818	97,818	97,818
21	Alumni Hall	43	2	40,452	40,452	40,452
22	Schwartz Health Care Center	214	16	294,353	294,353	294,353
23	Schwartz Lecture Hall	15	1	44,605	44,605	44,605
25	Skirball Institute	317	25	541,428	541,428	541,428
26	Smilow	270	16	251,029	251,029	251,029
27	Tisch Hospital (Elevator Addition)	247	18	40,380	40,380	40,380
28	Emergency Department	40	1	12,380	12,380	12,380
Proposed:						
29	Energy Building[2]	155	6	N/A	113,756	151
30	Kimmel Pavilion[2]	385	22	N/A	895,801	949,563
31	Bulk Oxygen Tanks	49	N/A	N/A	662	1,213
	Totals			**2,514,118**	**3,304,725**	**3,245,433**

Note:
[1] There are no proposed alterations to existing buildings to remain.
[2] Excludes mechanical space.

Table 2
Storage Tanks

	Existing	No Action	With Action
Number of Tanks	5		
Size of tanks	One 8,000 gallon AST east of the North Service Wing (which supplies one 275 gallon AST on the Rusk roof); one 5,000 gallon AST in an underground vault east of the Auxiliary Pavilion (which supplies two 100 gallon ASTs in the adjacent generator room).	Three 25,000 gallon underground fuel oil storage tanks would be located below grade beneath the landscaped entry of the Kimmel Pavilion. These tanks would serve both the Kimmel Pavilion and the Energy Building generators.	Three 25,000 gallon underground fuel oil storage tanks would be located below grade beneath the landscaped entry of the Kimmel Pavilion. These tanks would serve both the Kimmel Pavilion and the Energy Building generators.
Location of tanks			
Depth of tanks			

Table 3
NYU Langone Medical Center Superblock Population

Type	2010 Existing Conditions	2017 Future Conditions without the Proposed Action	2017 Future Conditions with the Proposed Action	Net Increment
Physicians[1]	748	809	809	0
Staff[2]	4,375	4,957	4,957	0
Medical Students	664	640	640	0
Nursing Students	100	100	100	0
School of Medicine Employees[3]	6,867	7,396	7,396	0
Inpatients admitted and Outpatients	1,200	1,362	1,362	0
Patient Visitors (Inpatient and Outpatient)	3,600	4,086	4,086	0

Notes:
1 Includes hospital Physicians Headcount and Visiting Physicians.
2 Includes laboratory and technical staff, house staff, RNs, and nursing attendants, reported in Full Time Equivalents (FTEs).
3 Includes researchers, educators, post-doctorates, administrators, and corporate services.
Source: NYU Langone Medical Center. Typical daily weekday population, based existing conditions and on full occupancy of the No Action building and the proposed buildings.

PART II: TECHNICAL ANALYSES

INSTRUCTIONS: For each of the analysis categories listed in this section, assess the proposed project's impacts based on the thresholds and criteria presented in the *CEQR Technical Manual*. Check each box that applies.

- If the proposed project can be demonstrated not to meet or exceed the threshold, check the 'NO' box.
- If the proposed project will meet or exceed the threshold, or if this cannot be determined, check the 'YES' box.
- For each 'Yes' response, answer the subsequent questions for that technical area and consult the relevant chapter of the *CEQR Technical Manual* for guidance on providing additional analyses (and attach supporting information, if needed) to determine whether the potential for significant impacts exists. Please note that a 'Yes' answer does not mean that EIS must be prepared—it often only means that more information is required for the lead agency to make a determination of significance.
- The lead agency, upon reviewing Part II, may require an applicant to either provide additional information to support the Full EAS Form. For example, if a question is answered 'No,' an agency may request a short explanation for this response.

		YES	NO
1.	***LAND USE, ZONING AND PUBLIC POLICY:*** *CEQR Technical Manual, Chapter 4* **See Attachment B, "Land Use, Zoning, and Public Policy."**		
(a)	Would the proposed project result in a change in land use or zoning that is different from surrounding land uses and/or zoning? Is there the potential to affect an applicable public policy? If 'Yes,' complete a preliminary assessment and attach.		✓
(b)	Is the project a large, publicly sponsored project? If 'Yes,' complete a PlaNYC assessment and attach.		✓
(c)	Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries? If 'Yes,' complete the Consistency Assessment Form.	✓	
2.	***SOCIOECONOMIC CONDITIONS:*** *CEQR Technical Manual, Chapter 5*		
(a)	Would the proposed project:		
	• Generate a net increase of 200 or more residential units?		✓
	• Generate a net increase of 200,000 or more square feet of commercial space?		✓
	• Directly displace more than 500 residents?		✓
	• Directly displace more than 100 employees?		✓
	• Affect conditions in a specific industry?		✓
(b)	If 'Yes' to any of the above, attach supporting information to answer the following questions, as appropriate. If 'No' was checked for each category above, the remaining questions in this technical area do not need to be answered.		✓
(1)	***Direct Residential Displacement***		
	If more than 500 residents would be displaced, would these displaced represent more than 5% of the primary study area population?		
	If 'Yes,' is the average income of the directly displaced population markedly lower than the average income of the rest of the study area population?		
(2)	***Indirect Residential Displacement***		
	Would the expected average incomes of the new population exceed the average incomes of the study area populations?		
	If 'Yes,' would the population increase represent more than 5% of the primary study area population or otherwise potentially affect real estate market conditions?		
	If 'Yes,' would the study area have a significant number of unprotected rental units?		
	Would more than 10 percent of all the housing units be renter-occupied and unprotected?		
	Or, would more than 5 percent of all the housing units be renter-occupied and unprotected where no readily observable trend toward increasing rents and new market rate development exists within the study area?		

		YES	NO
(3)	***Direct Business Displacement***		
	Do any of the displaced businesses provide goods or service that otherwise could not be found within the trade area, either under existing conditions or in the future with the proposed project?		
	Do any of the displaced businesses provide goods or services that otherwise could not be found within the trade area, either under existing conditions or in the future with the proposed project?		
	Or is any category of business to be displaced the subject of other regulations or publicly adopted plans to preserve, enhance, or otherwise protect it?		
(4)	***Indirect Business Displacement***		
	Would the project potentially introduce trends that make it difficult for businesses to remain in the area?		
	Would the project capture the retail sales in a particular category of goods to the extent that the market for such goods would become saturated as a result, potential resulting in vacancies and disinvestment on neighborhood commercial streets?		
(5)	***Effects on Industry***		
	Would the project significantly affect business conditions in any industry or any category of businesses within or outside the study area?		
	Would the project indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses?		
3.	***COMMUNITY FACILITIES:*** *CEQR Technical Manual, Chapter 6*		
(a)	Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations?		✓
(b)	Would the project exceed any of the thresholds outlines in Table 6-1 in Chapter 6?		✓
(c)	If 'No' was checked above, the remaining questions in this technical area do not need to be answered. If 'Yes' was checked, attach supporting information to answer the following, if applicable.		
(1)	***Child Care Centers***		
	Would the project result in a collected utilization rate of the group child care/Head Start centers in the study area that is greater than 100 percent?		
	If 'Yes,' would the project increase the collective utilization rate by 5 percent from the No-Action scenario?		
(2)	***Libraries***		
	Would the project increase the study area population by 5 percent from the No-Action levels?		
	If 'Yes,' would the additional population impair the delivery of library services in the study area?		
(3)	***Public Schools***		
	Would the project result in a collective utilization rate of the elementary and/or intermediate schools in the study area that is equal to or greater than 105 percent?		
	If 'Yes,' would the project increase this collective utilization rate by 5 percent from the No-Action scenario?		
(4)	***Health Care Facilities***		
	Would the project affect the operation of health care facilities in the area?		
(5)	***Fire and Police Protection***		
	Would the project affect the operation of fire or police protection in the area?		
4.	***OPEN SPACE:*** *CEQR Technical Manual, Chapter 7*		
(a)	Would the project change or eliminate existing open space?		✓
(b)	Is the project located within an underserved area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	✓	
(c)	If 'Yes,' would the proposed project generate more than 50 additional residents or 125 additional employees?		✓
(d)	Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?		✓
(e)	If 'Yes,' would the project generate more than 350 additional residents or 750 additional employees?		
(f)	If the project is not located within an underserved or well-served area, would it generate more than 200 additional residents or 500 additional employees?		
(g)	If 'Yes' to any of the above questions, attach supporting information to answer the following: • Does the project result in a decrease in the open space ratio of more than 5%?		
	• If the project site is within an underserved area, is the decrease in open space between 1% and 5%?		
	• If 'Yes,' are there qualitative considerations, such as the quality of open space, that need to be considered?		

		YES	NO
5.	***SHADOWS:*** *CEQR Technical Manual, Chapter 8.* **See Attachment C, "Shadows."**		
(a)	Would the proposed project result in a net height increase of any structure of 50 feet or more?	✓	
(b)	Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	✓	
(c)	If 'Yes' to either of the above questions, attach supporting information explaining whether the project's shadow reach any sunlight-sensitive resource at any time of the year.		
6.	***HISTORIC AND CULTURAL RESOURCES:*** *CEQR Technical Manual, Chapter 9* **See Attachment D, "Historic and Cultural Resources."**		
(a)	Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for, or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; is listed or eligible for listing on the New York State or National Register of Historic Places; or is within a designated or eligible New York City, New York State, or National Register Historic District? If "Yes," list the resources and attach supporting information on whether the proposed project would affect any of these resources.		✓
7.	***URBAN DESIGN AND VISUAL RESOURCES:*** *CEQR Technical Manual, Chapter 10* **See Attachment E, "Urban Design and Visual Resources."**		
(a)	Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	✓	
(b)	Would the proposed project result in obstruction of publicly accessible views to visual resources that is not currently allowed by existing zoning?		✓
(c)	If "Yes" to either of the questions above, please provide the information requested in Chapter 10.		
8.	***NATURAL RESOURCES:*** *CEQR Technical Manual, Chapter 11*		
(a)	Is any part of the directly affected area within the Jamaica Bay Watershed? If "Yes," complete the Jamaica Bay Watershed Form.		✓
(b)	Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11? If "Yes," list the resources: Attach supporting information on whether the proposed project would affect any of these resources.		✓
9.	***HAZARDOUS MATERIALS:*** *CEQR Technical Manual, Chapter 12* **See Attachment F, "Hazardous Materials."**		
(a)	Would the proposed project allow commercial or residential use in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	✓	
(b)	Does the proposed project site have existing institutional controls (e.g., (E) designations or a Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?		✓
(c)	Does the project require soil disturbance in a manufacturing zone or any development on or near a manufacturing zone or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	✓	
(d)	Does the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material or unknown origin?	✓	
(e)	Does the project result in development where underground and/or aboveground storage tanks (e.g., gas stations) are or were on or near the site?	✓	
(f)	Does the project result in renovation of interior existing space on a site with potential compromised air quality, vapor intrusion from on-site or off-site sources, asbestos, PCBs or lead-based paint?		✓
(g)	Does the project result in development on or near a government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, municipal incinerators, coal gasification or gas storage sites, or railroad tracks and rights-of-way?	✓	
(h)	Has a Phase I Environmental Site Assessment been performed for the site? If 'Yes,' were RECs identified? Briefly identify:	✓	
(i)	Based on a Phase I Assessment, is a Phase II Assessment needed?	✓	
10.	***WATER AND SEWER INFRASTRUCTURE:*** *CEQR Technical Manual, Chapter 13*		
(a)	Would the project result in water demand of more than one million gallons per day?		✓
(b)	Is the proposed project located in a combined sewer area and result in at least 1,000 residential units or 250,000 sq. ft. or more of commercial space in Manhattan or at least 400 residential units or 150,000 sq. ft. or more of commercial space in the Bronx, Brooklyn, Staten Island or Queens?		✓
(c)	Is the proposed project located in a separately sewered area and result in the same or greater development than that listed in Table 13-1 in Chapter 13?		✓
(d)	Does the proposed project involve development on a site five acres or larger where the amount of impervious surface would increase?		✓
(e)	Would the proposed project involve development on a site one acre or larger where the amount of impervious surface would increase and is located within the Jamaica Bay Watershed or in certain specific drainage areas including: Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek?		✓
(f)	Would the proposed project be located in an area that is partially sewered or currently unsewered?		✓
(g)	Is the project proposing an industrial facility or activity that would contribute industrial discharges to a WWTP and/or generate contaminated stormwater in a separate storm sewer system?		✓
(h)	Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?		✓
(i)	If "Yes" to any of the above, conduct the appropriate preliminary analyses and attached supporting documentation.		

		YES	NO
11.	***SOLID WASTE AND SANITATION:*** *CEQR Technical Manual, Chapter 14*		
(a)	Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?		✓
(b)	Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?		✓
12.	***ENERGY:*** *CEQR Technical Manual, Chapter 15*		
(a)	Would the proposed project affect the transmission or generation of energy?	✓	
13.	***TRANSPORTATION:*** *CEQR Technical Manual, Chapter 16*		
(a)	Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?		✓
(b)	If "Yes," conduct the screening analyses, attach appropriate back up data as needed for each stage, and answer the following questions:		
	(1) Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour? If "Yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? **It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 in Chapter 16 for more information.		
	(2) Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour? If "Yes," would the proposed project result per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?		
	(3) Would the proposed project result in more than 200 pedestrian trips per project peak hour? If "Yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?		
14.	***AIR QUALITY:*** *CEQR Technical Manual, Chapter 17* **See Attachment G, "Air Quality."**		
(a)	*Mobile Sources:* Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?		✓
(b)	*Stationary Sources:* Would the proposed project result in the conditions outlined in Section 220 in Chapter 17? If 'Yes,' would the proposed project exceed the thresholds in the Figure 17-3, Stationary Source Screen Graph? (attach graph as needed)	✓	
(c)	Does the proposed project involve multiple buildings on the project site?	✓	
(d)	Does the proposed project require Federal approvals, support, licensing, or permits subject to conformity requirements?		✓
(e)	Does the proposed project site have existing institutional controls (e.g., (E) designations or a Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?		✓
(f)	If "Yes," conduct the appropriate analyses and attach any supporting documentation.		
15.	***GREENHOUSE GAS EMISSIONS:*** *CEQR Technical Manual, Chapter 18*		
(a)	Is the proposed project a city capital project, a power plant, or would fundamentally change the City's solid waste management system?		✓
(b)	If "Yes," would the proposed project require a GHG emissions assessment based on the guidance in Chapter 18?		✓
(c)	If "Yes," attach supporting documentation to answer the following; Would the project be consistent with the City's GHG reduction goal?		
16.	***NOISE:*** *CEQR Technical Manual, Chapter 19* **See Attachment H, "Noise."**		
(a)	Would the proposed project generate or reroute the vehicular traffic?	✓	
(b)	Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of sight to that rail line?	✓	
(c)	Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	✓	
(d)	Does the proposed project site have existing institutional controls (e.g., E-designations or a Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?		✓
(e)	If "Yes," conduct the appropriate analyses and attach any supporting documentation.		
17.	***PUBLIC HEALTH:*** *CEQR Technical Manual, Chapter 20*		
(a)	Would the proposed project warrant a public health assessment based upon the guidance in Chapter 20?		✓
18.	***NEIGHBORHOOD CHARACTER:*** *CEQR Technical Manual, Chapter 21*		
(a)	Based upon the analyses conducted for the following technical areas, check 'Yes' if any of the following technical areas required a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise.	✓	
(b)	If "Yes," explain here why or why not an assessment of neighborhood character is warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary.		
	See Attachment I, "Neighborhood Character."		

19. *CONSTRUCTION IMPACTS:* *CEQR Technical Manual, Chapter 22*
Would the project's construction activities involve (check all that apply):

	YES	NO
• Construction activities lasting longer than two years;	✓	
• Construction activities within a Central Business District or along an arterial or major thoroughfare;	✓	
• Require closing, narrowing, or otherwise impeding traffic, transit or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, etc);	✓	
• Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out;		✓
• The operation of several pieces of diesel equipment in a single location at peak construction;	✓	
• Closure of community facilities or disruption in its service;		✓
• Activities within 400 feet of a historic or cultural resource; or		✓
• Disturbance of a site containing natural resources.		✓

If any boxes are checked, explain why or why not a preliminary construction assessment is warranted based on the guidance of in Chapter 22, "Construction." It should be noted that the nature and extent or any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination.

See Attachment J, "Construction."

20. *APPLICANT'S CERTIFICATION*

I swear or affirm under oath and subject to the penalties for perjury that the information provided in this Environmental Assessment Statement (EAS) is true and accurate to the best of my knowledge and belief, based upon my personal knowledge and familiarity with the information described herein and after examination of pertinent books and records and/or after inquiry of persons who have personal knowledge or such information or who have examined pertinent books and records.

Still under oath, I further swear or affirm that I make this statement in my capacity as the

Vicki Match Suna

of

Vicki Match Suna, AIA, Senior Vice President, NYU Hospitals Center and Vice Dean, New York University
APPLICANT/SPONSOR

NYU Hospitals Center and New York University
NAME OF THE ENTITY OR OWNER

the entity which seeks the permits, approvals, funding or other governmental action described in this EAS.

Check if prepared by: ☑ APPLICANT/REPRESENTATIVE or ☐ LEAD AGENCY REPRESENTATIVE (FOR CITY-SPONSORED PROJECTS)

Anne M. Locke, Chief Operating Officer, AKRF, Inc.
APPLICANT/SPONSOR NAME:

LEAD AGENCY REPRESENTATIVE NAME:

Anne Locke
SIGNATURE:

March 14, 2011
DATE:

PLEASE NOTE THAT APPLICANT MAY BE REQUIRED TO SUBSTANTIATE RESPONSES IN THIS FORM AT THE DISCRETION OF THE LEAD AGENCY SO THAT IT MAY SUPPORT ITS DETERMINATION OF SIGNIFICANCE.

PART III: DETERMINATION OF SIGNIFICANCE (To Be Completed by Lead Agency)

INSTRUCTIONS:

In completing Part III, the lead agency should consult 6 NYCRR 617.7 and 43 RCNY §6-06 (Executive Order 91 of 1977, as amended) which contain the State and City criteria for determining significance.

1. For each of the impact categories listed below, consider whether the project may have a significant effect on the environment. For each of the impact categories listed below, consider whether the project may have a significant adverse effect on the environment, taking into account its (a) location; (b) probability of occurring; (c) duration; (d) irreversibility; (e) geographic scope; and (f) magnitude

	Potential Significant Adverse Impact	
IMPACT CATEGORY	**YES**	**NO**
Land Use, Zoning, and Public Policy		
Socioeconomic Conditions		
Community Facilities and Services		
Open Space		
Shadows		
Historic and Cultural Resources		
Urban Design/Visual Resources		
Natural Resources		
Hazardous Materials		
Water and Sewer Infrastructure		
Solid Waste and Sanitation Services		
Energy		
Transportation		
Air Quality		
Greenhouse Gas Emissions		
Noise		
Public Health		
Neighborhood Character		
Construction Impacts		

2. Are there any aspects of the project relevant to the determination whether the project may have a significant impact on the environment, such as combined or cumulative impacts, that were not fully covered by other responses and supporting materials? If there are such impacts, explain them and state where, as a result of them, the project may have a significant impact on the environment.

3. LEAD AGENCY'S CERTIFICATION

TITLE _____ LEAD AGENCY _____

NAME _____ SIGNATURE _____

☐ **Check this box if the lead agency has identified one or more potentially significant adverse impacts that MAY occur.**

☐ **Issue *Conditional Negative Declaration***

A ***Conditional Negative Declaration*** (CND) may be appropriate if there is a private applicant for an Unlisted action AND when conditions imposed by the lead agency will modify the proposed project so that no significant adverse environmental impacts would result. The CND is prepared as a separate document and is subject to the requirements in 6 NYCRR Part 617.

☐ **Issue *Positive Declaration* and proceed to a draft scope of work for the Environmental Impact Statement.**

If the lead agency has determined that the project may have a significant impact on the environment, and if a conditional negative declaration is not appropriate, then the lead agency issues a Positive Declaration.

NEGATIVE DECLARATION (To Be Completed By Lead Agency)

Statement of No Significant Effect

Pursuant to Executive Order 91 of 1977, as amended, and the Rules of Procedure for City Environmental Quality Review, found at Title 62, Chapter 5 of the Rules of the City of New York and 6NYCRR, Part 617, State Environmental Quality Review, the **[ ]** assumed the role of lead agency for the environmental review of the proposed project. Based on a review of information about the project contained in this environmental assessment statement and any attachments hereto, which are incorporated by reference herein, the **[ ]** has determined that the proposed project would not have a significant adverse impact on the environment.

Reasons Supporting this Determination

The above determination is based on information contained in this EAS that finds, because the proposed project:

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA).

TITLE	LEAD AGENCY
NAME	SIGNATURE

NYU Langone Medical Center—Kimmel Building and Energy Building Screening Analyses

All analyses were performed in accordance with the 2010 *City Environmental Quality Review (CEQR) Technical Manual*.

PROJECT DESCRIPTION

See Attachment A, "Project Description."

LAND USE, ZONING, AND PUBLIC POLICY

See Attachment B, "Land Use, Zoning, and Public Policy."

SOCIOECONOMIC CONDITIONS

According to the *CEQR Technical Manual*, a socioeconomic assessment should be conducted if a project may reasonably be expected to create substantial socioeconomic changes within the area affected by the action that would not occur in the absence of the action. Actions that would trigger a CEQR analysis include the following:

- Direct displacement of a residential population so that the socioeconomic profile of the neighborhood would be substantially altered.
- The displacement of more than 100 employees.
- The direct displacement of a business or institution that is unusually important because of its products or services are uniquely dependent on its location; based on its type or location, it is the subject of other regulations or publicly adopted plans aimed at its preservation; or it serves a population uniquely dependant on its services in its present location.
- Introduction of substantial new development that is markedly different from existing uses, development, and activities within the neighborhood. Such an action could lead to indirect displacement. Residential development of 200 units or fewer or commercial development of 200,000 square feet or less would typically not result in significant socioeconomic impacts.
- The project would add to, or create, a retail concentration that may draw a substantial amount of sales from existing businesses within the study area to the extent that certain categories of business close and vacancies in the area increase, thus resulting in a potential for disinvestment on local retail streets.
- If the project is expected to affect conditions within a specific industry; for example, if a substantial number of residents or workers depend on the goods and services provided by the affected businesses, or if it would result in the loss or substantial diminishment of a particularly important product or service within the City.

The proposed action would result in a two new buildings on NYU Langone Medical Center's (NYULMC) main campus: the Kimmel Pavilion to house hospital functions and an Energy Building to house a combined heat and power (CHP) plant to support the campus, as well as space for patient care, specifically radiation oncology. Absent the proposed action, a new hospital pavilion that would incorporate some of the functions intended for the Energy Building would be constructed on the campus in an as-of-right configuration that complies with all the zoning requirements. The proposed action would have the same population as with the future without the proposed action (the "No Action" condition). The proposed action would not displace any residential populations, businesses, or employees. The proposed action would not alter land use patterns in the study area. Overall, the proposed action would not substantially change the surrounding neighborhood's overall character, and would not substantially alter market-rate rents in the surrounding neighborhood. Therefore, the proposed action would not result in significant adverse impacts on socioeconomic character of the community surrounding the project site, and further analysis is not necessary.

COMMUNITY FACILITIES AND SERVICES

The proposed action would not displace any community facilities, but rather would renew and upgrade NYULMC's facilities and support its mission with the development of two new buildings on its main campus: the Kimmel Pavilion to house hospital functions and an Energy Building to house a CHP plant to support the campus, as well as space for patient care, specifically radiation oncology. Therefore, the proposed action would not result in any significant direct effects on community facilities and services.

As explained below, the proposed action would not result in significant indirect effects on community facilities and services, such as public schools, libraries, hospitals, child care centers, or police and fire protection.

- Schools: The *CEQR Technical Manual* specifies that if a proposed action introduces more than 50 elementary and/or intermediate school students or 150 or more high school students who are expected to attend public schools, there may be a significant impact to educational facilities. The proposed action would not generate any residential units. Therefore, no further analysis is warranted.
- Libraries: The *CEQR Technical Manual* recommends an analysis of potential impacts to libraries if an action would increase the service population by more than 5 percent. The proposed action would not generate any new workers, as compared with the No Action condition, and would not generate any new residents. Therefore, further analysis is not necessary, and it is expected that there would be no significant adverse impacts to libraries.
- Health Care Facilities: The *CEQR Technical Manual* recommends an analysis of potential indirect impacts to public health care facilities if an action would introduce a sizeable new neighborhood. The proposed action would not generate any new residents. Therefore, further analysis is not necessary, and the proposed action would not result in significant adverse impacts to health care facilities.
- Child Care Facilities: The *CEQR Technical Manual* recommends an analysis of potential impacts to publicly funded group child care and Head Start centers if an action would generate more than 20 eligible children under age 6 and living in low/moderate-income residential units. As noted above, the proposed action would not generate any new low- or moderate-income residential units, and therefore further analysis is not necessary.

