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# THE IMPACTS OF NEW YORK UNIVERSITY'S PROPOSED EXPANSION IN GREENWICH VILLAGE

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## EXECUTIVE SUMMARY

New York University's proposed 2031 plan for its Washington Square campus would add approximately 2.5 million square feet of academic, student and faculty housing, and commercial space to two superblocks, Washington Square Village and University Village, located just south of NYU's Washington Square campus. NYU has argued that expansion on this site is essential to maintaining its competitiveness among peer institutions, and that it will also provide substantial benefits to the city and the neighborhood. These claims are echoed in a NYU-commissioned report by New York City-based consulting firm Appleseed, and the project's Draft Environmental Impact Statement (DEIS). In addition, the DEIS finds the project would create a net increase in publicly accessible open space on the two superblocks, with minimal impact on the character of the project site or the neighborhood as a whole. Despite these findings, local stakeholders have continued to question the economic benefits of the project, expressing concerns about the impacts associated with this two-decade, complex development project located in a densely populated, historic neighborhood. Gambit Consulting was retained by the Greenwich Village Society for Historic Preservation to conduct a comprehensive investigation of the proposed development's impacts.

This report examines the economic, historic and environmental consequences, both positive and negative, of NYU's planned 2031 expansion of its Washington Square campus. It concludes that the local positive economic impact of the project in Greenwich Village would be minimal, while the collateral negative impacts would be substantial. Major findings include:

- Significant positive economic impacts of the plan would be citywide or regional in scope, while any positive local economic impacts would be minimal. For example, the maximum projected increase in local retail spending associated with the development would expand neighborhood retail sales by only approximately 2.5%.
- If NYU built its proposed development program in another area of the city—one that is, from the point of view of city policymakers, a priority for economic development—the local impacts would be greater, both because of the existing economic conditions of those alternate locations, and because development would represent more than an incremental expansion of an existing higher education presence.
- Based on a preliminary estimated development cost of \$1,000/SF, this project would cost approximately \$2.5 billion, i.e., close to the total size of NYU's endowment. If NYU suffers financial difficulties or financing shortfalls during the course of this twenty-year construction project, associated construction interruptions would substantially reduce economic benefits citywide and damage quality of life at a local level, especially for existing residents on the site.
- The proposed design would harm or destroy historically significant features of Washington Square Village and University Village by roughly doubling the amount of built space on both superblocks. The requested rezoning would permit the construction of new towers on areas required to remain as open space under the existing zoning.
- The project would reduce the amount of open space in the superblocks from 6.23 acres to 3.71 acres, a net loss of 2.52 acres.
- The inefficiencies inherent in building and operating 1.1 million SF of proposed underground space, as well as the project's complex construction phasing (including a temporary gymnasium), would reduce opportunities to pursue a more environmentally sensitive design.

### **Net New Economic Benefits Would Be Limited in Greenwich Village**

The NYU expansion would generate significant economic impacts felt across New York City. However, from a citywide perspective, certain benefits—including construction-period jobs and spending, as well as permanent new jobs, incremental increases in university purchases of goods and services, and incremental sales and other taxes—would remain essentially the same regardless whether the proposed space were built in Greenwich Village or elsewhere in the city. In contrast, the significance of local retail spending by students and NYU staff who work and live in the proposed mix of housing, academic, retail and hotel space would vary depending on project location.

The amount of local retail spending that a neighborhood captures from a major project depends on local factors. Economists use a term, “net new,” to denote the benefits of a project that are truly new within a geographic area. Incremental expansion of a university in a neighborhood in which it already has a major presence will generate far fewer net new benefits than the establishment of a new university presence in another neighborhood. In fact, economists generally state the standard definition of a net new impact is a job, dollar spent, or other activity, that would not occur *but for* the project in question.

This project represents a significant expansion of NYU's physical presence, and many students and staff would study, live, and work on site. However, as NYU has stated in its 2031 plan, the project also represents, primarily, an opportunity to reorganize existing facilities and programs, rather than provide for a radical expansion of the university population. Regardless of whether the project is built or not, most of the people associated with it would be present as economic actors in the Village and, therefore, little of the retail spending would be net new.

Based on conservative assumptions, neighborhood retail spending from students, faculty, and staff living or working in project components could total approximately \$23 million a year; however, as discussed above, only a small amount of that total could be classified as net new within the Village. Further, since retail sales within just a quarter-mile of the site are \$854 million per year, an additional \$23 million per year in retail spending would represent only a roughly 2.5% increase in the size of the local retail market, even without discounting spending that cannot be classified as net new. Thus, the positive local economic impact of the project would be minimal.

On the other hand, the project's impact would be superior in neighborhoods where NYU's presence is smaller or nonexistent. In areas with fewer higher education facilities, the \$23 million stimulus would be largely net new, only offset by the possible displacement of existing businesses or residents, along with their sales and spending. In addition, in areas lacking the vigorous real estate and local retail market of Greenwich Village, project impacts would have greater local benefit. For example, if this project were developed in Downtown Brooklyn, more of the potential retail spending would be truly net new, and would increase local retail spending by up to 10%. Areas such as the Financial District, Downtown Brooklyn, and Long Island City have excellent transit access, short travel times to NYU's Washington Square Campus, and have been identified by policymakers as economic development priorities. Additionally, the Financial District is a leading global business center, Downtown Brooklyn is part of an emerging “Tech Triangle,” and Long Island City is home to a large number of cultural institutions, each of which aligns with NYU's academic program and mission. Pursuing the project in one of these locations would meet NYU's goals, further economic policy agendas, and result in a greater economic impact.

The potential economic stimulus of this project depends on local context. This report finds that the NYU planned expansion, if developed elsewhere in the city, could be an effective neighborhood development tool that also meets NYU's