- Police and Fire Protection: The proposed action would not result in the direct displacement of a police or fire station, nor would it introduce a sizeable new neighborhood. Therefore, no further analysis is necessary.

OPEN SPACE

The *CEQR Technical Manual* recommends performing an open space assessment for projects that either physically displace an open space or generate enough new residents or workers to noticeably diminish the ability of an area's open spaces to serve existing or future populations. Open space is defined as publicly or privately owned land that has been designated for leisure, play, or sport, or land set aside for the protection and/or enhancement of the natural environment.

The *CEQR Technical Manual*'s threshold for a detailed analysis is an expected population increase of 200 or more residents or 500 or more employees. The proposed action would not result in any increase in population compared to the No Action condition. Therefore, the proposed action would not result in significant adverse impacts to open space, and no further analysis is required.

SHADOWS

See Attachment C, "Shadows."

HISTORIC RESOURCES

See Attachment D, "Historic and Cultural Resources."

URBAN DESIGN AND VISUAL RESOURCES

See Attachment E, "Urban Design and Visual Resources."

HAZARDOUS MATERIALS

See Attachment F, "Hazardous Materials."

WATER AND SEWER INFRASTRUCTURE

The *CEQR Technical Manual* states that a preliminary infrastructure analysis is required if a project would result in a demand for water of more than one million gallons per day or if the project is located in an area that experiences low water pressure (such as the Rockaway Peninsula and Coney Island). The proposed project would not meet either of these thresholds; therefore, no further analysis of water supply is required.

The *CEQR Technical Manual* also provides guidelines for when a preliminary infrastructure analysis is required: if the project site is located in a combined sewer area, and would exceed 1,000 residential units or 250,000 square feet of commercial space above the No Action condition or if the project site involves development on a site five acres or larger where the amount of impervious surface would increase. The project site is located in a combined sewer area. The proposed Kimmel Program would neither result in additional square footage compared to the No Action condition nor increase the amount of impervious surface on the project site. Therefore, a preliminary infrastructure analysis is not required.

The proposed action would not result in any significant adverse impacts to water and sewer infrastructure.

SOLID WASTE AND SANITATION SERVICES

The *CEQR Technical Manual* states that few projects have the potential to generate substantial amounts of solid waste (50 tons per week or more) that would result in a significant adverse impact. However, it recommends that the solid waste and service demand generated by a project be disclosed, based on estimates presented on Table 14-1 of the *CEQR Technical Manual*. Based on a rate of 51 pounds per week per bed for hospital use, and 726 licensed beds on the superblock, the existing NYU Langone Medical Center generates approximately 37,000 pounds (or 18.5 tons) per week of solid waste. As in the existing conditions, general and medical waste would be handled by private carting companies and transported outside of New York City. The proposed action would not result in a change in the number of licensed beds on the superblock; therefore, no further analysis is required, and the proposed action would not result in any significant adverse impacts to solid waste and sanitation services.

ENERGY

According to the *CEQR Technical Manual*, detailed assessments of energy impacts are limited to those actions that would significantly affect the transmission or generation of energy or that generate substantial indirect consumption of energy. The proposed action is not expected to generate a significant new demand for energy. Rather, the proposed action would facilitate the development of the Energy Building, which would include a CHP plant containing cogeneration, primary electric service, and emergency generators. The CHP plant would contain the following equipment:

- One 15 megawatt (MW) gas turbine, which would provide base load power for existing campus services (Tisch Hospital, Medical Science Building), as well as the proposed Kimmel Pavilion and Energy Building. The turbine would provide for the entire campus steam load.
- Dual-fueled steam generating boilers to provide a reliable source of steam for heating in the event that the gas turbine is down for maintenance or unexpected outages.
- Isolation transformers to provide Consolidated Edison feeders for electrical power to the campus.
- Feeders to distribute electrical power from the proposed Energy Building for connection to existing loads and the proposed Kimmel Pavilion.

The CHP plant and backup boilers would exhaust through a common stack to the Kimmel Pavilion roof. The stack height would be approximately 522 feet above datum. The CHP plant would help NYULMC fulfill its commitment to reducing greenhouse gas (GHG) emissions (see "Greenhouse Gas Emissions," below). In addition, the proposed facility would increase the reliability of operations, insulate NYULMC from commodity and utility rate volatility, and reduce utility costs. The proposed facility would provide new primary electric service that would replace the existing aging electrical distribution system, electrical transformers and switchgear, and provide electrical capacity to support future growth and new medical technology. It would also enhance electrical system redundancy, which is paramount in supporting an acute care hospital and leading edge research institution.

The proposed action would not result in significant adverse impacts to the consumption or supply of energy.

TRANSPORTATION

As described in Attachment A, "Project Description," the proposed action would not result in a population change as compared to No Action conditions. The proposed action would not generate more than 50 vehicle trips or 200 pedestrian or transit trips; therefore, no further analysis is required and no significant adverse transportation impacts would occur.

AIR QUALITY

See Attachment G, "Air Quality."

GREENHOUSE GAS EMISSIONS

The *CEQR Technical Manual* requires an assessment of consistency with the City's citywide GHG reduction goal, as defined in PlaNYC and codified in Local Law 22 of 2008. This requirement is limited to projects with certain characteristics defined in the manual. For environmental assessments, a GHG emissions assessment is not normally required, unless warranted by the nature or type of project, including, for example, city capital projects, or projects that propose power generation or projects that would fundamentally affect the City's solid waste management system.

The proposed action does include power generation in the form of cogeneration, and includes substantial energy consumption. However, the nature of the project is such that it aims to improve energy efficiency and reduce GHG emissions. The project is part of NYUMC's long term energy management and sustainability plan.

Further, NYULMC was one of the first healthcare institutions in New York City to sign on to an initiative aimed at supporting the City's efforts to reduce GHG emissions as part of PlaNYC; under this commitment, NYULMC will reduce its GHG emissions by 30 percent by 2018. The proposed action is needed to achieve that goal.

Therefore, the proposed action is explicitly consistent with the goals of PlaNYC and other State energy and GHG goals, and no further analysis is required.

NOISE

See Attachment H, "Noise."

PUBLIC HEALTH

The proposed action would not result in any significant unmitigated adverse impacts to air quality, water quality, hazardous materials, noise, or any other CEQR analysis area. Therefore, no further analysis of public health is required, and no significant adverse impacts to public health are expected to occur as a result of the proposed action.

NEIGHBORHOOD CHARACTER

See Attachment I, "Neighborhood Character."

CONSTRUCTION IMPACTS

See Attachment J, "Construction Impacts." ✷

A. INTRODUCTION

NYU Langone Medical Center (NYULMC) is one of the premier academic medical institutions in the country. For more than 155 years, it has been a leader in patient care, physician education, and scientific research. NYULMC consists of the NYU School of Medicine (NYUSOM) and the three hospitals of the NYU Hospitals Center (NYUHC)—Tisch Hospital, Rusk Institute of Rehabilitation Medicine (Rusk Institute), and NYU Hospital for Joint Diseases (HJD). NYULMC's main campus, located on First Avenue between East 30th and 34th Streets, is home to NYUSOM, Tisch Hospital, and Rusk Institute (see Figure A-1).

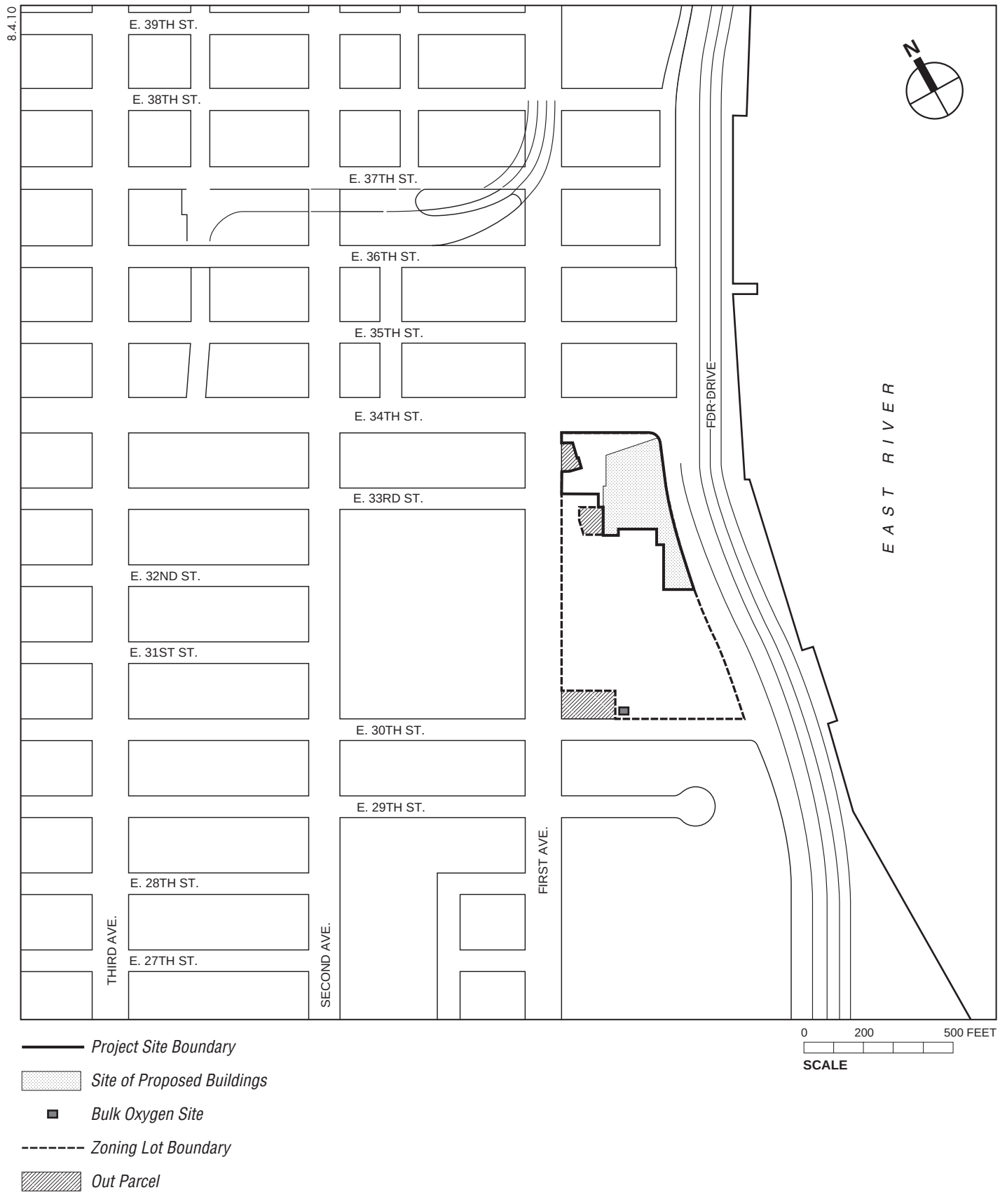
To renew its facilities and support its mission, NYULMC proposes to develop the Kimmel Program which consists of two new buildings on its main campus: the Kimmel Pavilion to house hospital functions and an Energy Building to house a combined heat and power (CHP) plant, primary electric service and emergency generators to support the campus, as well as space for patient care (specifically, radiation oncology).

The proposed Kimmel Pavilion would be located on the northeast corner of the campus at the intersection of East 34th Street and Franklin Delano Roosevelt (FDR) Drive. Several existing buildings, including the building housing the Rusk Institute, would be demolished. The Kimmel Pavilion would have a gross floor area of approximately 895,801 square feet (sf) and provide single (private) inpatient rooms, operating and image-guided procedure rooms, an observation unit for post-procedure patients, a state-of-the-art sterile processing department for operating room instruments, and expansion of the loading docks and materials management department. It would be physically linked to and function with the existing Tisch Hospital.

The proposed Energy Building would be located along the FDR Drive Service Road to the south of the proposed Kimmel Pavilion and would also be physically linked to and function with Tisch Hospital. It would have a gross floor area of approximately 113,756 sf.

Bulk oxygen storage tanks currently located in the footprint of the proposed Energy Building would be relocated to a site on the former East 30th Street currently used as two unenclosed loading berths.

Approvals from the Board of Standards and Appeals (BSA) are being sought to construct the proposed Kimmel Pavilion and the Energy Building. They are expected to include waivers of applicable rear yard, rear yard equivalent, setback and sky exposure plane, tower coverage, parking, and curb cut requirements. These discretionary city approvals are subject to City Environmental Quality Review (CEQR).



Project Location
Figure A-1

B. BACKGROUND HISTORY

NYU SCHOOL OF MEDICINE

Founded in 1841 as University Medical College, NYUSOM has had a distinguished history that includes many major events in American medicine. Clinical instruction started in Bellevue Hospital in 1847. In 1898 University Medical College and Bellevue Hospital Medical College (founded 1861) were consolidated and became an integral part of New York University as University and Bellevue Hospital Medical College.

NYU HOSPITALS CENTER

NYUHC, a New York not-for-profit hospital corporation, was created in 1998. It operates and comprises Tisch Hospital (a tertiary care hospital), Rusk Institute (a leading rehabilitation hospital for both outpatients and inpatients), and HJD (a leader in musculoskeletal care). NYUHC is affiliated with New York University but is a separate corporate entity. NYUHC currently operates 916 licensed beds with 726 located on the main campus at 34th Street and 190 located at the HJD campus.

Tisch Hospital was founded in 1882 as the New York Post Graduate Hospital and became part of what is now NYULMC in 1947. In 1905 HJD was founded by the brothers Henry and Herman Frauenthal, physicians with the mission of “bringing relief through care to the orthopedic problems of children” in a brownstone building on Lexington Avenue in upper Manhattan. HJD expanded over the years and moved into its present quarters at the corner of Second Avenue and 17th Street in 1979. HJD began an academic affiliation with NYUSOM in 1986 and a clinical association with NYULMC in 1994. The two orthopedic departments were fused in 1997, and the rheumatology programs were integrated in 2001. On January 1, 2006, HJD merged with NYUHC becoming NYU HJD.

After devising rehabilitation programs for the Army Air Force during the war, Dr. Howard A. Rusk founded Rusk Institute. Widely considered "the father of rehabilitation medicine," his philosophy that rehabilitation medicine provides care for the entire person became the model for rehabilitation medicine. Rusk Institute was the first university-affiliated facility devoted entirely to rehabilitation medicine. Since 1989, when *U.S. News & World Report* introduced its annual “Best Hospitals” rankings, it has ranked among the top ten rehabilitation hospitals in the country.

NYULMC MAIN CAMPUS

The main campus of NYULMC was created in 1949 when the City of New York conveyed to New York University the street beds of East 31st, East 32nd, and East 33rd Streets, creating a superblock for development of an integrated hospital complex (see Figures A-2 and A-3). There are three outparcels on the superblock. Ventilation buildings for the Amtrak tunnels which run beneath the site are located on two of the outparcels. The third outparcel on the corner of First Avenue and former East 30th Street belongs to the Office of the Chief Medical Examiner.

The campus has a total lot area of 408,511 sf with 28 buildings dating from different periods of the institution’s development and totaling approximately 2,514,118 gross square feet (gsf). There are a total of 238 parking spaces on the overall campus, including 128 at grade near the Rusk Institute at the northeast corner of the campus.

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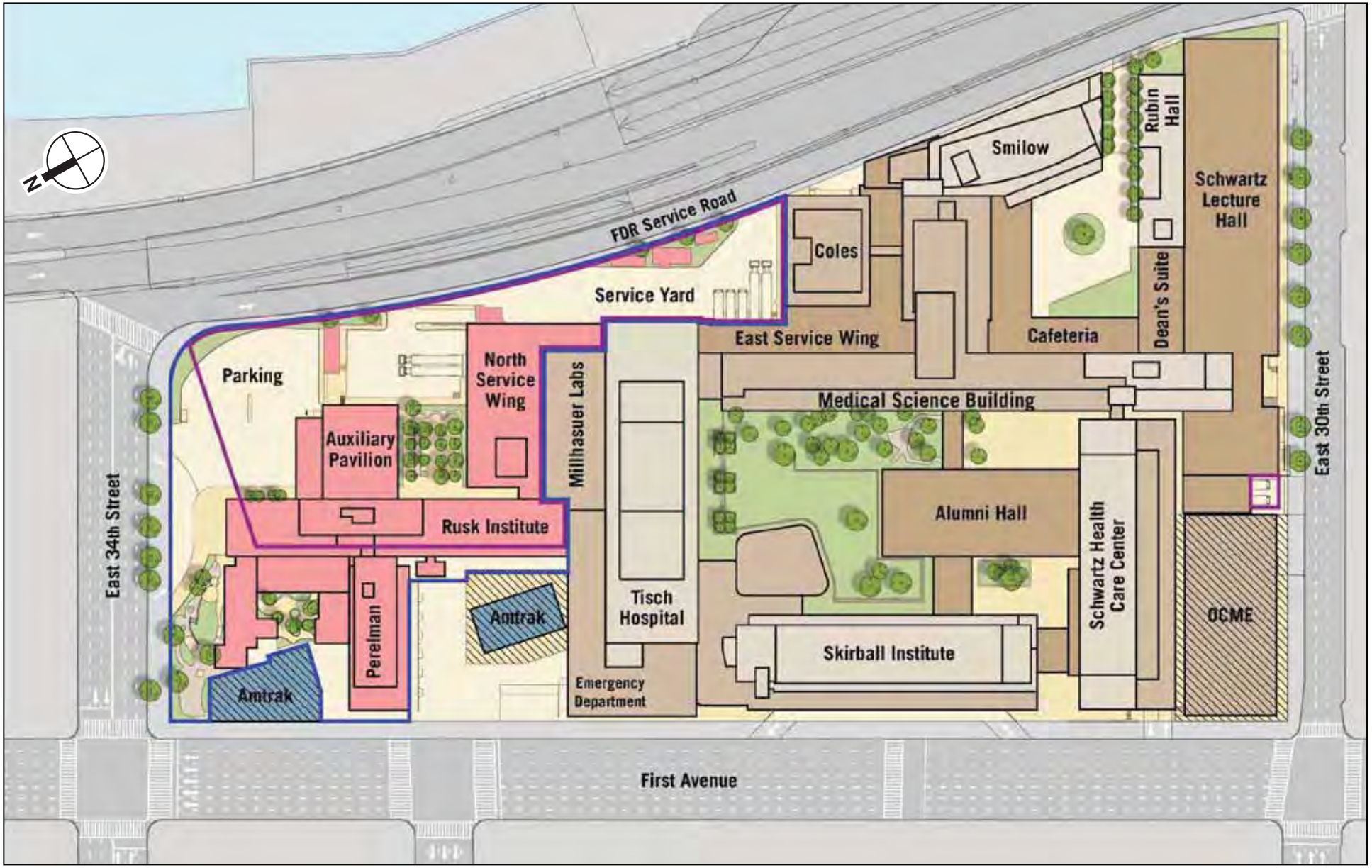


Project Site

Site of Proposed Buildings and Structures

Out Parcel

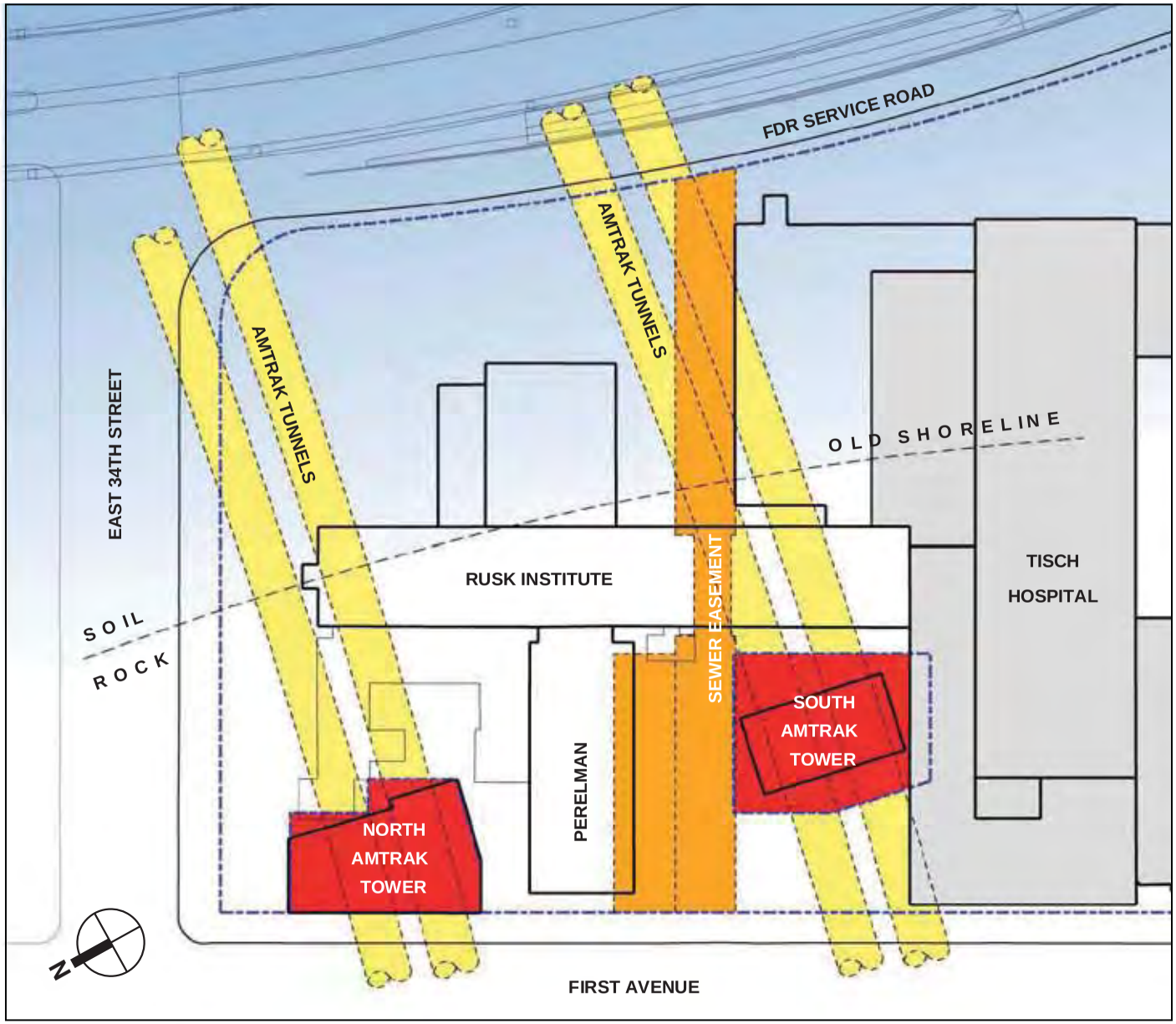
Existing Buildings to be Demolished

Existing Campus Plan

Figure A-2

SITE CONSTRAINTS

- *Amtrak Tunnels*
- *Amtrak Ventilation Towers*
- *Utility Easements*
- *Storm Sewers*
- *Poor Soil Conditions / Fill*
- *High Water Table*



Site Constraints
Figure A-3

OTHER NYULMC FACILITIES

NYULMC owns or leases over 4.3 million square feet of space located mostly between East 14th Street and East 38th Streets, Park Avenue, and the FDR Drive. About one-third is outside the main campus, including the HJD at Second Avenue and East 17th Street, NYU Outpatient Surgery Center at 333 East 38th Street, the NYU Clinical Cancer Center on East 34th Street at Third Avenue, and approximately one million square feet of leased office space and housing in the general vicinity of the main campus.

AFFILIATIONS

As part of the "biomedical corridor" that stretches along First Avenue between East 17th and East 36th Streets, NYULMC provides medical staff and clinical services to Bellevue Hospital Center and the Department of Veterans Affairs New York Harbor Health Care System. In 2007, NYUSOM became the largest academic affiliate for New York City's Health and Hospitals Corporation (HHC).

C. PURPOSE AND NEED OF THE PROPOSED PROJECT

PATIENT CARE NEEDS

NYULMC is guided by the principles of "translational medicine," in which scientific discoveries are translated into innovative treatments for patients. As part of an academic medical center, NYULMC's clinical services are continually informed and enhanced by ongoing basic and clinical research projects. Today it has state-of-the-art clinical programs in virtually every medical specialty and subspecialty, including oncology, pediatrics, neurology, and neuroscience; cardiovascular and pulmonary and musculoskeletal. In 2006, NYULMC completed the Joan and Joel Smilow Research Center, part of a major initiative in translational research that has sped the transfer of laboratory discoveries to the patient's bedside.

However, the majority of the clinical facilities on the NYULMC campus are in aging buildings with structural, mechanical, and electrical systems that cannot support state-of-the-art clinical technologies. Existing inpatient beds, procedure rooms, and patient care areas are located in three buildings across the campus: Rusk Institute (1946), Tisch Hospital (1962), and Schwartz Health Care Center (1979). Not only does this not foster integrated patient care, it leads to inefficiencies and redundancies in equipment, support space and clinical supply inventories. Even if it were possible to provide updated utilities to the existing buildings, the resulting spaces would be inefficient in providing effective patient care.

The Rusk Institute building, due to its age, condition, and configuration, does not warrant renovation. Estimates to renovate equal the cost of a replacement facility and would result in a sub-optimal environment.

The Schwartz Health Care Center is undersized for inpatient use and is located near the southern end of the superblock without direct access to Tisch Hospital.

Tisch Hospital is undersized for current and projected needs. Its floor-to-floor height and its floor plate size limit its adaptability to a new state-of-the-art health care environment for the highest acuity (most ill patients and complex cases) level care. Further, it lacks adequate swing space to accommodate relocations for renovation of other hospital buildings, and there is no growth space available for emerging clinical practices.

Existing connections between Rusk and Tisch through hallways, up and down elevator banks, and among the entrances and the various departments are circuitous and hard for patients and staff to navigate.

Based on current and projected clinical volumes, NYULMC requires additional operating and procedure rooms to meet the demand. Space is required to shift patients from shared (semi-private and open bay) rooms to all private rooms. NYULMC has insufficient intensive care and step down beds to safely care for the growing number of higher acuity patients.

Patient Rooms

National benchmarks for similar urban, academic medical centers which treat higher acuity patients assign approximately 25 percent of inpatient rooms for intensive care and another 15 to 25 percent for step-down care (patients who continue to require the physiological monitoring of intensive care but not the same level of intensive nursing). According to the *Guidelines for Design and Construction of Health Care Facilities, 2010* (*2010 Guidelines*), these rooms require a greater number of medical gases and electrical outlets, more space at the bedside, as well as closer visual observation by the nursing staff. Currently, only 12 percent of NYULMC's inpatient beds are designed for critical care; of these, a majority do not have the clear floor space at each bed required by the *2010 Guidelines*.

Tisch Hospital is not large enough to accommodate bed need. It accommodates 471 beds at 350 gsf per bed. Renovated to current standards of 720 gsf per bed, it can accommodate only 246 beds.

To address the major shift from inpatient to outpatient procedures that has occurred in the last decade, observation areas (non-inpatient beds [NIBs]) for patients who do not require hospitalization after a procedure, but who do require a period of observation of 23 hours or less, must be created. Designated and equipped areas designed for this purpose do not currently exist on the NYULMC campus.

Single patient rooms are an important need because they reduce patient-to-patient contact and, hence, reduce the spread of infection. Single patient rooms provide patient privacy and accommodate family members while also allowing higher bed utilization. The number of private rooms currently available at NYULMC is minimal.

Operating Rooms

Operating and procedure rooms on the campus are insufficient in number to accommodate projected growth in demand and insufficient in size to accommodate new procedures and technologies. There is a projected need for 82 operating/procedure rooms as compared to the existing 69. The existing rooms range in size from 310 sf to 550 sf**.**

Optimal operating/procedure room size to accommodate new technologies such as robotics and intra-operative imaging as well as staff circulation, case carts, and supplies is 600 to 650 sf (*2010 Guidelines*). Two-thirds of the operating/procedure rooms in Tisch Hospital are undersized based on the *2010 Guidelines* and cannot accommodate the latest technologies (robotics, imaging, etc.). In addition, there are fewer recovery rooms than desirable for the number of operating rooms. The lack of a sufficient number of recovery beds leads to a backup in the operating rooms, reducing the efficiency of the operating suite and extending wait times for patients.

Radiation Oncology

The Radiation Oncology department provides cancer treatment for NYULMC inpatients, pediatric patients, and also serves all of Bellevue's inpatients and outpatients since that hospital does not have a Radiation Oncology department. Currently located in the cellar of Tisch Hospital, it shares a floor primarily occupied by utility equipment and storage. The treatment vaults are over 20 years old and are not large enough to accommodate state-of-the-art equipment while providing a high level of patient care. Ceiling heights are low, making any renovations a challenge. There is insufficient program space, mechanical space, and floor-to-floor height to accommodate newer treatment systems.

Loading Docks and Services

The current loading dock arrangement located on the eastern edge of the campus along the FDR Drive Service Road now handles food deliveries, clean linen deliveries, medical waste and other soiled pick-ups all in one area. The new Kimmel Program will accommodate the proper separation of clean and soiled docks as well as providing adequate materials handling space adjacent to the docks.

ENERGY AND UTILITY NEEDS

NYULMC is hampered by a 50-year old campus electrical distribution system, overloaded and outdated electrical transformers and switchgear that expose the campus to the risk of power failure. The existing system is not capable of handling the needs of future development on the campus, including the needs of the Kimmel Pavilion. NYULMC is also faced with commodity and utility rate volatility and in general rising utility costs.

Electrical requirements in the existing medical center facilities also are rapidly increasing due to new clinical and research technologies, ever-greater intensity of computing, and greater reliance on information technology in all aspects of patient care. The pervasive use of electronic medical records, for example, means that patient care and ultimately patient lives depend on highly reliable power systems with robust and redundant emergency back-up systems.

PROJECT PLANNING AND ORGANIZATION

KIMMEL PAVILION

The Kimmel Pavilion would be focused on strategic priority acute care services. The design goal has been to exemplify a world class, integrated, patient-centered academic medical center. The intention is to provide an environment that is innovative, disease-focused, responsive to market forces, and supportive of patients, clinicians, students, faculty and visitors. Specifically the plan is to integrate the proposed Kimmel Pavilion with the existing Tisch Hospital and to make the Kimmel Pavilion as flexible as possible for the future.

Integration with Tisch Hospital

It is intended that the Kimmel Pavilion and Tisch Hospital be integrated to create a contiguous, state-of-the-art, patient centered, and integrated environment for inpatient and procedure based care. To this end, the entrances and elevators of the two buildings would be connected by a very clear circulation spine; public spaces and amenities would be located along this spine at the second-floor level. Further, the Kimmel Pavilion would provide the receiving loading docks and associated materials management space for the entire campus. There would be an equally clear

service corridor linking the buildings at the first-floor level. Kimmel Pavilion procedure levels would align with the two key procedure floors of Tisch (radiology and imaging on the third floor and surgery on the seventh floor) with the intent of creating large and flexible clinical areas.

Flexibility

Since it is expected that the Kimmel Pavilion would be in service for the next 100 years—during which time patient care and technology would continue to evolve and be transformed—it is critical that the building be efficient, highly flexible, and free of major permanent obstructions. This means that it must have a highly regular and repetitive structure and interior configurations that can be easily modified. The bed floors must be sized to accommodate the amount of space needed to contain support functions now and in the future. Mechanical spaces in the Kimmel Pavilion must be sized for growth, anticipating ever more demanding codes and standards.

ENERGY BUILDING

In 2008, NYULMC completed a feasibility study, funded in part and approved by the New York State Energy Research and Development Authority (NYSERDA), which studied the technical feasibility of a CHP plant. Since then, NYULMC has further studied and conceptually designed the proposed Energy Building in parallel with the planning for the Kimmel Pavilion. The campus must have robust mechanical and electrical infrastructure sized to anticipate increasing needs and new standards of reliability.

Further, as one of the first healthcare institutions in New York City to sign on to the City's efforts to reduce greenhouse gas (GHG) emissions to commit to a GHG reduction of 30 percent by 2018, NYULMC needs to replace its existing systems.

BULK OXYGEN STORAGE TANKS

The existing campus bulk oxygen storage tanks are currently located within the footprint of the proposed Energy Building and would need to be relocated to an available site on the former East 30th Street, currently used as two unenclosed loading berths. (The associated loading docks will be taken out of service, and the loading activity absorbed in the expanded dock facilities on the FDR Service Road.)

D. PROJECT DESCRIPTION

PROJECT SITE

KIMMEL PAVILION

In order to build the Kimmel Pavilion with its necessary adjacency to Tisch Hospital, the best site is the northeast corner of the campus (see Figure A-4). This location is also dictated by the existing density of development on the rest of the campus (see Figure A-2, above). Further, the area of the superblock to the west is partially occupied by two Amtrak buildings on small parcels not owned by NYULMC.

The site poses a number of issues for development. Four Amtrak tunnels as well as a major New York City Department of Environmental Protection (NYCDEP) sewer outfall traverse the site (see Figure A-3). The original shoreline ran through the site giving it a high water table and poor soil conditions because it has been filled. Aging facilities in the Rusk Institute building, the

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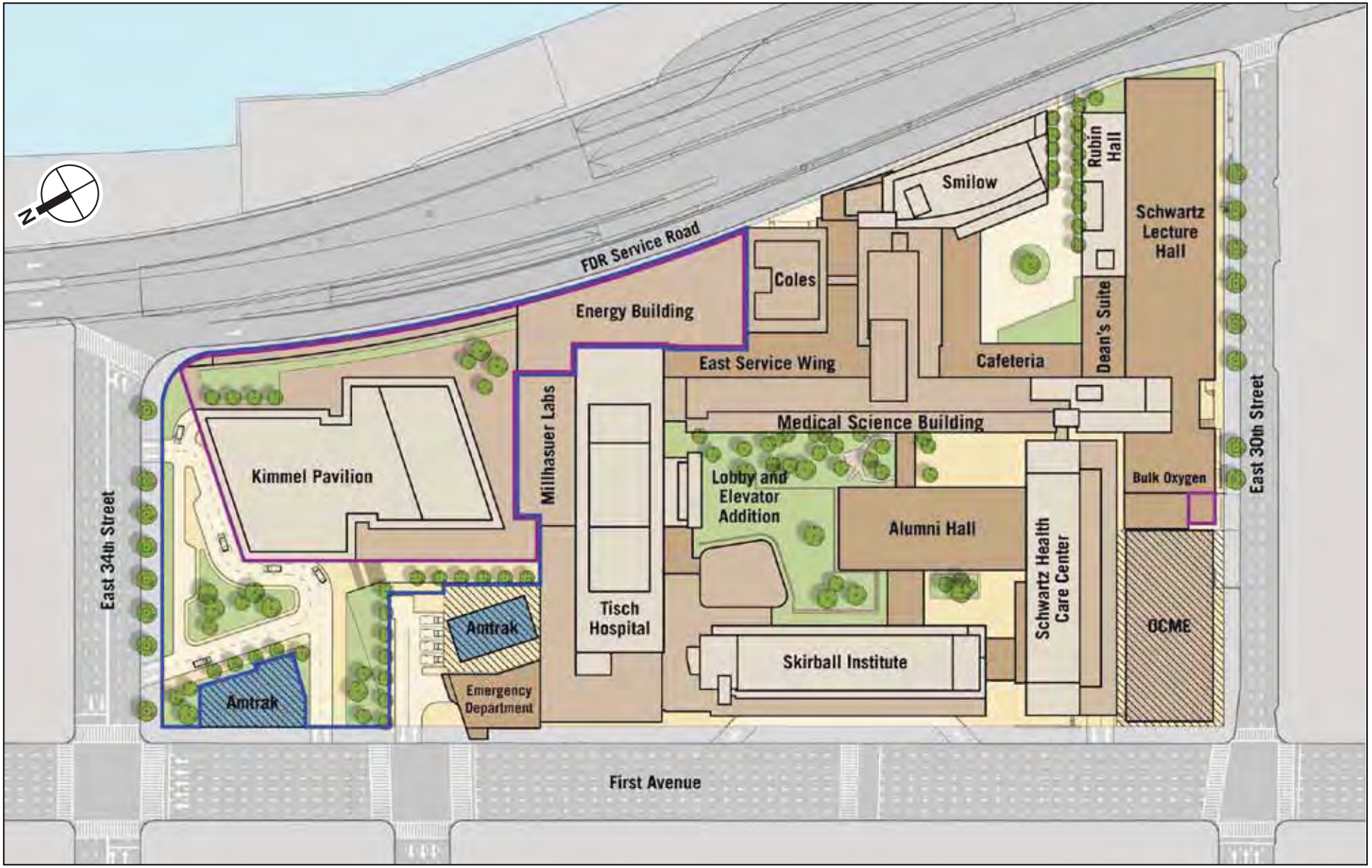

Project Site

Site of Proposed Buildings and Structures

Out Parcel

NYU Langone Medical Center Kimmel Pavilion and Energy Building

Proposed Campus Plan

Figure A-4

Perelman Building, the Auxiliary Pavilion, the Greenhouse, Horizon House, and the Visitors' Pavilion would need to be demolished and the 128 parking spaces at grade would need to be temporarily removed.

However, this site offers the most appropriate location because it is both large enough to accommodate the programmatic needs for large floor plates and adjacent to Tisch Hospital.

ENERGY BUILDING

The proposed location of the Energy Building mid-campus adjacent to Tisch Hospital would minimize its distance from the farthest buildings on the superblock and hence the lengths of the utility connections to those buildings (see Figure A-4, above). This location allows utility access to both the Kimmel Pavilion and the buildings to the south without passing through Tisch Hospital. Due to its age and low floor-to-floor heights, Tisch Hospital is already highly congested, making it exceedingly difficult to route new utilities through the building. As these utilities cannot cross from Kimmel Pavilion to Tisch at the lowest service levels due to the sewer easement, clinical programs would likely have to be displaced if it is necessary to create the utility connections through the building at a higher level.

Locating radiation oncology in the Energy Building on its second level would also allow it to be adjacent to the existing radiology department on the third floor in Tisch Hospital, providing direct access between the buildings for patients, doctors, and staff (see Figure A-5). Since the Energy Building is adjacent to the FDR Drive Service Road, this location would also provide the opportunity for ambulette access very close to the point of service.

In order to build the Energy Building at this site, the oxygen tank location would be relocated to the existing unenclosed truck docks on the former East 30th Street at the south end of the campus.

PROPOSED PROGRAM

KIMMEL PAVILION

Specific program elements to be provided by the design of the proposed Kimmel Pavilion include expansion of the surgical suite, including 20 new operating rooms, and 10 minimally invasive and image- and robot-guided procedure areas; intensive care, step-down and acute care beds (all 365 in private rooms); 40 to 42 NIBs; a dedicated entry, access, and Child Life activity space for Children's Services programs; related clinical and nonclinical support; as well as a parking garage for 140 cars. A total of 250 parking spaces would be provided on the main campus, exceeding the number required under the Indenture (described below).

As funds become available, bed relocation from Tisch Hosptial to the Kimmel Pavilion would allow bed floor renovations to be performed in Tisch Hospital to make double rooms into single private rooms, reducing the number of beds in Tisch from 468 to 251. Overall, the number of inpatient beds on the campus is expected to be the same as it is today.

ENERGY BUILDING

The proposed central plant within the Energy Building will include a CHP plant, primary electric service for the campus, and emergency generators—all of which have unusual height, weight, access and acoustical requirements. The plant is expected to contain the following equipment:

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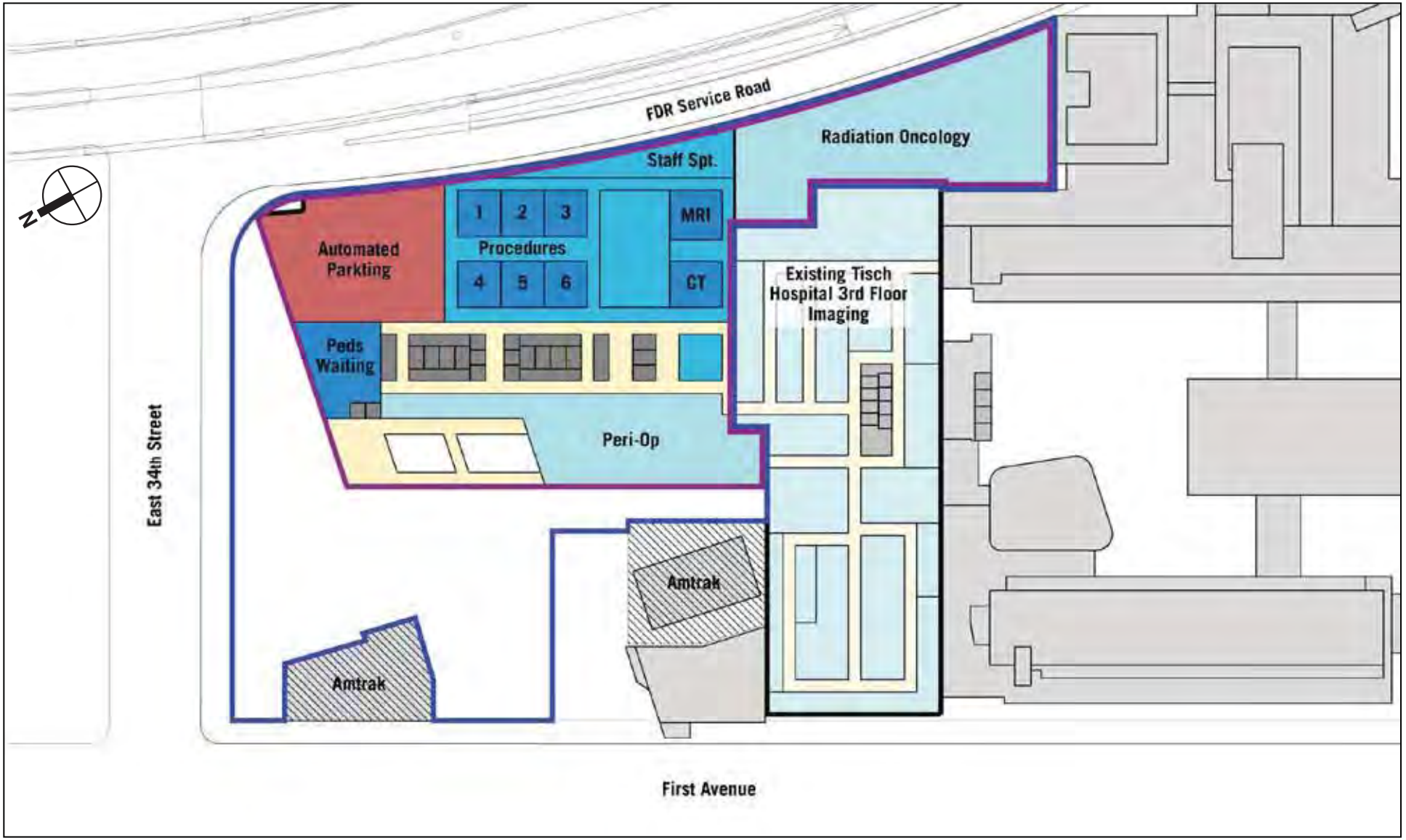

Project Site

Site of Proposed Buildings

Out Parcel

For Illustrative Purposes Only

Third Floor Plan

Figure A-5

- One 15 megawatt (MW) gas turbine, which would provide base load power for existing campus electrical power services (Tisch Hospital, Medical Science Building, Schwartz Health Care Center), as well as the proposed Kimmel Pavilion and Energy Building. The turbine will also provide for the entire campus steam load.
- Dual-fueled steam generating boilers to provide on-site steam to provide a reliable source of steam for heating in the event that the gas turbine is down for maintenance or unexpected outages.
- Isolation transformers to provide Con Edison feeders for electrical power to the campus.
- Feeders to distribute electrical power from the proposed Energy Building for connection to existing loads and the proposed Kimmel Pavilion.

The CHP plant and backup boilers would exhaust through a common stack to the Kimmel Pavilion. The stack height would be approximately 522 feet above datum. The CHP plant will help NYULMC fulfill its commitment to reducing GHG emissions. In addition, the proposed facility would increase the reliability of operations, insulate NYULMC from commodity and utility rate volatility, and reduce utility costs. The proposed electrical service would replace the existing electrical distribution system, the electrical transformers and switchgear and provide electrical capacity to support future growth and new medical technology. It would also enhance electrical system redundancy, which is paramount in supporting an acute care hospital and leading edge research institution.

Radiation Oncology would also be located in the Energy Building. As with the mechanical and electrical programs in the Energy Building, Radiation Oncology also has unusual requirements for height, weight, and isolation. To provide a shield from the radiation, the treatment equipment is housed within concrete vaults, four feet in thickness on all sides, top and bottom. As a result, floor-to-ceiling clearance of 20 feet and a floor strong enough to support heavy equipment is required. Further, the department could be accessible to an ambulette entrance off the FDR Drive Service Road, which could provide for direct internal access to the existing radiology department in Tisch Hospital. The Radiation Oncology program would include a waiting area, exam rooms, simulator and 2 to 3 linear accelerator treatment rooms, and support space.

PROJECT DESCRIPTION

KIMMEL PAVILION

Expected to be complete in 2017, the proposed Kimmel Pavilion would be an approximately 895,801-gsf building with a zoning floor area of approximately 687,731 sf. It would be linked to and function with the existing Tisch Hospital. It would allow integration of clinical programs, beds, and technology on the hospital campus.

The building has been designed to avoid site constraints including a high water table, four Amtrak tunnels, a sewer easement and poor soil conditions (see Figure A-3, above). These constraints preclude the construction of cellars (which are commonly used for mechanical and support space in hospital buildings) and limit the location of foundations and elevator and mechanical cores. As a result all hospital facilities, mechanical and support spaces must be located above grade, with minimal flexibility as to the footprint of the proposed buildings.

Access to the main entrance to the Kimmel Pavilion would be from First Avenue as well as East 34th Street (see Figure A-4, above, and Figure A-6). The addition of an entrance along First Avenue would provide more options for accessing the project site, which would distribute traffic

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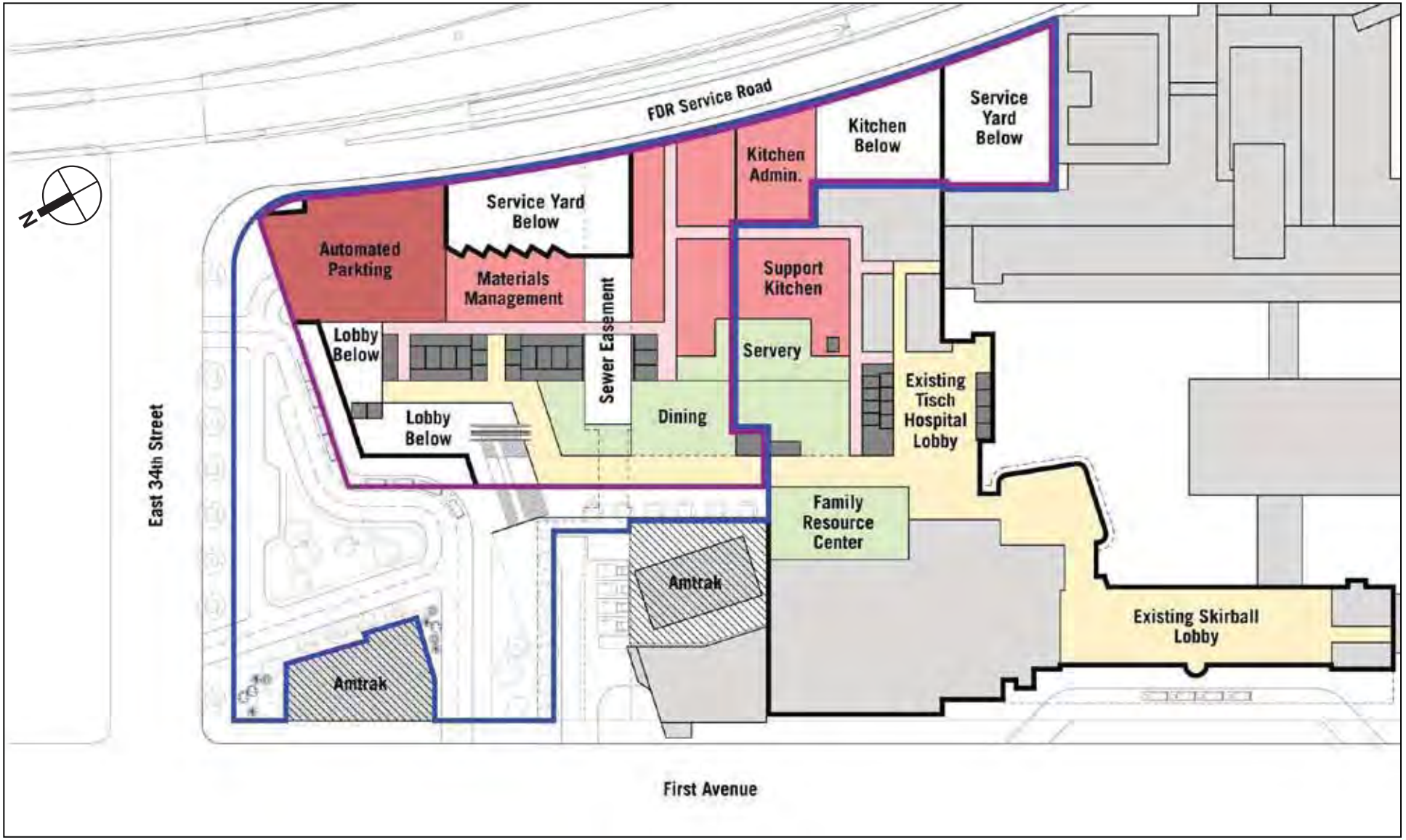

Project Site

Site of Proposed Buildings

Out Parcel

For Illustrative Purposes Only

Second Floor Plan

Figure A-6

more evenly throughout the roadway network in the study area. Landscaping of the entry area would provide a calming and comforting garden-like environment. Driveways on campus would lead to the Kimmel Pavilion entrance for drop-offs and to the parking garage. Pedestrians would enter at the northwest corner of the Kimmel Pavilion. From the entrance lobby visitors would go up one level to a public concourse providing a direct visual and physical connection to the lobby and elevators of Tisch Hospital and the central courtyard of the superblock. The proposed building would include services, amenities, a separate sky lobby for pediatric patients, and a roof terrace overlooking the East River at the 8th floor.

At the base of the building, the lower levels have large contiguous floor plates, with a concentrated building elevator and utility core surrounded by large amounts of space unconstrained by vertical penetrations. This base plan allows for the greatest flexibility to accommodate operating and procedure rooms now and in the future. The larger floor plate supports 10 to 12 operating or procedure rooms per floor and the associated pre-operative holding, recovery, and support areas (see Figure A-7). This arrangement provides an efficient cluster of procedure rooms in terms of staffing (surgeons, nurses, technicians, support personnel) and of management of patient flow and pre- and post-procedure care. Also located in the base of the building, the garage would provide 140 parking spaces with an automated system using trays to move cars.

Inpatient rooms would be located on floors 9 through 20, the bed tower of the building (see Figure A-8). Decentralized nursing stations would allow nurses to better observe patients. Rooms are designed for the patient bed and bathroom entrance to be seen from the hallway to facilitate observation. Multi-acuity beds and step-down beds would reduce the number of transfers or "hand-offs" of patients from unit to unit, thereby reducing the potential for errors. The bed tower would also contain two full mechanical levels and a small roof penthouse housing a stair and elevator.

Service access would continue to occur off the FDR Drive Service Road, but the service area would be expanded to eleven bays and organized into separate clean and soiled docks. Six clean receiving docks are to be housed within the Kimmel Pavilion footprint; the five existing docks within the Energy Building footprint will be maintained and used for waste removal. Three new 35,000 gallon below-grade fuel oil tanks will be located on the campus, either below the Kimmel Pavilion entrance plaza or within the area of the receiving docks.

The Kimmel Pavilion is expected to be sheathed in a glass curtain wall with terra cotta rain screens at certain locations (see Figures A-9 and A-10). The curtain wall would reach the full height of the building and screen the upper mechanical levels.

ENERGY BUILDING

The proposed Energy Building would be approximately 155 feet tall and would abut Tisch Hospital to the west and the Kimmel Pavilion to the north. A portion of the first floor would be left open to allow the five existing loading docks to be maintained. Access to the mechanical facilities would be from the FDR Drive south of the Kimmel Pavilion, and access to the Radiation Oncology department would be from Tisch Hospital. Exhaust from the CHP plant would be routed through the Kimmel Pavilion to a stack on the roof.

The CHP plant would provide steam and electric power for the NYULMC campus, including existing campus facilities, the proposed Kimmel Pavilion, as well as to accommodate potential future campus growth. The CHP would have a maximum potential capacity of 15 megawatts

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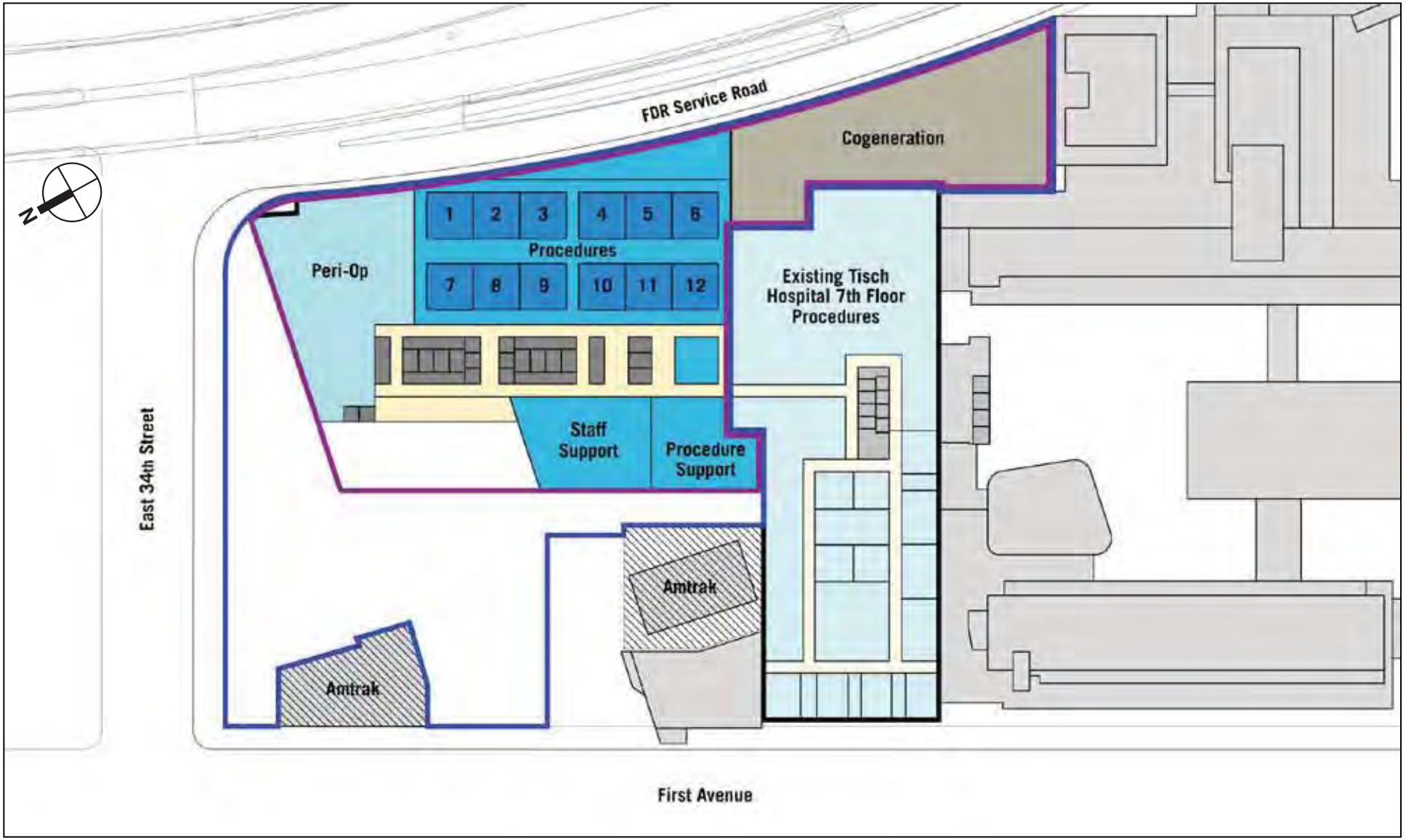


Project Site

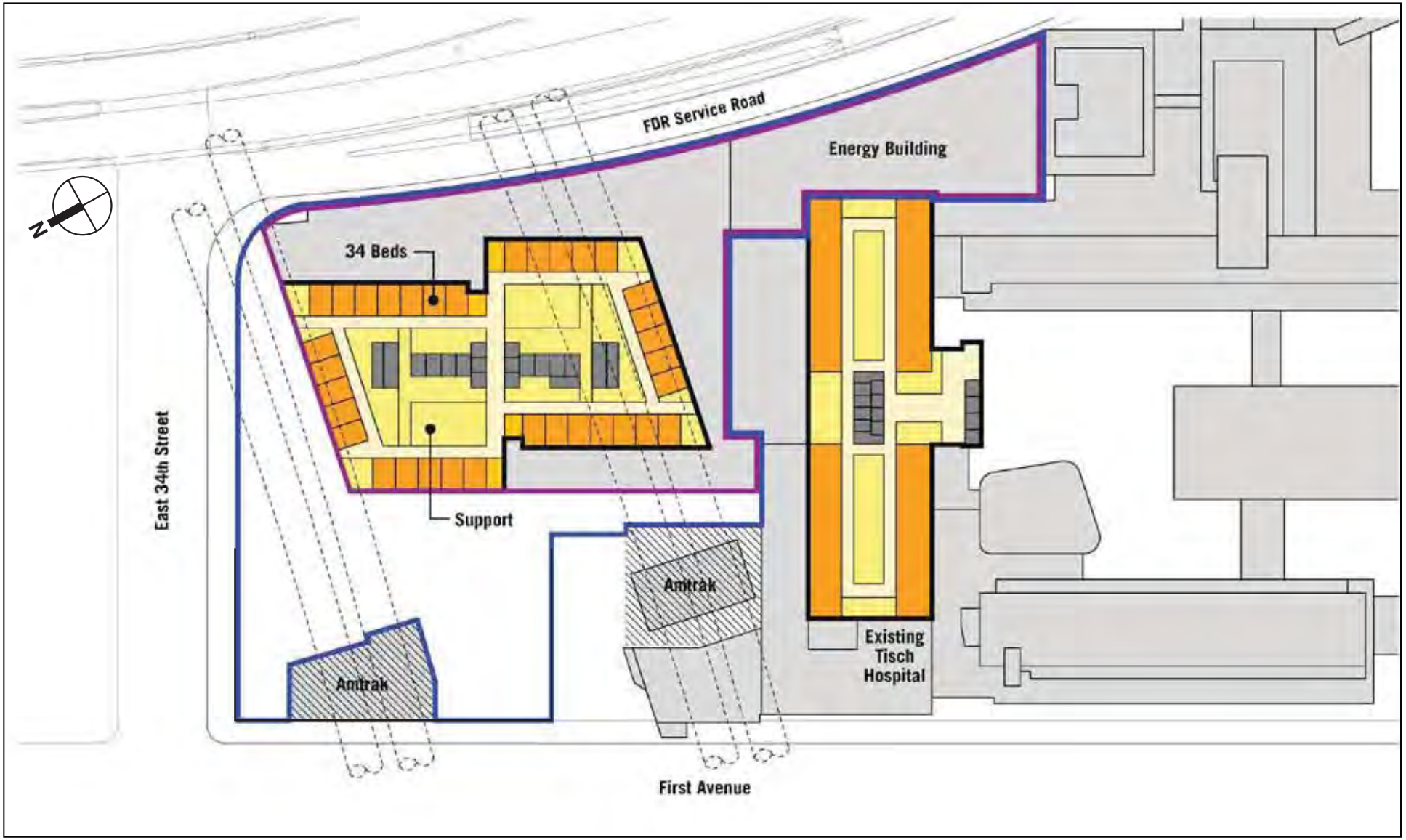
Site of Proposed Buildings

Out Parcel

For Illustrative Purposes Only

Sixth Floor Plan

Figure A-7



Project Site

Site of Proposed Buildings

Out Parcel

For Illustrative Purposes Only

Typical Bed Floor Plan

Figure A-8

For Illustrative Purposes Only

East 34th Street View
Figure A-9

9.20.10

For Illustrative Purposes Only

View from East River
Figure A-10

(MW), including a natural gas fired combustion turbine with a maximum heat input rating of 158 million British Thermal Units per hour (mmBtu/hr), with additional steam generated by a supplemental gas-fired duct burner rated at 82 mmBtu/hr using a heat recovery steam generator (HRSG). In addition to the CHP plant, a maximum of three 60,000 lb/hr dual-fuel back-up boilers would be used during periods when the CHP plant is not operating, due to scheduled CHP plant maintenance or other reasons. The backup boilers would fire natural gas with oil used only during the winter period when the utility gas supply is interrupted.

The CHP plant and back-up boilers would be housed in the Energy Building and the exhaust gases would be ducted through a common stack to the Kimmel Pavilion roof. The current design for the CHP exhaust is a 60 inch diameter insulated steel riser flue. It would exhaust vertically from the Energy Building and traverse horizontally through the 6th floor mechanical equipment room in the proposed Kimmel Building and transition vertically to a shaft opposite the patient elevators in the south core of the building. The flue would exit the building and terminate approximately 150 feet above the roof level. The flue would be designed in accordance with applicable codes and standards to provide proper draft for venting emissions and to avoid any fugitive leaks. The stack height for the 15 MW CHP would be approximately 522 feet above datum (524.6 feet above sea level).

The Energy Building and Kimmel Pavilion would each house diesel emergency generators. In its current proposed configuration, each building would have three generators, each rated at approximately 2.5 MW. The emergency generators would be tested periodically for a short period to ensure their availability and reliability in the event of a sudden loss in utility electrical power. They would not be utilized in a peak load shaving program, minimizing the use of this equipment during non-emergency periods. The exhausts from the generators would be located on the roof the buildings, at a minimum height of three feet above the roof.

BULK OXYGEN STORAGE TANKS

The campus bulk oxygen storage tanks currently located within the footprint of the Energy Building would be relocated to an available site on the former East 30th Street, currently used as two unenclosed loading berths. (The associated loading docks will be taken out of service, and the loading activity absorbed in the expanded dock facilities on the FDR Service Road.) The new oxygen storage facility would be enclosed within masonry walls with a metal gate facing the former East 30th Street.

E. CHANGES IN POPULATION

In the future without the proposed Kimmel Pavilion and the Energy Building, the population coming to the campus is expected to grow as shown on Table A-1. Absent the proposed project, NYULMC will build a new hospital pavilion in an as-of-right configuration that complies with all zoning requirements. The complying building will incorporate many of the functions intended for the Energy Building. A new, expanded and improved Emergency Department to be completed in 2013 is anticipated to serve the projected growth in Emergency Department visits. However, some other departments would become more crowded in their existing facilities.

The proposed Kimmel Pavilion is not being designed to increase the campus population, but rather to better accommodate the programs. Accordingly, no incremental population is expected to result from the proposed Kimmel Pavilion. The existing Radiation Oncology uses to be relocated to the proposed Energy Building would not result in any new users.

In the future both without and with the proposed action, some existing departments would be moved to other locations. Some research programs are moving off campus to a variety of locations including 180 Varick Street, the Veterans Administration Hospital and Public Health Building. Outpatient Care is moving off campus to various locations between East 17th and East 39th Streets between First Avenue and Park Avenue. Inpatient rehabilitation medicine beds are moving from the existing Rusk Institute building to vacancies at HJD.

Table A-1
NYU Langone Medical Center Superblock Population Table

Type	2010 Existing Conditions	2017 Future Conditions without the Proposed Action	2017 Future Conditions with the Proposed Action	Net Increment
Physicians[1]	748	809	809	0
Staff[2]	4,375	4,957	4,957	0
Medical Students	664	640	640	0
Nursing Students	100	100	100	0
School of Medicine Employees[3]	6,867	7,396	7,396	0
Inpatients admitted and Outpatients	1,200	1,362	1,362	0
Patient Visitors (Inpatient and Outpatient)	3,600	4,086	4,086	0

Notes:
[1] Includes hospital Physicians Headcount and Visiting Physicians.
[2] Includes laboratory and technical staff, house staff, RNs, and nursing attendants, reported in Full Time Equivalents (FTEs).
[3] Includes researchers, educators, post-doctorates, administrators, and corporate services.
Source: NYU Langone Medical Center. Typical daily weekday population, based existing conditions and on full occupancy of the No Action building and the proposed buildings.

F. PROPOSED ACTION

DISCRETIONARY APPROVALS SUBJECT TO CEQR

The NYULMC campus is located in an R8 zoning district. In order to build the Kimmel Pavilion and the Energy Building as proposed, variances are being sought from BSA to waive the following:

- Required rear yard and rear yard equivalent pursuant to Section 24-36 and 24-382;
- Initial setback distance and sky exposure plane required pursuant to Section 24-522,
- Required rear yard setback pursuant to Section 24-552;
- Tower coverage of previously approved towers under Section 24-54;
- Maximum permitted 100 accessory parking spaces required pursuant to Section 13-132 and minimum 200 sf per accessory parking space required pursuant to Section 25-62; and
- Curb cuts to accessory parking on wide streets in Section 13-142.

ADDITIONAL PERMITS AND APPROVALS

The proposed Kimmel Pavilion requires a Certificate of Need from the New York State Department of Health (NYSDOH). The Energy Building also requires permits to construct and certificates to operate from NYCDEP and an air facility permit or registration from the New York State Department of Environmental Conservation (NYSDEC). Modification of a NYCDEP sewer easement is also required.

In addition, NYULMC is seeking funding from the Dormitory Authority of the State of New York (DASNY). DASNY's action would consist of its authorization of the issuance of

Dormitory Authority obligations on behalf of NYULMC, the proceeds of which would be used to finance the proposed project.

Approval from Amtrak is also required to construct above and adjacent to railroad tunnels beneath the project site. However, this approval is not subject to environmental review.

OTHER RESTRICTIONS

The City and New York University entered into an Indenture in 1949 when the City conveyed the street beds of East 31st, East 32nd, and East 33rd Streets to New York University to create the campus. The Indenture requires, among other things, that no building on the campus be higher than 25 stories, that lot coverage on the campus not exceed 65 percent, and that at least 235 parking spaces be provided. The Kimmel Pavilion and the Energy Building have been planned to comply with these restrictions.

G. FRAMEWORK FOR ANALYSIS

SCOPE OF ENVIRONMENTAL ANALYSIS

This document has been prepared in accordance with the guidelines presented in the *CEQR Technical Manual*. For each technical area, the analysis includes a description of existing conditions, an assessment of conditions in the future without the proposed action, and an assessment of future conditions with the proposed Kimmel Pavilion and Energy Building.

BASELINE CONDITIONS

EXISTING CONDITIONS

The analysis framework begins with an assessment of existing conditions on the project site and in the relevant study area because these can be most directly measured and observed. The assessment of existing conditions does not represent the condition against which the proposed project is measured, but serves as a starting point for the projection of future conditions with and without the proposed action and the analysis of project impacts.

THE FUTURE WITHOUT THE PROPOSED ACTION

The future without the proposed project (the "No Action" condition) describes a future baseline condition to which the changes that are expected to result from the proposed action are compared. For each technical analysis, approved or designated development projects within the appropriate study area that are likely to be completed by the 2017 analysis year are considered.

NYULMC Main Campus

In the future without the proposed action, NYULMC has determined that its needs are so great that it would build a new hospital pavilion in an as-of-right configuration that complies with all the zoning requirements (see Figure A-11). It would also incorporate many of the functions intended for the Energy Building. However, as described below, it would be far less suitable and efficient in meeting NYULMC's needs than the proposed Kimmel Pavilion and the separate Energy Building.

The required setbacks would reduce the number of operating and procedure rooms per floor. This would reduce the desired flexibility and efficiency of the building. Due to the need to have

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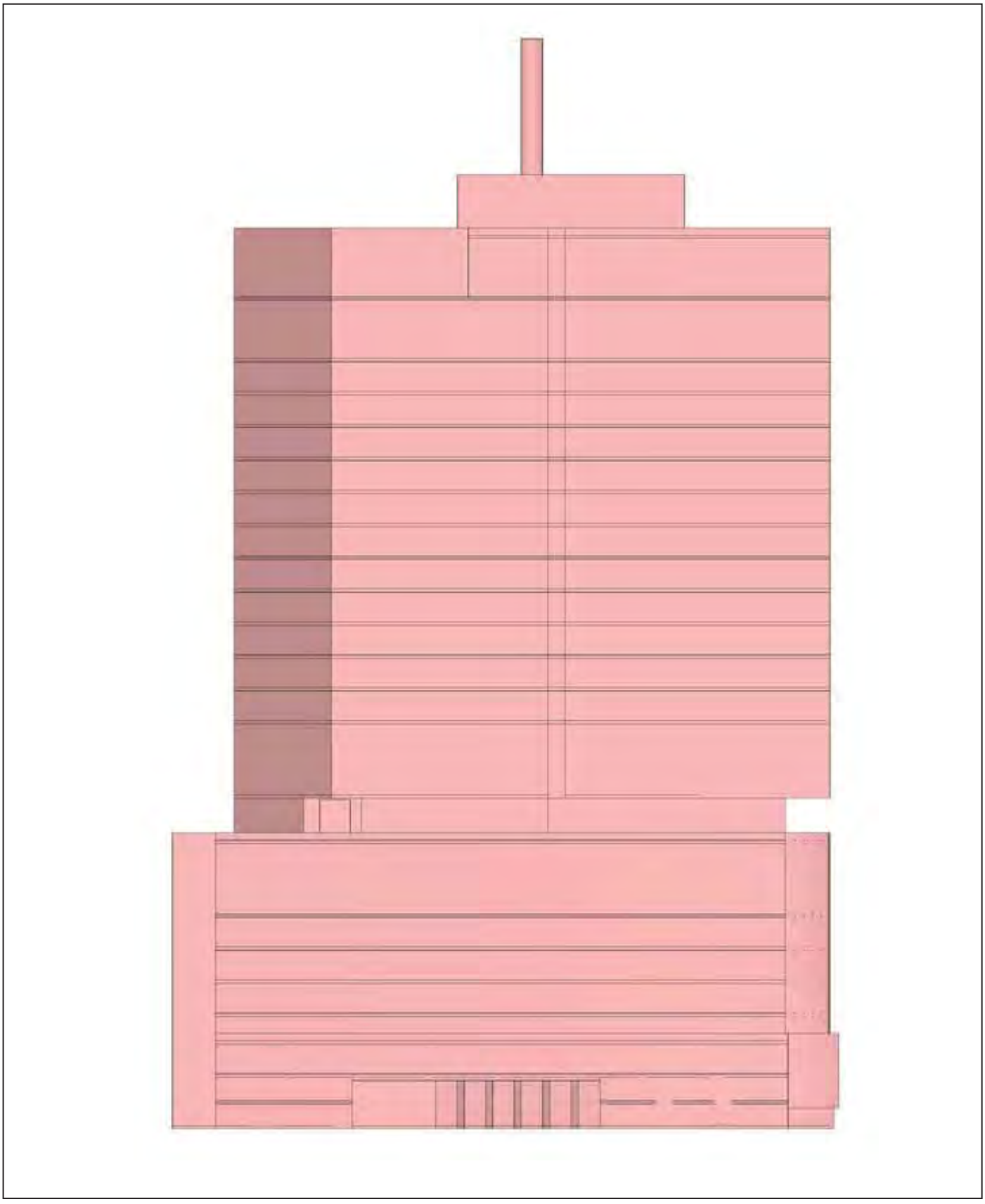


For Illustrative Purposes Only

East Elevation of No Action Building

Figure A-11

all procedure floors identical in size and layout, the No Action building would reduce the overall clinical area available on the third floor, one of the most important and valuable clinical floors on the campus. In the No Action building, the Radiation Oncology department would not align with or have the desired adjacency to the radiology department on the second level of Tisch Hospital as it would if it were located in the proposed Energy Building. The opportunity for shared staffing and equipment would be lost.

Placing major infrastructure items such as the CHP plant, campus electrical service, and radiation oncology vaults in the Kimmel Pavilion would increase the size of the mechanical core, reduce clinical area, and permanently limit the flexibility of the building. Being part of the larger building, the Energy Building functions, including cogeneration, would come online later than with the proposed Energy Building. They would have poor connectivity to the rest of the campus and be further from the buildings that they would serve at the south end of the superblock. Further, radiation oncology vaults, even using the most sophisticated of shielding materials, are at a minimum of 4 feet thick on all 6 sides of the room. Vaults are considered permanent elements in the building with the structure embedded in the shielded walls. To remove a vault in the future for a change in clinical use would be impossible while maintaining adjacent clinical operations. Because of the shielding required below the radiation oncology vaults to protect areas below, if located above the first floor, the space on the level below usually becomes unoccupiable because of the intrusion into the functional space (unless very high—and costly—floor-to-floor height is provided).

Further, the equipment intended for the Energy Building typically introduces noise, vibration and potential for low frequency radiation interference with sensitive medical equipment. All of these require remediation or attenuation within a hospital structure. The exceptionally high floor-to-floor requirements required for the Energy Building functions would create complications on floors above.

The emergency generator would have to be placed on the roof of Tisch Hospital and an exterior riser tower would have to be created to connect the new plant to existing electrical equipment. The rooftop location would be difficult to access and inconvenient to operate.

Access to the No Action building would be located along East 34th Street, requiring that all traffic to the No Action building travel through the intersection of East 34th Street and First Avenue. The location of the existing curb cuts along East 34th Street would constrain queuing for valet parking and drop offs, creating lane blockages along the on-site access road as well as queues that could block access to the parking garage. The existing curb cut locations would also restrict on-site traffic circulation by creating sharp curves for vehicle access to the No Action building, which could also result in queuing issues.

Surrounding Area

On the campus but independent of the proposed project, NYULMC has received approval to expand and improve its Emergency Department in order to meet the growing needs of the population and to provide separate facilities for the pediatric patients. This expansion is expected to be completed by 2013.

Adjacent to the campus major transportation initiatives are expected to improve transit along both 34th Street and First Avenue. The 34th Street Transitway project is expected to create a set of fully protected bus lanes from the FDR Drive to Twelfth Avenue, as well pedestrian crossing islands and sidewalk expansions to address pedestrian safety needs. East of Fifth Avenue the bus lanes would be on the north side of 34th Street, while general traffic would flow eastbound on

the south side of the street. The Transitway is expected to be operational in 2012. Starting in October 2010, the New York City Department of Transportation (NYCDOT) and the Metropolitan Transportation Authority (MTA) is expected to inaugurate Select Bus Service on First and Second Avenues. There will be curb side bus lanes as well as bike lanes and pedestrian safety islands.

South of the campus, the first phase of the Alexandria Center for Science and Technology is expected to open as the first phase of East River Science Park, a project planned to support the development biotechnology in New York City. In addition to laboratory space, the Alexandria Center will provide a public plaza overlooking the East River at the cul-de-sac on the east end of 29th Street. The recent creation of an ambulance entrance from First Avenue into the Bellevue Emergency Department has rerouted some ambulances away from East 30th Street and the FDR Service Road which was previously the only access route. A previously approved project that would have converted the Bellevue Psychiatric Building (which currently serves as a homeless shelter) to a hotel and conference facility has recently been cancelled.

North of the East 34th Street, a public school was approved for construction at 616 First Avenue between East 35th and East 36th Streets with a 2012 completion date. A residential building was also approved for that block but further east and closer to the FDR, and it assumed to be complete by 2017.

PROBABLE IMPACTS OF THE PROPOSED ACTION

The identification of potential environmental impacts is based upon the comparison of the No Action condition to the future with the proposed action. In certain technical areas (e.g., traffic, air quality, and noise) this comparison can be quantified and the severity of impact rated in accordance with the *CEQR Technical Manual*. In other technical areas, (e.g., neighborhood character) the analysis is qualitative in nature. The methodology for each analysis is presented at the start of each technical analysis. As summarized in the following attachments, the proposed action would not result in any significant adverse impacts. ✷

A. INTRODUCTION

The two new buildings that the NYU Langone Medical Center (NYULMC) proposes to develop on its main campus would house hospital functions, a combined heat and power (CHP) plant, and radiation oncology. Medical facilities associated with NYU have occupied the superblock on which the project site is located for many years. The proposed use is consistent with the traditional and dominant uses on the superblock, and compatible with surrounding uses in the study area. However, the buildings require approvals from the Board of Standards and Appeals (BSA), including waivers of applicable rear yard, rear yard equivalent, setback and sky exposure plane, tower coverage, parking, and curb cut requirements.

This section describes land use, zoning, and public land use policies in relation to the project site and surrounding ¼-mile study area to set the context for the other analysis areas and to consider any potential impacts associated with the requested BSA actions.

B. EXISTING CONDITIONS

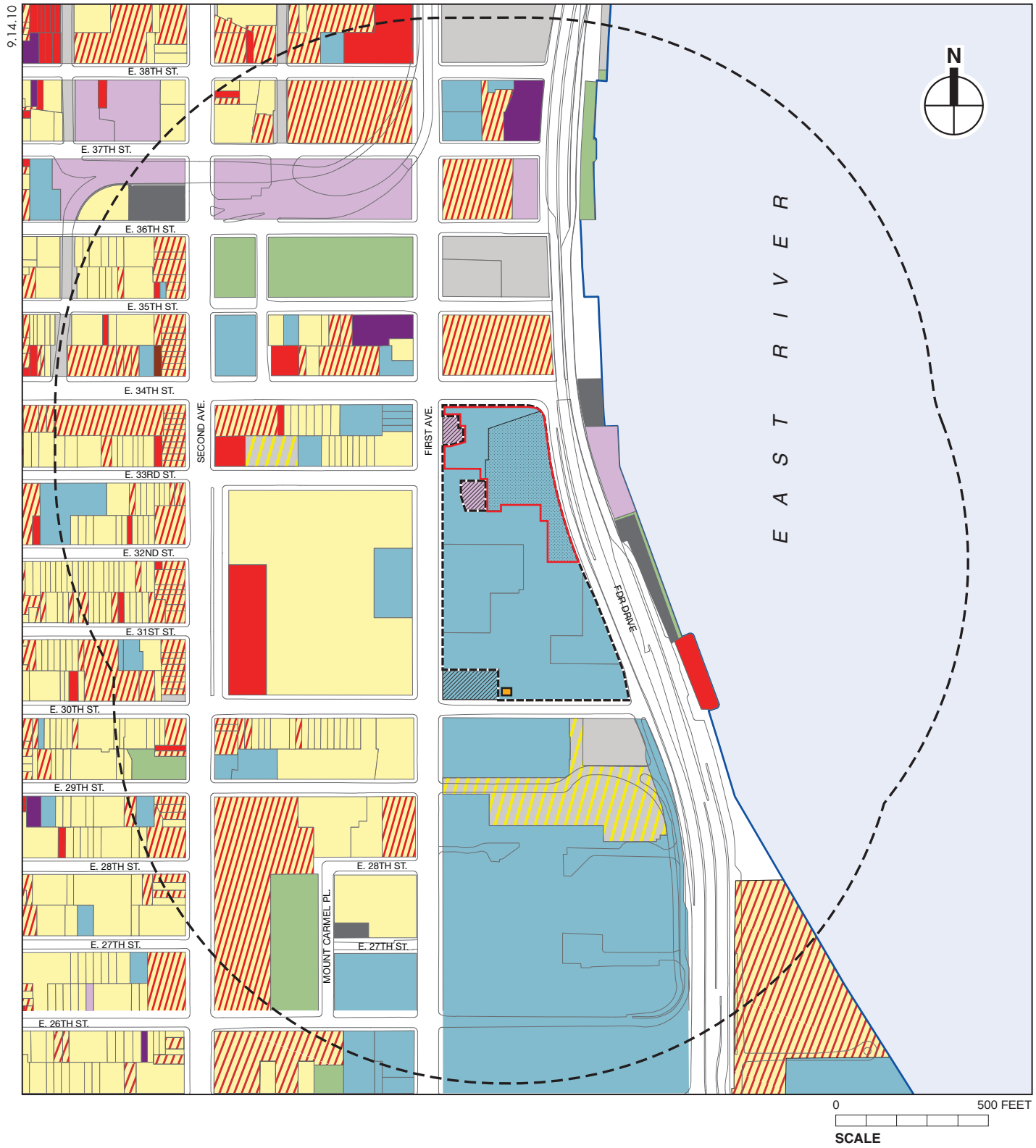
LAND USE

PROJECT SITE

The project site currently contains seven buildings, as well as a landscaped courtyard, at-grade parking, and loading areas. The buildings on the project site include the Rusk Institute for Rehabilitative Medicine, the Perelman Building, the Auxiliary Pavilion, the Greenhouse, Horizon House, Visitor's Pavilion, and the North Service Wing. There is access to the Rusk Institute entrance from First Avenue. Except for the North Service Wing, the other buildings are not accessible other than through Rusk Institute or other campus buildings. The North Service Wing is accessible for deliveries and removals through the loading area that opens onto the Franklin D. Roosevelt (FDR) Drive Service Road.

The site of the proposed Kimmel Pavilion and Energy Building is part of the larger campus superblock of NYULMC that is bounded by First Avenue and the FDR Drive and East 30th and 34th Streets (see Figure B-1). This campus houses the NYU School of Medicine (NYUSOM), Tisch Hospital, and Rusk Institute of Rehabilitation Medicine (Rusk Institute).

The proposed Kimmel Pavilion and Energy Building would be located on the northeast portion of the superblock, at East 34th Street and along the FDR Drive. In addition, a bulk oxygen storage structure would be constructed on the former East 30th Street. Currently, there are several buildings on the project site, including Rusk Institute. There are also 128 at-grade parking spaces at the northeast corner of the campus, as well as loading areas along the east side of the site facing the FDR Drive Service Road.



- Project Site Boundary
- Site of Proposed Buildings
- Bulk Oxygen Site
- Zoning Lot Boundary
- Out Parcel
- Study Area Boundary (1/4-Mile Perimeter)
- Residential
- Residential with Commercial Below
- Hotels
- Commercial and Office Buildings
- Industrial and Manufacturing
- Transportation and Utility
- Public Facilities and Institutions
- Open Space and Outdoor Recreation
- Parking Facilities
- Vacant Land
- Vacant Building
- Under Construction

NYU Langone Medical Center Kimmel Pavilion and Energy Building

Land Use
Figure B-1

There are three outparcels on the superblock that are not part of the NYULMC zoning lot—two small parcels that are owned by Amtrak along First Avenue near East 33rd and East 34th Streets and a third at the corner of the former East 30th Street and First Avenue where a building belonging to the Office of Chief Medical Examiner (OCME) of the City of New York is located.

STUDY AREA

The study area contains a mix of medical institutional, non-medical institutional, residential, retail, open space, and transportation uses.

Institutional uses, primarily related to medicine and research, predominate along the east side of First Avenue. South of East 30th Street, the former Bellevue Hospital Psychiatric Building is a 9-story brick building now used as a homeless shelter for men. Located at the southeast corner of First Avenue, the building has been the 30th Street Men's Shelter since 1985. The shelter is operated by the New York City Department of Homeless Services.

South of the shelter is the 6-story former Bellevue R&S Building, which sits at the southeast corner of First Avenue and East 29th Street. It was renovated for use as a children's health facility and is currently occupied by the Administration for Children's Service, a City agency.

The campus of Bellevue Hospital Center extends from East 29th Street south to East 26th Street along the east side of First Avenue. Run by the New York City Health and Hospitals Corporation, the hospital has more than 800 beds and is a Level I Trauma Center. Bellevue is a primary teaching hospital of the New York University (NYU) School of Medicine and an integral component of the NYULMC Residency Programs. NYU faculty began conducting clinical instruction at Bellevue in 1847. In 1968 the NYU School of Medicine assumed complete responsibility for Bellevue's clinical services.

Directly across First Avenue from the campus is NYULMC Arnold & Marilyn Greenberg Hall, a residence hall. Other NYULMC outpatient facilities can be found in buildings in the northern part of the study area, at 333 East 38th Street and 660 First Avenue.

The health care corridor continues south of Bellevue Hospital. This area includes the Hunter College Brookdale Health Science Center between East 25th and East 26th Streets and a New York City Department of Health (NYSDOH) Public Health Laboratory at 26th Street and First Avenue. Although just outside the study area boundary, another major facility is the 18-story Veterans Administration Hospital between East 23rd and East 25th Streets.

Additional institutional uses within the study area include the Churchill School and Center on East 29th Street, the Chapel of the Sacred Hearts of Jesus and Mary on East 33rd Street, St. Vartan Armenian Cathedral on Second Avenue between East 34th and 35th Streets, Engine Company 16/Ladder Company 7 on East 29th Street, and the Chinese Mission to the United Nations at the corner of East 34th Street and First Avenue.

Residential uses are also found throughout the study area, which contains a mix of large residential towers and smaller scale apartments. Kips Bay Towers has two 21-story residential buildings along East 33rd Street and East 30th Street between First and Second Avenues. Between the two buildings is a private courtyard. A second large residential complex is Henry Phipps Plaza, which spans from East 26th to East 29th Streets along Second Avenue. Other large residential buildings in the study area include the 35-story Rivergate at East 34th Street and First Avenue; the Corinthian, a 55-story apartment building that occupies the block between East 37th and 38th Streets and First Avenue and the Queens-Midtown Tunnel approach; Manhattan

Place at 630 First Avenue; and the Horizon, at 415 East 37th Street. Smaller scale apartment buildings and row houses line the remainder of the blocks west of First Avenue.

Commercial uses in the study area are concentrated in the ground floors of buildings along First and Second Avenues and in a commercial strip, Kips Bay Center, on the east side of Second Avenue from East 30th Street to East 32nd Street. The Water Club restaurant is located on the outboard side of the East River Esplanade north of East 30th Street. A heliport is located along the river at East 34th Street, and various ferries operate from the piers at East 35th Street.

There are three City-owned parks and playgrounds within the project's study area. St. Vartan Park, on the blocks bounded by East 35th and East 36th Streets and First and Second Avenues, is bisected by one of the access roads for the Queens-Midtown Tunnel. It includes play fields, basketball and handball courts, sitting areas, and a playground. Bellevue South Park, a 1.76 acre open space extending along Mt. Carmel Place north of East 26th Street, features basketball courts, playground and fitness equipment, and other amenities. The third City-owned open space is the Albano Playground at the corner of Second Avenue and East 29th Street. Other open spaces in the study area include esplanade areas along the waterfront from East 36th to 38th Street and in the area between the heliport and the Water Club restaurant. Privately owned publicly accessible open spaces are associated with some of the larger residential buildings in the study area, such as the Rivergate, Corinthian, and Manhattan Place developments.

The Queens-Midtown Tunnel is a major presence in the northern part of the study area. Access ramps and roadways, and the portal of the tunnel itself, span the blocks between East 36th and East 37th Streets west of First Avenue.

ZONING AND PUBLIC POLICY

PROJECT SITE

The project site is located in an R8 district (see Figure B-2). The maximum floor area ratio (FAR) in R8 districts ranges from 0.94 to 6.02 for residential uses, and 6.5 FAR for community facility uses such as hospitals and educational instructions. Apartment houses in these districts can range from mid-rise, 8- to 10-story buildings to narrower, taller buildings set back from the street. Building heights are governed by the required sky exposure plane.

STUDY AREA

The entire NYULMC campus is in the R8 district. The maximum permitted floor area on the superblock in which the project site is located is 2,655,322 sf, and the existing built floor area is 2,048,042 sf. Beyond the NYULMC, the study area includes C1-9, C1-9A, C4-6, C5-2, and C6-2 commercial zoning districts, as well as R7B, R8, R8A, and R8B residential zoning districts.

C1-9 and C1-9A commercial districts are predominantly residential in nature, and typical uses include grocery stores, dry cleaners, restaurants, and clothing stores that cater to the needs of the local community. The maximum commercial FAR in both districts is 2.0, and the maximum residential FAR is 10.0 (up to 12.0 with inclusionary housing). The residential district equivalent for C1-9 districts is R10, while the equivalent for C1-9A is R10A.

C2-5 districts are intended to serve a wide neighborhood, and permit uses that could not be supported by small neighborhoods. In the study area they are mapped as an overlay in R8 and R9 districts and thus have a maximum commercial FAR of 2.0.

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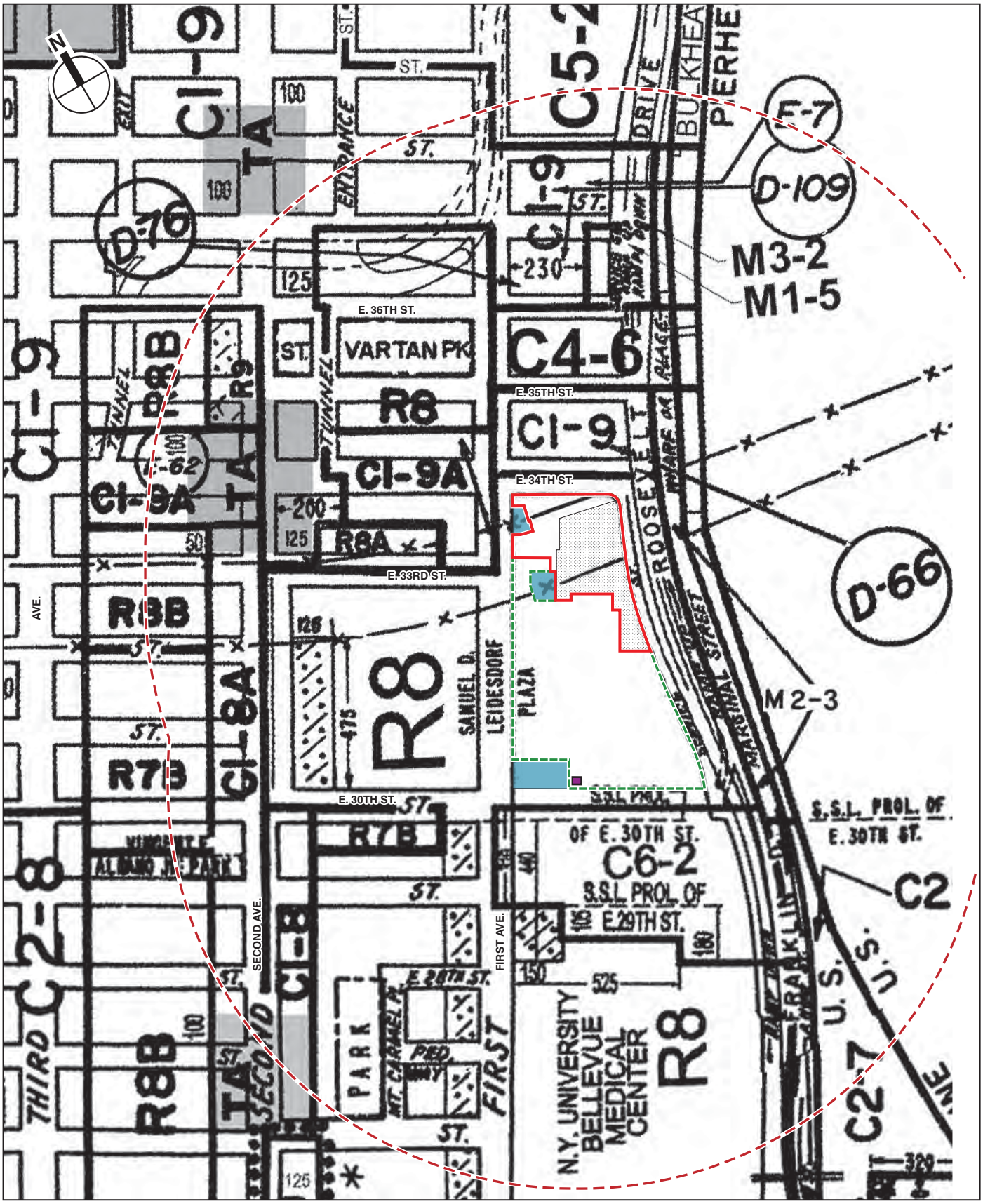


Project Site Boundary
Site of Proposed Buildings
Bulk Oxygen Site
Zoning Lot Boundary
Out Parcel
Study Area Boundary (1/4-Mile Perimeter)
Zoning District Boundary
Special Purpose District
C2-5 Overlay

0 200 500 FEET
SCALE

Zoning
Figure B-2

C4-6 districts have a maximum commercial FAR of 3.4 and a maximum residential FAR of 10.0 (up to 12.0 with inclusionary housing). The residential district equivalent for C4-6 districts is R10.

C5-2 districts have a maximum commercial FAR of 10.0 and a maximum residential FAR of 10.0. The residential district equivalent for C5-2 districts is R10. C6-2 districts have a maximum commercial FAR of 6.0 and a maximum residential FAR of 0.94 to 6.02. The residential district equivalent for C6-2 districts is R8.

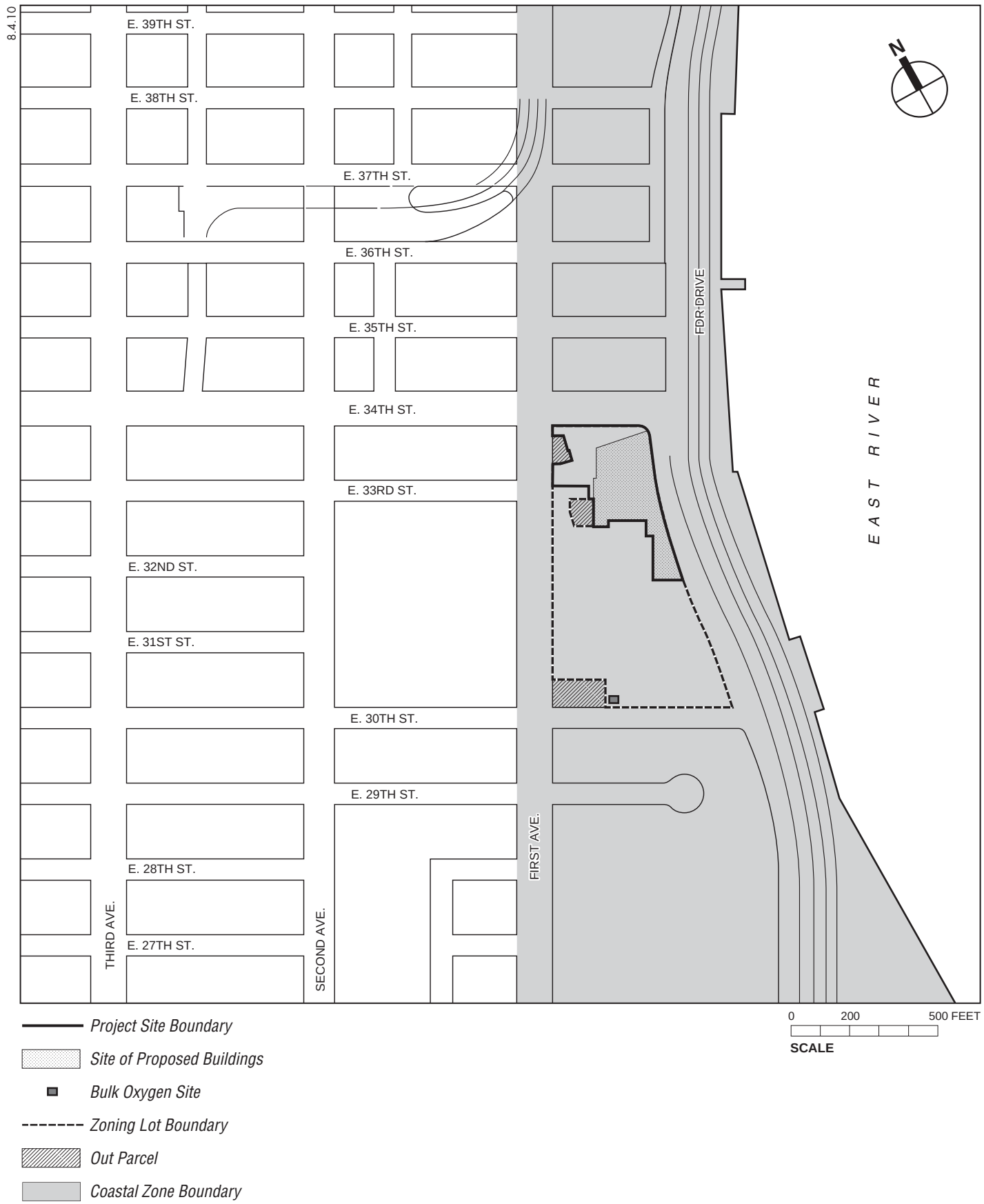
R7B residence districts are mapped on certain study area midblocks. The maximum FAR is 3.0, building heights cannot exceed 75 feet, and parking is required for 50 percent of dwelling units. R8 residential districts are described above. R8A districts have a maximum FAR of 6.02. Like R8 districts, parking is required for 40 percent of the dwelling units, but this requirement is waived if 15 or fewer parking spaces are required or if the zoning lot is 10,000 square feet (sf) or less. Community facilities are also permitted as-of-right in R8A districts. R8B districts are also mapped on certain midblocks within the study area. Similar to R7B districts but with a higher FAR, for R8B contextual residence districts the maximum FAR is 4.0, building heights cannot exceed 75 feet, and parking is required for 50 percent of dwelling units.

WATERFRONT REVITALIZATION PROGRAM

The site of the proposed project is located entirely within the Coastal Zone designated by New York State and City (see Figure B-3). For this reason, the project is subject to a review for compliance with the City's Coastal Zone management policies. This section provides a description of existing Coastal Zone policies and the City's Waterfront Revitalization Program (WRP).

The Federal Coastal Zone Management (CZM) Act of 1972 was established to support and protect the distinctive character of the waterfront, and to establish policies for the Coastal Zone Management. In 1982, New York State adopted its own state Coastal Management Program, designed to balance economic development and preservation in the Coastal Zone by promoting waterfront revitalization and water-dependent uses while protecting fish and wildlife, open space and scenic areas, public access to the shoreline and farmland, and minimizing adverse changes to ecological systems and erosion and flood hazards. The State program allows for local implementation of a plan when a municipality adopts a local waterfront revitalization program. New York City adopted its first plan in 1982. The State program encourages coordination among all levels of government to promote sound waterfront planning and requires consideration of the program's goals in making land use decisions. Since the City has adopted local waterfront revitalization program, the New York State Department of State (NYSDOS) administers the program at the State level, and the New York City Department of City Planning (NYCDCP) administers it in the City.

Because the proposed project is located within the City's Coastal Zone, it is subject to the policies of the *New York City WRP*. The City's WRP was originally adopted in 1982 and approved by NYSDOS for inclusion in the New York State Coastal Management Program. The WRP establishes the City's policies for development and use of the waterfront and provides a framework for evaluating activities proposed in the Coastal Zone. The City's WRP was amended in 1999 to 10 consolidated policies. This amendment was adopted by the City Council in October 1999. In May 2002, NYSDOS approved the City's amended WRP, and the United States Department of Commerce concurred in August 2002. This chapter reviews the New York City Coastal Zone policies and assesses the consistency of the proposed project with the policies. A discussion of the proposed project's consistency with those policies is included below in the



Coastal Zone Boundary
Figure B-3

section "Probable Impacts of the Proposed Project." The *WRP Coastal Assessment Form* is included as Appendix A.

C. THE FUTURE WITHOUT THE PROPOSED ACTION

LAND USE

PROJECT SITE

As described in greater detail in Attachment A, "Project Description," the future without the proposed action (the "No Action" condition) assumes that none of the discretionary approvals are obtained, but that because of its needs for new inpatient rooms, procedure rooms, and other improvements, NYULMC would build a new hospital pavilion in an as-of-right configuration. The pavilion would also incorporate many of the functions intended for the Energy Building. However, it would be far less suitable and efficient in meeting NYULMC's needs than the proposed Kimmel Pavilion and the separate Energy Building.

On the campus but independent of the proposed project, NYULMC has obtained (July 2010) approvals from BSA to expand and improve its Emergency Department (ED) by 2013 in order to meet the growing needs of the population and to provide separate facilities for the pediatric patients. This expansion is expected to be completed by 2013.

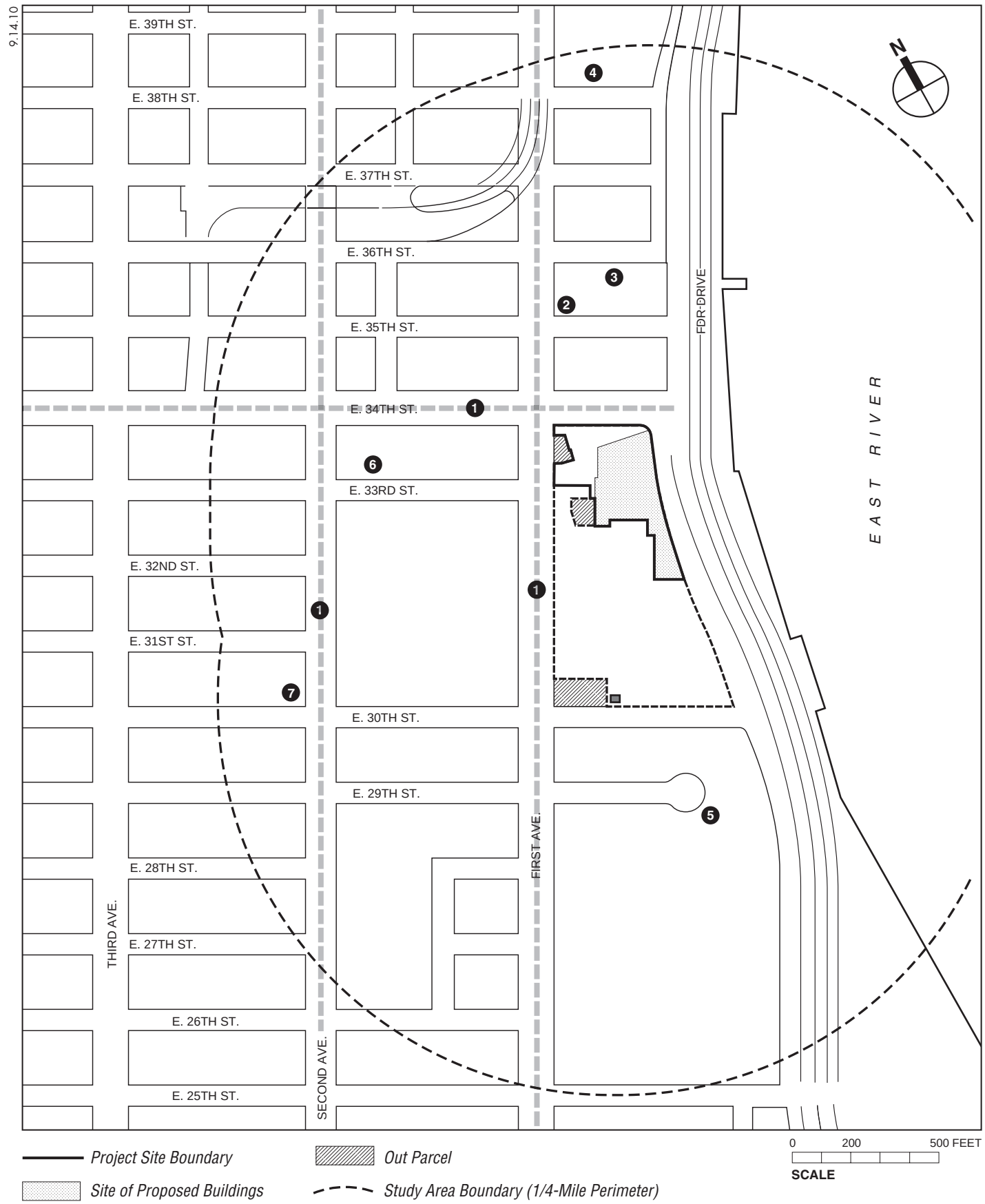
In addition, as described below, other projects are expected to be completed in the study area.

STUDY AREA

Several projects are planned or underway that may be completed by the project build year of 2017 (see Figure B-4 and Table B-1).

Adjacent to the campus, major transportation initiatives are expected to improve transit along both 34th Street and First Avenue. The 34th Street Transitway project is expected to create a set of fully protected bus lanes from the FDR Drive to Twelfth Avenue, as well pedestrian crossing islands and sidewalk expansions to address pedestrian safety needs. East of Fifth Avenue the bus lanes would be on the north side of 34th Street, while general traffic would flow eastbound on the south side of the street. The Transitway is expected to be operational in 2012. Starting in October 2010, the New York City Department of Transportation (NYCDOT) and the Metropolitan Transportation Authority (MTA) is expected to inaugurate Select Bus Service (SBS) on First and Second Avenues. SBS is New York City Transit's new, innovative bus service introduced in June 2008. It is designed to reduce travel time and increase the level of comfort for customers, and for the First and Second Avenue SBS, improvements are planned to include the following elements: curbside bus lanes; off-board fare collection; bike lanes on both avenues, and pedestrian safety islands at selected intersections below 34th Street to help reduce crossing distances for pedestrians.

South of the campus, the first phase of the Alexandria Center for Science and Technology is expected to open in 2011 as the first phase of East River Science Park, a project planned to support the development of biotechnology in New York City. One of the three research buildings (the East Tower) has been substantially completed, while a second building (the West Tower) has been designed and the foundation has been built. The third parcel, which lies north of East 29th Street, remains undeveloped. In addition to laboratory space the Alexandria Center



No Action Projects
Figure B-4

will provide a public plaza overlooking the East River at the cul-de-sac on the east end of 29th Street.

Portions of the study area have been rezoned in recent years but have yet to be redeveloped. The First Avenue Properties Rezoning (approved by the City Council in 2008) included the block bounded by East 35th and East 36th Streets and First Avenue and the FDR Drive, as well as the blocks north of East 38th Street (extending beyond the study area) between First Avenue and the FDR Drive. At East 35th Street and First Avenue, a 640-seat public school (PS/IS 281) is scheduled to begin construction soon and is expected to be completed by 2013. Approved plans for the remainder of that block include two residential towers totaling approximately 703,000 zoning square feet (zsf), retail space totaling approximately 6,000 zsf, and open space of approximately 18-20,000 sf. At the north end of the study area, approved plans include an approximately 625,000-sf residential building with retail at the corner of East 38th Street and First Avenue. Immediately to its east will be an approximately 10,000-sf playground area.

Additional development in the study area includes a residential building at 303 East 33rd Street between First and Second Avenues. This 12-story residential building is nearing completion and will contain approximately 128 units. Finally, a small commercial building is planned for the northwest corner of 30th Street and Second Avenue; construction has not begun but the site has been cleared.

Table B-1
No Build Projects

Ref. No.	Name	Description	Completion Year
1	34th Street Transitway and Select Bus Service	Traffic, transit, and pedestrian improvements	2012
2	PS/IS 281 616 First Avenue	113,372 zsf, 640-seat public school	2013
3	616 First Avenue	703,530 zsf residential (828 units) 6,350 ZSF retail; 18-20,000 sf open space	By 2017
4	700 First Avenue	Waterside 1-1: 625,190 zsf retail and residential; 10,000 sf open space	By 2017
5	Alexandria Center for Science and Technology at East River Science Park	Laboratory space, open space, parking	Phase I 2010
6	303 East 33rd Street	12-story, 128-unit condominium, parking	2010
7	543 Second Avenue	3-story commercial building	2012
8	NYULMC Emergency Department (ED) Expansion	Renovation of approximately 21,000 gsf ED uses in Tisch and expansion of existing ED by approximately 12,700 gsf	2013

Note: gsf = gross square feet

ZONING AND PUBLIC POLICY

As described above, the development of a new as-of-right building on the project site will take place absent the proposed actions. The building would comply with all existing zoning regulations and would not require zoning waivers or any other discretionary actions. No changes to zoning or public policy on the project site, or elsewhere in the study area, are anticipated in the future without the proposed action.

D. PROBABLE IMPACTS OF THE PROPOSED ACTION

LAND USE

PROJECT SITE

In terms of land use, conditions with the proposed action would be substantially the same as conditions in the future without the proposed action. The proposed action would be consistent with other land uses on the block and in the surrounding area. The project site is on a superblock that is historically and currently associated with medical uses.

STUDY AREA

The campus itself is part of a larger concentration of similar uses that contain medical, research and associated facilities, such as Bellevue Hospital and East River Science Park. With uses consistent with the medical-oriented facilities in the study area and essentially the same as those in the No Action condition, the proposed action would not have a significant adverse impact on land use.

ZONING AND PUBLIC POLICY

The BSA would waive the following:

- Required rear yard and rear yard equivalent pursuant to Section 24-36 and 24-382;
- Initial setback distance and sky exposure plane required pursuant to Section 24-522, and rear yard setback pursuant to Section 24-552;
- Tower coverage of previously approved towers under Section 24-54;
- Maximum permitted 100 accessory parking spaces required pursuant to Section 13-132 and minimum 200 sf per accessory parking space required pursuant to Section 25-62; and
- Curb cuts to accessory parking on wide streets in Section 13-142.

These actions are necessary to build the Kimmel Pavilion and the Energy Building as proposed and to relocate the bulk oxygen storage area. The proposed buildings would be more suitable and efficient in meeting NYULMC's needs. Without the required setbacks of the complying building, the proposed Kimmel Pavilion would provide more operating and procedure rooms per floor and the desired flexibility and efficiency of the building. It would also provide the needed clinical area on the third floor, one of the most important and valuable clinical floors on the campus. Located as proposed in the Energy Building, the Radiation Oncology department would align with and have the desired adjacency to the radiology department on the second level of Tisch Hospital. The opportunity for shared staffing and equipment would be fostered.

Major infrastructure items such as the CHP plant, campus electrical service, and radiation oncology vaults would be located in a separate building. The size of the mechanical core would be smaller, increasing the clinical area and providing more flexibility in the building. The Energy Building's functions, including cogeneration, would come online sooner than if they were to be located in the complying building. They would have superior connectivity to the rest of the campus and be closer to the buildings that they would serve at the south end of the superblock. As the radiation oncology vaults would be located on the first floor (which could only be done in the separate Energy Building), no lower floors would be affected by the size of the equipment.

Further, having the energy equipment in the proposed Energy Building would avoid the noise, vibration, and potential for low frequency radiation interference with sensitive medical equipment that could introduce into a hospital structure. It would not be necessary to build the Kimmel Pavilion structure with such high degree of attenuation or such exceptionally high floor-to-floor heights that would create complications for the connectivity of the floors above.

The emergency generator would not have to be placed on the roof of Tisch Hospital and an exterior riser tower would not be needed to connect the new plant to existing electrical equipment.

The proposed Kimmel Pavilion would be accessible from First Avenue as well as East 34th Street, so that all traffic to the Kimmel Pavilion would not have to travel through the intersection of East 34th Street and First Avenue and the driveway on campus would be less likely to experience congestion.

The proposed waivers would greatly improve the proposed buildings and would not change underlying zoning or public policy on the project site or within the study area. They would be confined to the proposed project.

Similarly, other approvals including a Certificate of Need from NYSDOH, permits from NYSDEC and NYCDEP for the Energy Building, and potential funding from the Dormitory Authority of the State of New York (DASNY) would be site-specific and would not have a significant adverse impact on public policy. Modification of a DEP sewer easement would also not affect public policy.

As described above, the proposed project would be compatible with the other hospital uses on the superblock and consistent with development in the study area. Therefore, the requested actions would not have a significant adverse impact to zoning or public policy on the project site or within the study area.

WATERFRONT REVITALIZATION PROGRAM

New York City's WRP includes 10 policies designed to maximize the benefits derived from economic development, environmental preservation, and public use of the waterfront, while minimizing the conflicts among those objectives. This attachment provides additional information for each of the policies that have been checked "yes" in the *WRP Coastal Assessment Form* included as Appendix A.

Policy 6: Minimize loss of life, structures and natural resources caused by flooding and erosion.

Policy 6.1: Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.

The proposed project would minimize impacts to lives and structures from flooding by complying with all applicable Federal Emergency Management Agency (FEMA) and City of New York requirements to minimize flood damage. Therefore, the proposed project would be consistent with this policy.

Policy 6.2: Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.

Public funding for flood prevention or erosion control measures is not part of the proposed project. Therefore, this policy does not apply.

Policy 6.3: Protect and preserve non-renewable sources of sand for beach nourishment.

The project site does not contain any public or private beaches and does not contain non-renewable sources of sand. Therefore, this policy does not apply.

Policy 7: Minimize environmental degradation from solid waste and hazardous substances.

Policy 7.1: Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.

The applicant would follow all applicable guidelines for the management of hazardous materials. Therefore, the proposed action would be consistent with this policy (see Attachment F, "Hazardous Materials.")

Policy 7.2: Prevent and remediate discharge of petroleum products.

See response to Policy 7.1 above.

Policy 7.3: Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.

Any hazardous materials uncovered during construction would be disposed of or remediated in conformance with all applicable laws, rules, and regulations, thus minimizing the potential for adverse impacts to coastal resources. The proposed action would not entail the siting of solid or hazardous waste facilities. Therefore, the proposed action is consistent with this policy.

Policy 10: Protect, preserve, and enhance resources significant to the historical, archaeological, and cultural legacy of the New York City coastal area.

Policy 10.1: Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.

There are no known or potential architectural resources on or within 400 feet of the project site. Therefore, this policy does not apply.

Policy 10.2: Protect and preserve archaeological resources and artifacts.

The New York City Landmarks Preservation Commission (LPC) determined that the project site is not sensitive for archaeological resources in a letter dated July 14, 2010 (see Appendix B). Therefore, this policy does not apply.

Based on the information presented above, the proposed project complies with New York State's Coastal Management Program as expressed in New York City's approved WRP. ✷

Attachment C: Shadows

A. INTRODUCTION

Sunlight and shadows affect people and their use of open space all day long and throughout the year, although the effects vary by season. Sunlight supports vegetation and enhances architectural features, such as stained glass windows and carved detail on historic structures. Conversely, shadows can affect plant growth and sustainability of landscape features, and the visibility architectural significance of building features.

The purpose of this attachment is to examine whether the two proposed buildings, the Kimmel Pavilion and the Energy Building, would cast new shadows on any sunlight-sensitive publicly accessible resources or other resources of concern and to assess the potential effects of any such new shadows. Public open spaces, historic, cultural, and natural resources are all potentially sunlight-sensitive resources, and, therefore, this chapter is closely linked to the data and analyses presented in the Open Space and Natural Resources screening analyses and Attachment D, "Historic and Cultural Resources."

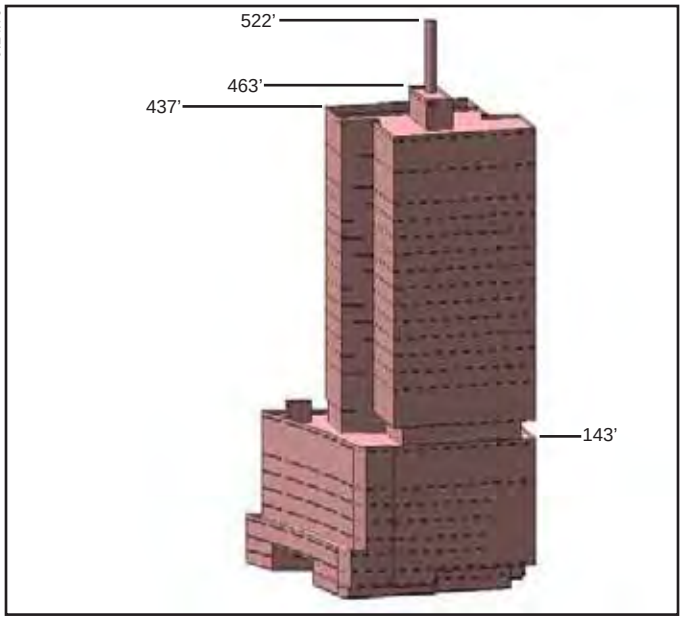
According to the 2010 *City Environmental Quality Review (CEQR) Technical Manual*, a shadows assessment is required only if the project would result in structures (or additions to existing structures) of 50 feet or more, or be located adjacent to, or across the street from, a sunlight-sensitive resource.

The proposed Kimmel Pavilion would rise to a height of approximately 385 feet above curb level to the top of its roof parapet. The Energy Building would be 172 feet above curb level, including elevator parapet, and 155 feet above curb level to the top of its 6th floor roof parapet. The privately owned, publicly accessible plaza and playground space at 401 East 34th Street (the Rivergate) is located just north of the project site, across East 34th Street. Given the height of the proposed structure and the proximity to a public open space, a shadow assessment is required. However, absent the proposed action, NYU Langone Medical Center (NYULMC) would develop a building on the project site that would comply with existing zoning regulations, the No Action building. The No Action building would be generally similar in form to the proposed Kimmel Pavilion, slightly narrower at the base (east to west) but with a taller tower (see Figure C-1). The complying scenario and the shadows resulting from the No Action building would be part of the baseline or No Action condition, against which the shadows from the proposed Kimmel Pavilion and Energy Building are compared.

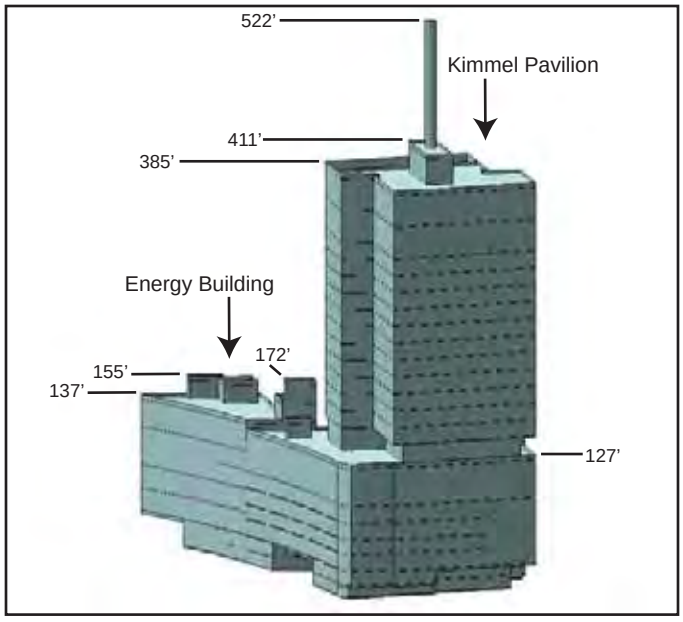
The detailed analysis concluded that through the spring, summer and fall, no incremental shadow would occur on any open space or sunlight-sensitive historic resource. Limited durations of incremental shadow would fall on areas of the East River in these seasons, but there would be less shadow on the river with the proposed Kimmel Pavilion and Energy Building than there would be with the taller No Action building.

On the December 21 analysis day, the plaza and playground at the Rivergate would experience small areas of increased and reduced shadow in the morning—50 minutes of increased shadow, 20 minutes

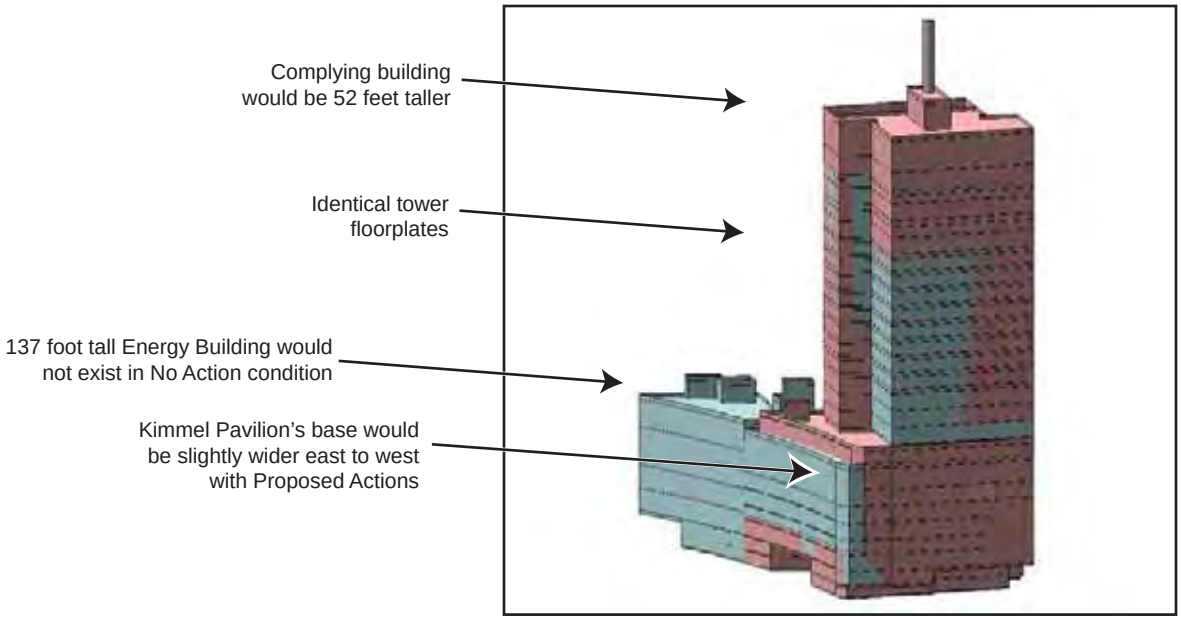
9.24.10



No Action building



Proposed Buildings



Proposed and No Action Buildings, superimposed

Note: All heights are approximate above curb level

Comparison of No Action and Proposed Buildings

of reduced shadow, and 20 minutes of both occurring simultaneously. The increased shadow would never eliminate all sunlight from the space, and in the afternoon the space would continue to have relatively large areas of sunlight. Two other resources would experience about 13 minutes of increased shadow on December 21, but one resource, St. Vartan Park, would have less shadow for three hours.

The analysis concluded that, given the limited extent and duration of increased shadow on December 21, and the reduction in shadow at other times of year compared with the No Action condition, the proposed Kimmel Pavilion and Energy Building would not cause any significant adverse shadow impacts.

B. DEFINITIONS AND METHODOLOGY

DEFINITIONS

Incremental shadow is the additional, or new, shadow that a structure resulting from a proposed project would cast on a sunlight-sensitive resource.

Sunlight-sensitive resources are those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity. Such resources generally include:

- *Public open space* (e.g., parks, beaches, playgrounds, plazas, schoolyards, greenways, landscaped medians with seating). Planted areas within unused portions of roadbeds that are part of the Greenstreets program are also considered sunlight-sensitive resources.
- *Features of architectural resources that depend on sunlight for their enjoyment by the public.* Only the sunlight-sensitive features need be considered, as opposed to the entire resource. Such sunlight-sensitive features might include: design elements that depend on the contrast between light and dark (e.g., recessed balconies, arcades, deep window reveals); elaborate, highly carved ornamentation; stained glass windows; historic landscapes and scenic landmarks; and features for which the effect of direct sunlight is described as playing a significant role in the structure's importance as a historic landmark.
- *Natural resources* where the introduction of shadows could alter the resource's condition or microclimate. Such resources could include surface water bodies, wetlands, or designated resources such as coastal fish and wildlife habitats.

Non-sunlight-sensitive resources for which no shadows impact assessment is required for the purposes of CEQR include:

- *City streets and sidewalks* (except Greenstreets);
- *Private open space* (e.g., front and back yards, stoops, vacant lots, and any private, non-publicly accessible open space);
- *Project-generated open space.* Such open space cannot experience a significant adverse shadow impact from the project, according to CEQR, because without the project the open space would not exist. However, if project-generated open space is included in a detailed qualitative Open Space analysis, the extent and duration of shadows that fall on it must be assessed and documented in the same fashion as the other sunlight-sensitive resources.

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, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources. Each case must be considered on its own merits.

METHODOLOGY

First, a preliminary screening assessment must be conducted to ascertain whether a project's shadow could reach any sunlight-sensitive resources at any time of year. If the screening assessment does not eliminate this possibility, a detailed shadow analysis is required to determine the extent and duration of the incremental shadow resulting from the project. The detailed analysis provides the data needed to assess the shadow impacts. The effects of the new shadows on the sunlight-sensitive resources are described, and their degree of significance is considered. The results of the analysis and assessment are documented with graphics, a table of incremental shadow durations, and narrative text.

C. PRELIMINARY SCREENING ASSESSMENT

A base map was developed showing the location of the proposed project and the surrounding street layout. In coordination with the open space, historic and cultural resources, and natural resources assessments presented in other sections of this EAS, sunlight-sensitive resources were identified and shown on the map (see Figure C-2). Topographic information was also added to the map, in the form of spot elevations published in Geographic Information Systems (GIS) format by the Department of Information Technology and Telecommunications (DoITT).

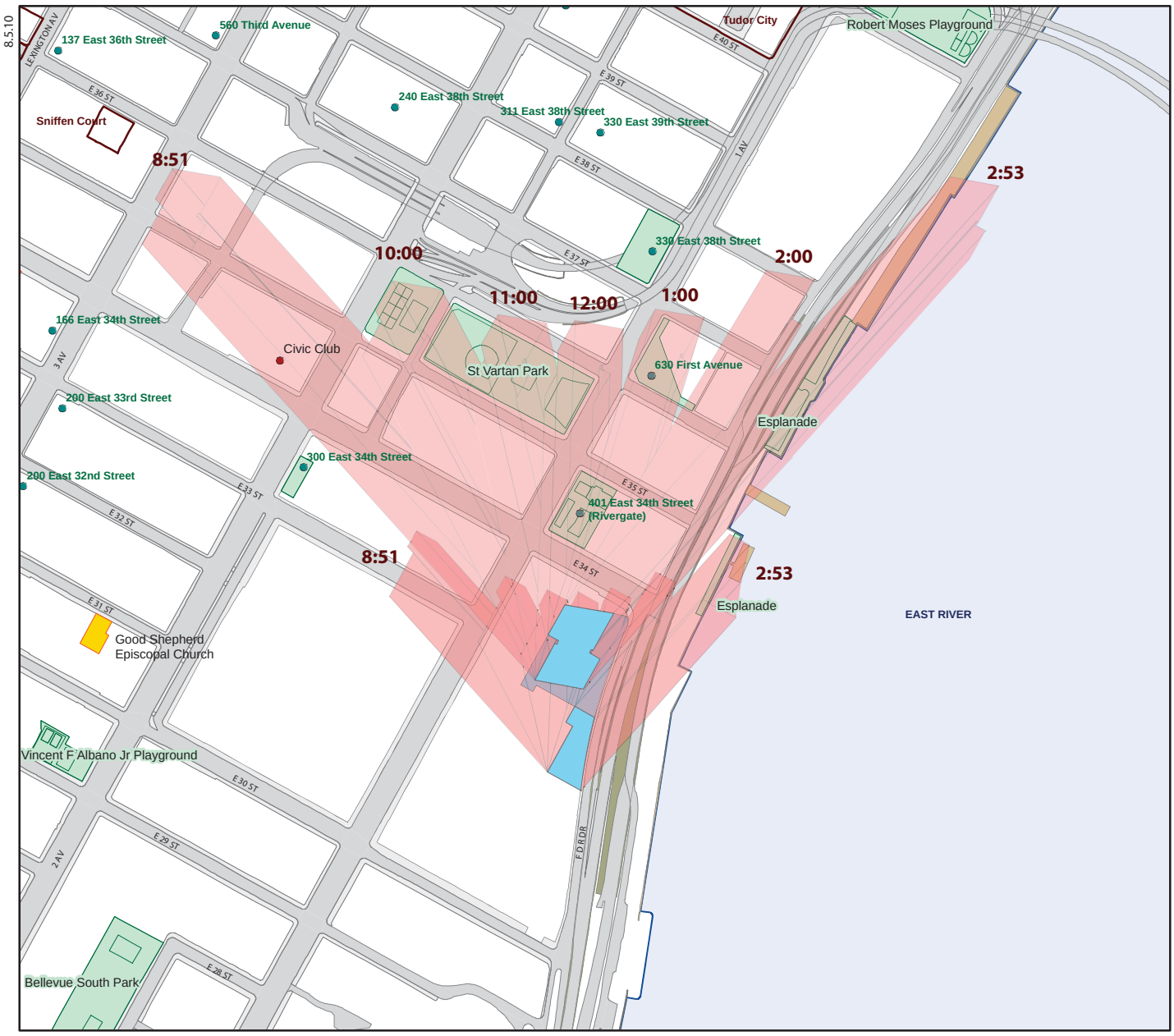
The preliminary screening assessment consists of three tiers of analysis. The first tier determines a simple radius around the project site representing the longest shadow that could be cast. If there are sunlight-sensitive resources within this radius, the analysis proceeds to the second tier, which reduces the area that could be affected by project shadow by accounting for the fact that shadows can never be cast between a certain range of angles south of the project site due to the path of the sun through the sky at the latitude of New York City. 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 project shadow by looking at specific representative days of the year and determining the maximum extent of shadow over the course of each representative day.

Given the height of the highest proposed building (approximately 408 feet above curb level including space for rooftop mechanical bulkhead) and the project site's proximity to at least one sunlight-sensitive resource (the Rivergate plaza and playground directly north of the project site across East 34th Street), the preliminary analysis proceeded directly to a Tier 3 screening assessment.

TIER 3 SCREENING ASSESSMENT

The direction and length of shadows vary throughout the course of the day and also differ depending on the season. In order to determine if and when project generated shadow could fall on a sunlight-sensitive resource, computer mapping software is used in the Tier 3 assessment to calculate and display the proposed project's shadows over the course of individual representative days of the year.

The proposed Kimmel Pavilion would have a base rising to a height of approximately 127 feet above curb level and a tower portion rising to about 411 feet (including space for a rooftop mechanical bulkhead). The 172-foot-high Energy Building (including elevator parapet) would be adjacent to the Kimmel Pavilion to the south (see Figure C-1).



Proposed Kimmel Pavilion tower and Energy Building

Shadow from proposed buildings (one-hour intervals, Eastern Standard Time)

Publicly accessible open spaces

Privately owned publicly accessible open spaces

Historic District boundaries (NYCL)

Individual designated landmarks (NYCL)

Other historic/cultural resources

0 200 400 600 800 1,000 Feet

N

Tier 3 Screening Assessment
December 21
Figure C-2

NYU Langone Medical Center

REPRESENTATIVE DAYS FOR ANALYSIS

Shadows on the summer solstice (June 21), winter solstice (December 21) and spring and fall equinoxes (March 21 and September 21, which are approximately the same in terms of shadow patterns) are modeled, to represent the full range of possible shadows over the course of the year. An additional representative day during the growing season is also modeled, generally the day halfway between the summer solstice and the equinoxes, i.e., May 6 or August 6, which are approximately the same.

TIMEFRAME WINDOW OF ANALYSIS

The shadow assessment only considers shadows occurring between 1.5 hours after sunrise and 1.5 hours before sunset. At times earlier or later than this timeframe window of analysis, the sun is down near the horizon and the sun's rays reach the Earth at very tangential angles, diminishing the amount of solar energy and producing shadows that are very long, move fast, and generally blend with shadows from existing structures until the sun reaches the horizon and sets. Consequently, shadows occurring outside the timeframe window of analysis are not considered significant under CEQR, and their assessment is not required.

TIER 3 SCREENING ASSESSMENT RESULTS

Figures C-2 to C-5 illustrate the range of shadows that would occur from the Kimmel Pavilion's 411 foot high tower and the 155-foot-high Energy Building on the four representative days of the year. Each figure shows the shadows occurring approximately every 60 minutes from the start of the analysis day (1.5 hours after sunrise) until the end of the analysis day (1.5 hours before sunset).

The No Action building would be generally similar in form to the proposed Kimmel Pavilion but have more setbacks of the base along the east side and rise to a greater height. The No Action building would not include a southern wing in the footprint of the proposed Energy Building. The Tier 3 screening assessment does not indicate incremental shadow, but rather delineates where the three-dimensional detailed analysis would be required to compare shadows from the proposed buildings with shadows from the No Action building.

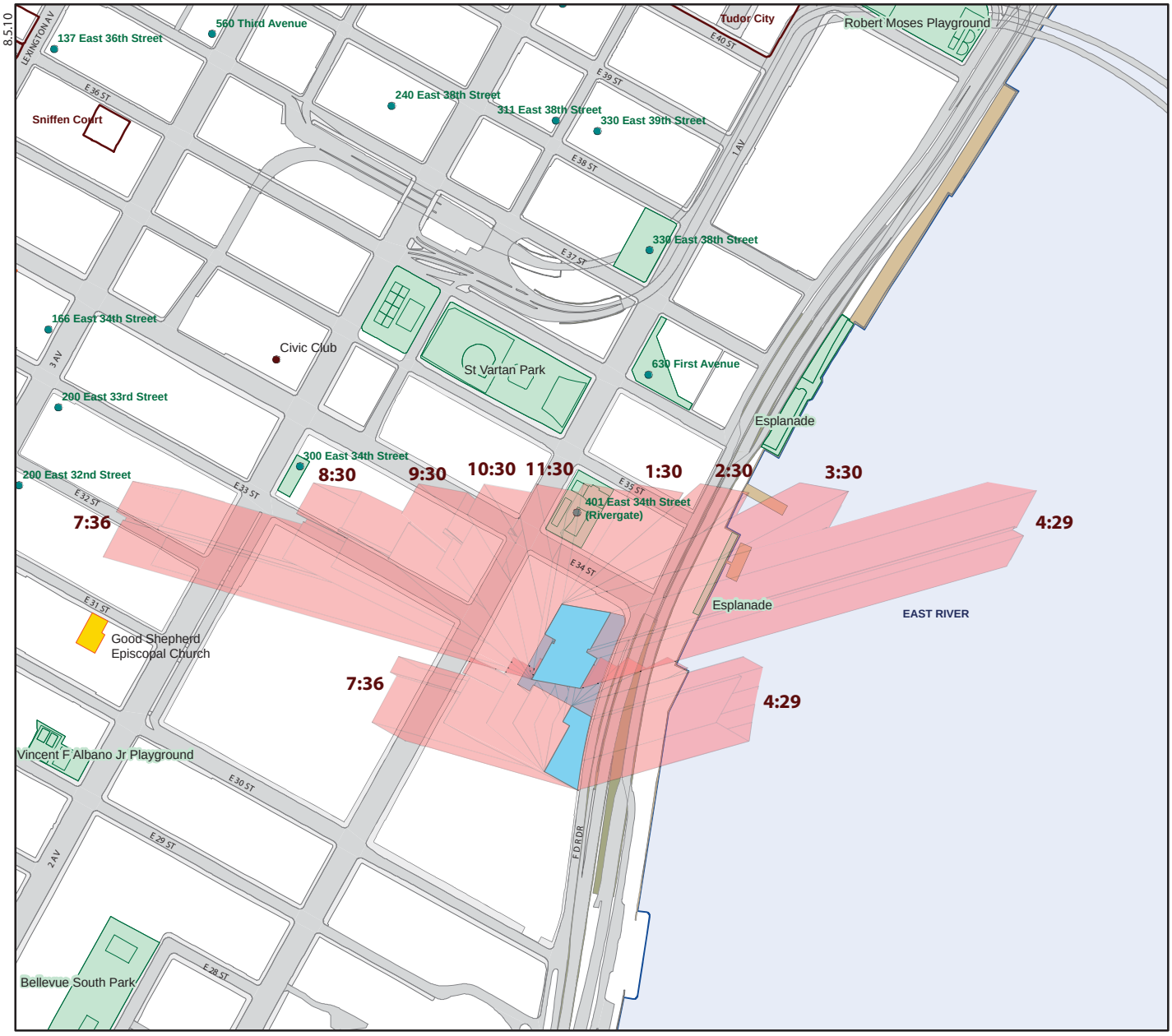
The results of the screening assessment for the December 21 analysis day show that shadow from the proposed buildings could reach St. Vartan Park, 630 First Avenue (Manhattan Place) plaza, 401 East 34th Street (Rivergate) open space, both the East 37th and East 34th Street sections of the East River Esplanade Park, and the waters of the East River itself, an important natural resource (see Figure C-2). Shadow could also reach The Civic Club, a New York City Landmark, but this historic resource does not have any sunlight-sensitive features to consider.

On the March 21/September 21 analysis day, project generated shadow could reach the Rivergate open space, the section of East River Esplanade at East 34th Street, and the waters of the East River (see Figure C-3).

On the May 6/August 6 analysis day project generated shadow could reach the section of East River Esplanade at East 34th Street, the waters of the East River, and probably a very small section at the southeast corner of the Rivergate open space (see Figure C-4).

On the June 21 analysis day shadow from the proposed Kimmel Pavilion and Energy Building could reach a small section of Albano Playground at Second Avenue and East 29th Street, the section of East River Esplanade at East 34th Street, and the waters of the East River.

The Tier 3 assessment shows that, in the absence of intervening buildings, shadows from the proposed Kimmel Pavilion and Energy Building would reach the East 34th Street section of East River



Proposed Kimmel Pavilion tower and Energy Building

Shadow from proposed buildings (one-hour intervals, Eastern Standard Time)

Publicly accessible open spaces

Privately owned publicly accessible open spaces

Historic District boundaries (NYCL)

Individual designated landmarks (NYCL)

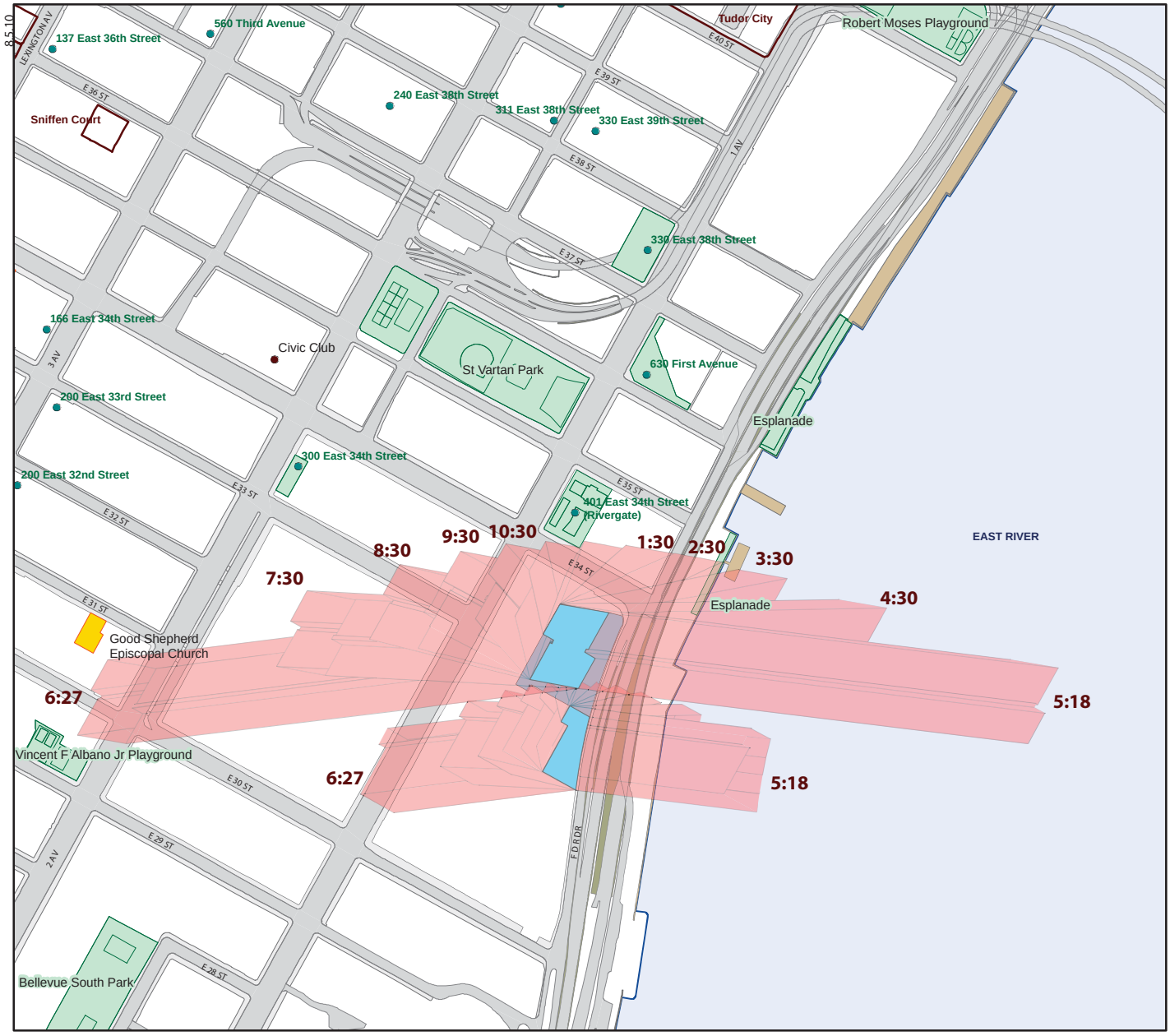
Other historic/cultural resources

0 200 400 600 800 1,000 Feet

N

Tier 3 Screening Assessment
March 21 / Sept. 21
Figure C-3

NYU Langone Medical Center



Proposed Kimmel Pavilion tower and Energy Building

Shadow from proposed buildings (one-hour intervals, Eastern Standard Time)

Publicly accessible open spaces

Privately owned publicly accessible open spaces

Historic District boundaries (NYCL)

Individual designated landmarks (NYCL)

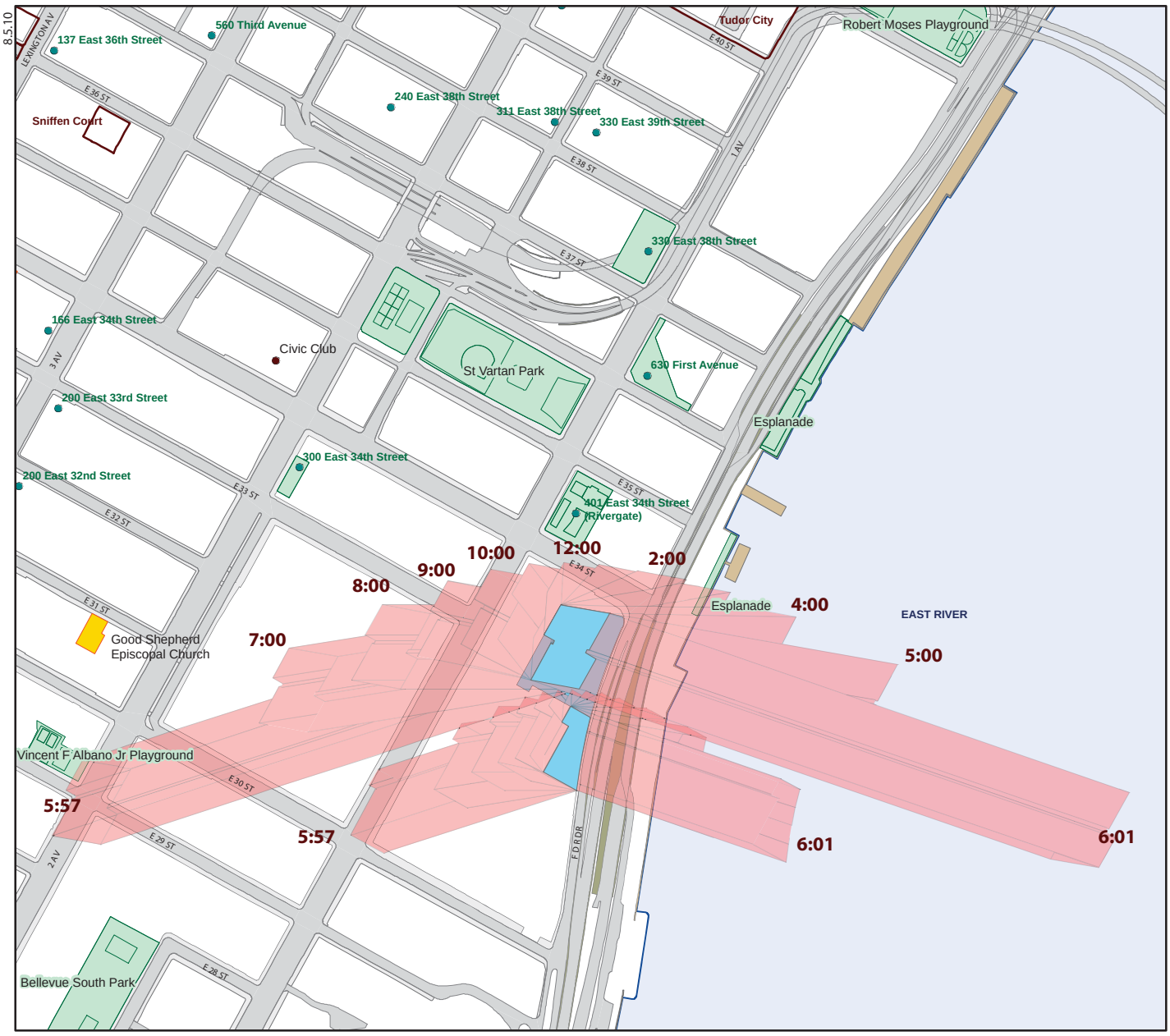
Other historic/cultural resources

0 200 400 600 800 1,000 Feet

N

Tier 3 Screening Assessment
May 6 / August 6
Figure C-4

NYU Langone Medical Center



Proposed Kimmel Pavilion tower and Energy Building

Shadow from proposed buildings (one-hour intervals, Eastern Standard Time)

Publicly accessible open spaces

Privately owned publicly accessible open spaces

Historic District boundaries (NYCL)

Individual designated landmarks (NYCL)

Other historic/cultural resources

0 200 400 600 800 1,000 Feet

N

Tier 3 Screening Assessment
June 21
Figure C-5

NYU Langone Medical Center

Esplanade and an areas of the East River on all four analysis days; the Rivergate open space on two or three analysis days; and the Albano Playground, the East 37th Street section of East River Esplanade, Manhattan Place plaza, and St. Vartan Park on one analysis day each. Therefore, a detailed analysis using three-dimensional computer modeling software was undertaken for these resources.

D. DETAILED SHADOW ANALYSIS

The purpose of the detailed analysis is to determine the extent and duration of incremental shadows on sunlight-sensitive resources and to assess their effects. A baseline or future No Action condition is established, containing existing buildings and any future developments planned in the area, to illustrate the existing shadows. The future condition with the proposed Kimmel Pavilion and Energy Building and their shadows can then be compared to the baseline condition with shadows from the No Action building to determine the incremental shadows that would result with the proposed action.

For the detailed analysis, three-dimensional computer modeling software was used to accurately calculate shadow patterns. Three-dimensional representations of the existing buildings and topography shown on the base map were developed using data obtained from Fugro EarthData, Inc., DoITT, Sanborn maps, and photos taken during site visits. Other developments in the area expected to be completed by the build year were also added to the model as accurately as current information allowed. Finally, the No Action building and proposed Kimmel Pavilion and Energy Building were placed on the project site in the three-dimensional model (Figure C-6).

Shadow analyses were performed for the window of analysis for each of the representative days indicated in the Tier 3 assessment.

Table C-1 shows the entry and exit times and total duration of incremental shadows on each affected resource. Figures C-7 to C-23 depict the extent of incremental increase in shadows at various moments in time, highlighted in red on the sunlight-sensitive resources. The extent, duration, and effects of the incremental shadows are discussed below.

DECEMBER 21, 8:51 AM TO 2:53 PM (FIGURES C-7 TO C-15)

RIVERGATE

The base of the proposed Kimmel Pavilion would be slightly wider on its eastern side than the No Action building, and this extra width on the eastern side would cast a narrow band of increased shadow on the Rivergate open space from 9:00 AM to just before 10:00 AM (see Figures C-7 to C-9), and then from 10:15 AM to 10:30 AM (see Figure C-11). The base of the proposed Kimmel Pavilion is also slightly shorter than that of the No Action building, and therefore there would be a small area of reduced shadow with the proposed action from 9:50 AM to 10:30 AM (see Figures C-10 and C-11). No increase in shadow would occur after 10:30 AM, as the proposed building and No Action building would cast identical shadows on the space until about 1:00 PM, when they both would exit the space (see Figures C-12 to C-14). From 1:00 PM until the end of the analysis day at 2:53 PM the space would continue to experience areas of sunlight.

ST.VARTAN PARK

The shorter tower of the proposed Kimmel Pavilion, in comparison with the No Action building, would cast less shadow on St. Vartan Park between 9:30 AM and 12:30 PM (see Figures C-9 to C-12). No other increase or decrease in shadow would occur on the park on this or any other analysis day.

9.13.10

Three-dimensional computer model with No Action Building
View Northwest

No Action Building
Existing buildings
Future buildings expected to be complete by Build Year (2017)
Public open spaces

Three-dimensional computer model with the Kimmel Pavilion and Energy Building
View Northwest

Proposed Project
Existing buildings
Future buildings expected to be complete by Build Year (2017)
Public open spaces

9.13.10

Note: Daylight Saving Time not used.

0 200 400 Feet

N

- Proposed Buildings
- Public open spaces
- Incremental shadow on sunlight-sensitive resource
- Existing buildings
- Future buildings (by 2017)

December 21 - 9:00 AM
With Proposed Buildings
Figure C-7

NYU Langone Medical Center

9.13.10

Note: Daylight Saving Time not used.

0 200 400 Feet

N

- No Action Building
- Public open spaces
- Existing buildings
- Future buildings (by 2017)

December 21 - 9:00 AM
No Action Condition
Figure C-8

NYU Langone Medical Center

9.13.10

Note: Daylight Saving Time not used.

0 200 400 Feet

N

- Proposed Buildings
- Public open spaces
- Incremental shadow on sunlight-sensitive resource
- Reduction in shadow
- Existing buildings
- Future buildings (by 2017)

December 21 - 9:30 AM
With Proposed Buildings
Figure C-9

NYU Langone Medical Center

9.13.10

0 200 400 Feet

Note: Daylight Saving Time not used.

N

- Proposed Buildings
- Public open spaces
- Reduction in shadow
- Existing buildings
- Future buildings (by 2017)

No incremental shadow would occur at this time.

December 21 - 10:00 AM
With Proposed Buildings
Figure C-10

9.13.10

Note: Daylight Saving Time not used.

0 200 400 Feet

N

- Proposed Buildings
- Public open spaces
- Incremental shadow on sunlight-sensitive resource
- Reduction in shadow
- Existing buildings
- Future buildings (by 2017)

December 21 - 10:30 AM
With Proposed Buildings
Figure C-11

9.13.10

Note: Daylight Saving Time not used.

0 200 400 Feet

N

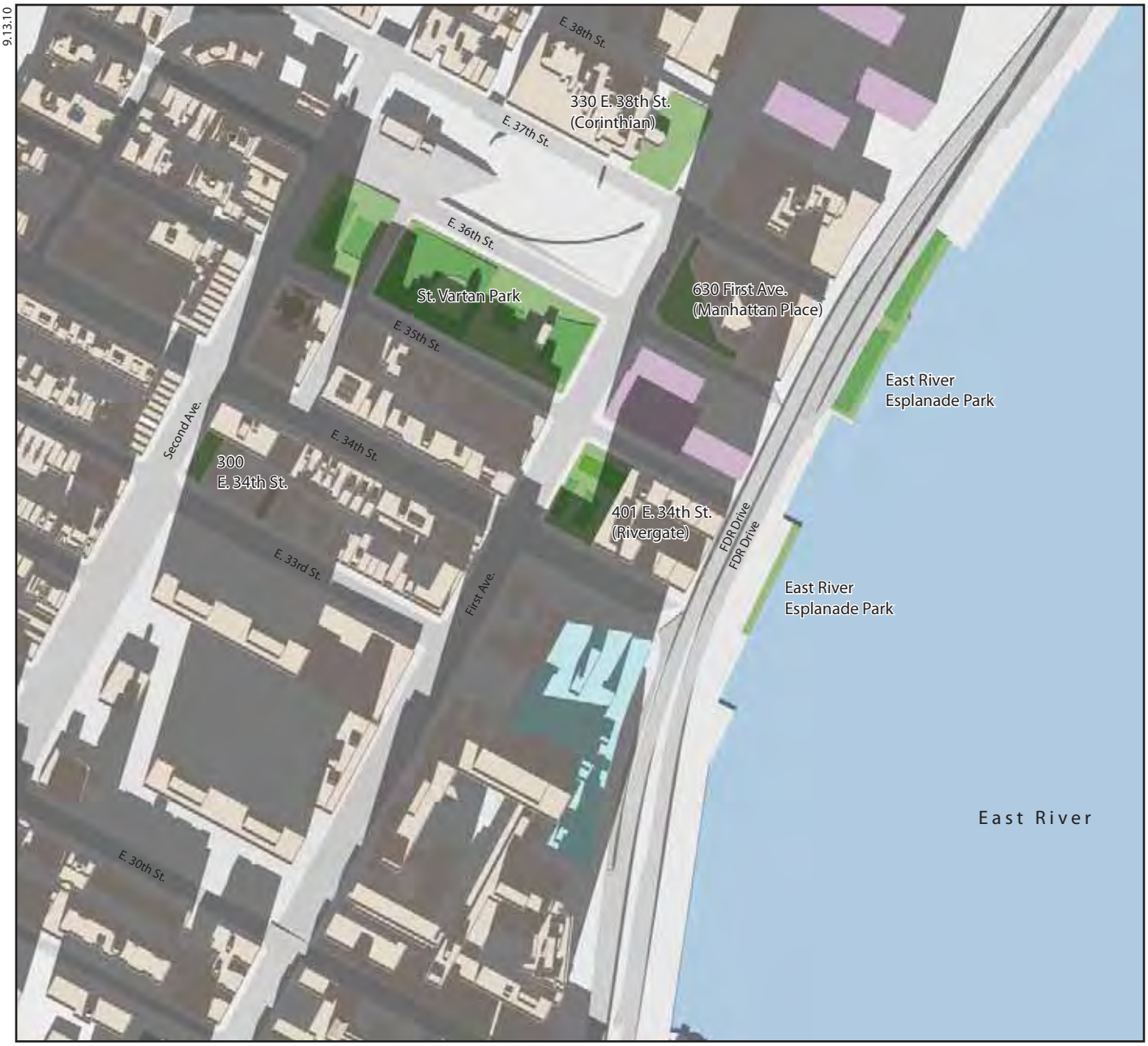
- Proposed Buildings
- Public open spaces
- Reduction in shadow
- Existing buildings
- Future buildings (by 2017)

No incremental shadow would occur at this time.

December 21 - 12:00 PM
With Proposed Buildings
Figure C-12

NYU Langone Medical Center

9.13.10



Note: Daylight Saving Time not used.

0 200 400 Feet

N

Proposed Buildings

Public open spaces

Existing buildings

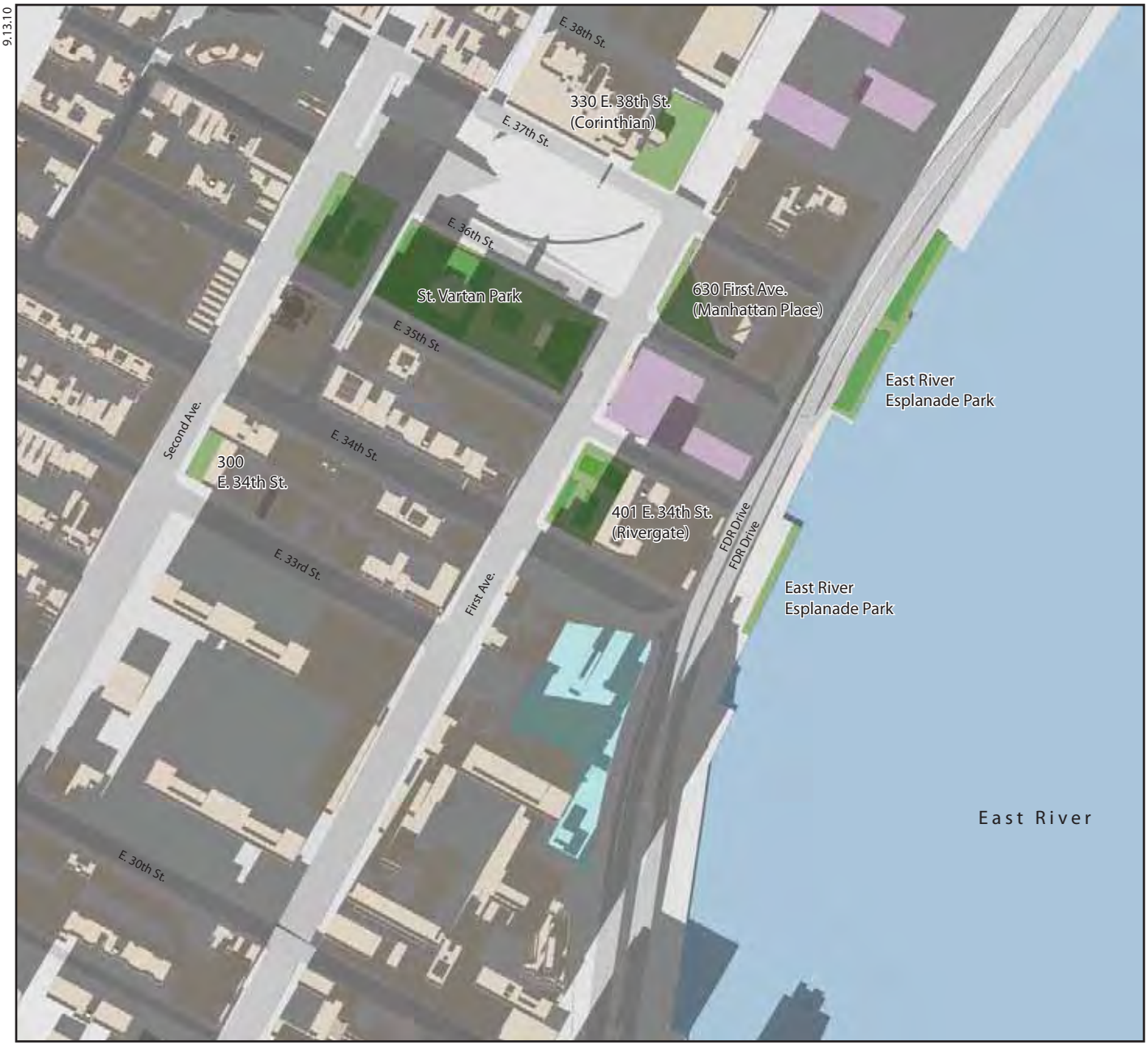
Future buildings (by 2017)

No incremental shadow would occur at this time.

December 21 - 1:00 PM
With Proposed Buildings
Figure C-13

NYU Langone Medical Center

9.13.10



Note: Daylight Saving Time not used.

0 200 400 Feet

N

Proposed Buildings

Public open spaces

Existing buildings

Future buildings (by 2017)

No incremental shadow would occur at this time.

December 21 - 2:00 PM
With Proposed Buildings
Figure C-14

NYU Langone Medical Center

9.13.10

Note: Daylight Saving Time not used.

0 200 400 Feet

N

- Proposed Buildings
- Public open spaces
- Incremental shadow on sunlight-sensitive resource
- Reduction in shadow
- Existing buildings
- Future buildings (by 2017)

December 21 - 2:45 PM
With Proposed Buildings
Figure C-15

9.13.10

Note: Daylight Saving Time not used.

0 200 400 Feet

N

- Proposed Buildings
- Public open spaces
- Reduction in shadow on sunlight-sensitive resource
- Existing buildings
- Future buildings (by 2017)

No incremental shadow would occur at this time.

March 21 / Sept. 21 - 12:00 PM
With Proposed Buildings
Figure C-16

9.13.10

Note: Daylight Saving Time not used.

0 200 400 Feet

N

- Proposed Buildings
- Public open spaces
- Reduction in shadow on sunlight-sensitive resource
- Existing buildings
- Future buildings (by 2017)

No incremental shadow would occur at this time.

March 21 / Sept. 21 - 2:30 PM
With Proposed Buildings
Figure C-17

9.13.10

Note: Daylight Saving Time not used.

0 200 400 Feet

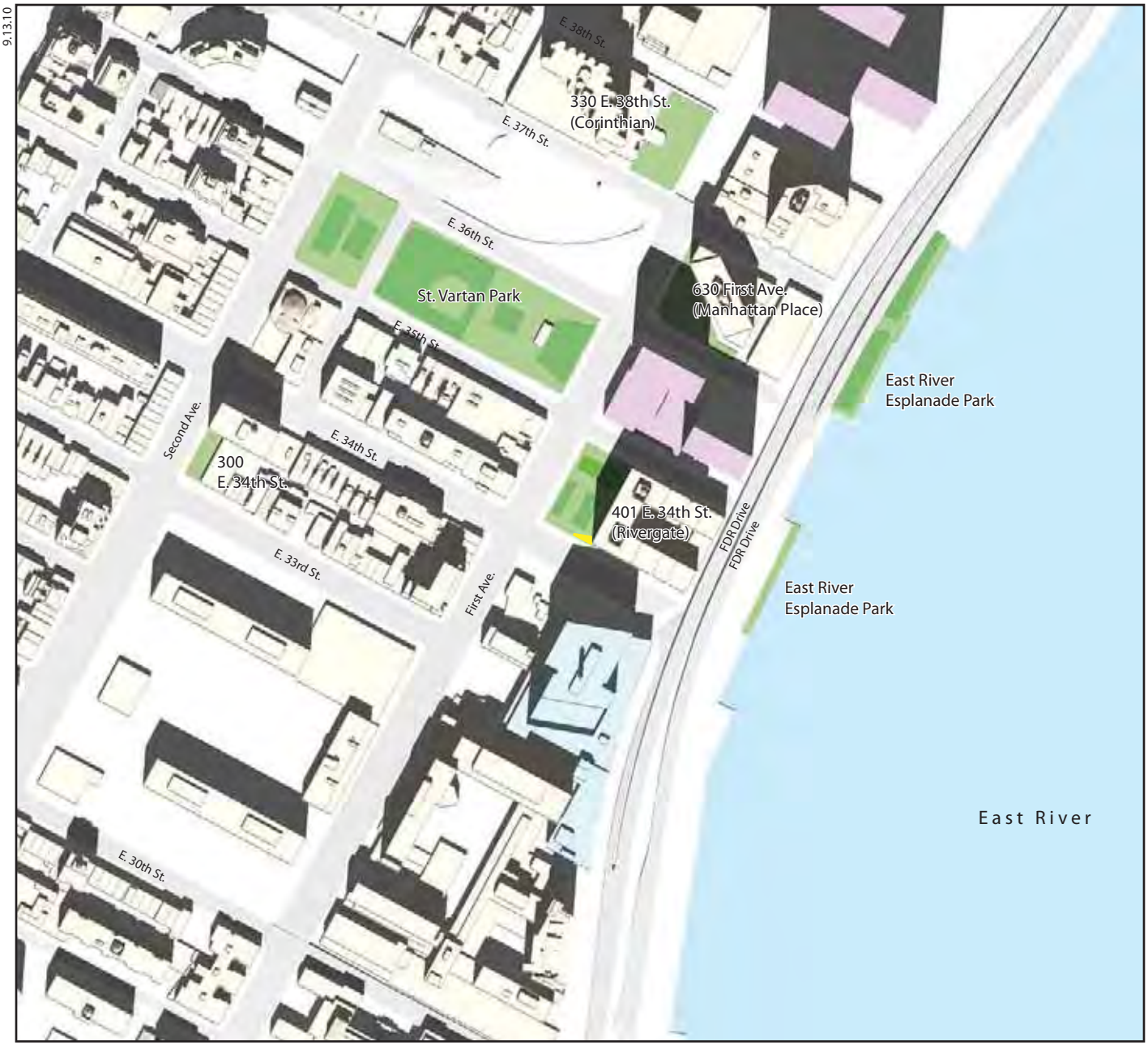
N

- Proposed Buildings
- Public open spaces
- Incremental shadow on sunlight-sensitive resource
- Reduction in shadow
- Existing buildings
- Future buildings (by 2017)

March 21 / Sept. 21 - 4:00 PM
With Proposed Buildings

Figure C-18

9.13.10



0 200 400 Feet

Note: Daylight Saving Time not used.

N

- Proposed Buildings
- Public open spaces
- Reduction in shadow on sunlight-sensitive resource
- Existing buildings
- Future buildings (by 2017)

No incremental shadow would occur at this time.

May 6 / August 6 - 12:00 PM
With Proposed Buildings
Figure C-19

9.13.10

Note: Daylight Saving Time not used.

0 200 400 Feet

N

- Proposed Buildings
- Public open spaces
- Incremental shadow on sunlight-sensitive resource
- Reduction in shadow
- Existing buildings
- Future buildings (by 2017)

May 6 / August 6 - 3:00 PM
With Proposed Buildings

Figure C-20

NYU Langone Medical Center

9.13.10

Note: Daylight Saving Time not used.

0 200 400 Feet

N

- Proposed Buildings
- Public open spaces
- Incremental shadow on sunlight-sensitive resource
- Reduction in shadow
- Existing buildings
- Future buildings (by 2017)

May 6 / August 6 - 4:30 PM
With Proposed Buildings
Figure C-21

9.13.10

Note: Daylight Saving Time not used.

0 200 400 Feet

N

- Proposed Buildings
- Public open spaces
- Incremental shadow on sunlight-sensitive resource
- Reduction in shadow
- Existing buildings
- Future buildings (by 2017)

June 21 - 3:00 PM
With Proposed Buildings
Figure C-22

NYU Langone Medical Center

9.13.10

Note: Daylight Saving Time not used.

0 200 400 Feet

N

- Proposed Buildings
- Public open spaces
- Incremental shadow on sunlight-sensitive resource
- Reduction in shadow
- Existing buildings
- Future buildings (by 2017)

June 21 - 5:00 PM
With Proposed Buildings
Figure C-23

EAST RIVER ESPLANADE (AT EAST 34TH ST.)

The proposed Energy Building would increase shadow on a portion of this space which is a paved walkway along the East River with several benches but no vegetation, during the final 13 minutes of the analysis day, 2:40 PM to 2:53 PM (see Figure C-15).

EAST RIVER

The shorter Kimmel Pavilion and taller Energy Building would result in areas of both increased and reduced shadow on small areas of the East River. Shadow increases would occur during the final 13 minutes of the analysis day, while shadow decreases would occur during the final 23 minutes of the analysis day (see Figure C-15).

Table C-1
Duration of Incremental Shadows

Analysis day and timeframe window	December 21 8:51 AM-2:53 PM	March 21 / Sept. 21 7:36 AM-4:29 PM	May 6 / August 6 6:27 AM-5:18 PM	June 21 5:57 AM-6:01 PM
OPEN SPACES				
St. Vartan Park	— *Reduced:* *9:30 AM–12:30 PM* *Total: 3 hr*	— No increment	— No increment	— No increment
401 East 34th Street (Rivergate)	Increased: 9:00 AM–9:55 AM 10:15 AM–10:30 AM Total: 1 hr 10 min *Reduced:* *9:50 AM–10:30 AM* *Total: 40 min*	— *Reduced:* *11:00 AM–12:45 PM* *Total: 1 hr 45 min*	— *Reduced:* *11:30 AM–12:15 PM* *Total: 1 hr 45 min*	— No increment
East River Esplanade (at East 34th Street)	Increased: 2:40 PM–2:53 PM Total: 13 min	— *Reduced:* *2:25 PM–2:45 PM* *Total: 20 min*	— *Reduced:* *2:10 PM–3:20 PM* *Total: 1 hr 10 min*	— *Reduced:* *2:25 PM–3:25 PM* *Total: 1 hr*
NATURAL FEATURES				
East River (portion)	Increased: 2:40 PM–2:53 PM Total: 13 min *Reduced:* *2:30 PM–2:53 PM* *Total: 23 min*	Increased: 3:35 PM–4:29 PM (from Energy Building) Total: 54 min *Reduced:* *2:20 PM–4:29 PM* *Total: 2 hr 9 min*	Increased: 4:15 PM–5:18 PM (from Energy Building) Total: 1 hr 3 min *Reduced:* *2:20 PM–5:18 PM* *Total: 2 hr 58 min*	Increased: 4:45 PM–6:01 PM (from Energy Building) Total: 1 hr 16 min *Reduced:* *2:25 PM–6:01 PM* *Total: 3 hr 36 min*

Notes:
Table indicates entry and exit times and total duration of increased or reduced shadow for each sunlight-sensitive resource.
Daylight saving time is not used.

MARCH 21/SEPTEMBER 21, 7:36 AM TO 4:29 PM (FIGURES C-16 TO C-18)

RIVERGATE

The shorter tower of the Kimmel Pavilion would cast less shadow on the Rivergate open space than the No Action building. The reduced shadow would occur from 11:00 AM to 12:45 PM (see Figure C-16). No increase in shadow would occur on this analysis day.

EAST RIVER ESPLANADE (AT EAST 34TH ST.)

The proposed Kimmel Pavilion would cast less shadow on this space from 2:25 PM to 2:45 PM than the No Action building. After 2:45 PM shadows would be the same with both the proposed buildings and No Action building (see Figure C-17).

EAST RIVER

The shorter Kimmel Pavilion would cast less shadow on the East River than the No Action building during the final two hours of the analysis day (see Figures C-17 and C-18). However, the taller proposed Energy Building would result in about an hour of increased shadow on a small section of the East River (see Figure C-18).

MAY 6/AUGUST 6, 6:27 AM TO 5:18 PM (FIGURES C-19 TO C-21)

RIVERGATE

The shorter tower of the Kimmel Pavilion would cast less shadow on the Rivergate open space than the No Action building. The reduced shadow would occur from 11:00 AM to 12:45 PM (see Figure C-19). No increase in shadows would occur on this analysis day.

EAST RIVER ESPLANADE (AT EAST 34TH ST.)

The proposed Kimmel Pavilion would cast less shadow on this space from 2:10 PM to 3:20 PM than would the taller No Action building (see Figure C-20). After 3:20 PM shadows would be the same with both the proposed buildings and with the No Action building (see Figure C-21).

EAST RIVER

The shorter Kimmel Pavilion would cast less shadow on the East River than the No Action building during the final three hours of the analysis day (see Figures C-20 and C-21). The proposed Energy Building, which would be taller than the south wing of the No Action building, would result in about an hour of increased shadow on a small section of the East River (see Figure C-21).

JUNE 21, 5:57 AM TO 6:01 PM (FIGURES C-22 TO C-23)

EAST RIVER ESPLANADE (AT EAST 34TH ST.)

The proposed Kimmel Pavilion would cast less shadow on this space for an hour in the afternoon (2:25 PM to 3:25 PM) than the No Action building (see Figure C-22). After 3:25 PM shadows would be the same in both conditions.

EAST RIVER

With the proposed action, the shorter Kimmel Pavilion would cast less shadow on the East River than the No Action building during the final three and a half hours of the analysis day (see Figures C-22 and C-23). The proposed Energy Building would result in about an hour and fifteen minutes of increased shadow on a small section of the East River (see Figure C-23).

E. CONCLUSIONS

The shadow analysis compared the shadows that would be cast by the proposed buildings to shadows that would result from the No Action building that would be built absent the proposed action.

Through the spring, summer, and fall, no increase in shadows would occur on any sunlight-sensitive resource except the East River. Limited durations of incremental shadow would fall on areas of the East River in these seasons from the taller Energy Building, and a very small incremental shadow would fall on the river from the top of the Kimmel Pavilion's stack, but there would be less shadow on the river with the proposed buildings than there would with the taller No Action building.

On the December 21 analysis day, the Rivergate open space would experience very small areas of increased as well as reduced shadow in the morning—50 minutes of increased shadow, 20 minutes of reduced shadow, and 20 minutes of both occurring simultaneously. The increased shadow would never eliminate all sunlight from the space, and in the afternoon the space would continue to experience large areas of sunlight. The East River Esplanade at East 34th Street and adjacent areas of the East River would experience about 13 minutes of increased shadow on December 21, but St. Vartan Park would experience three hours of reduced shadow.

Given the limited extent and duration of increased shadow on December 21, and the reduction in shadow on this day as well as at other times of year compared with the No Action building, the proposed Kimmel Pavilion and Energy Building would not cause any significant adverse shadow impacts. ✷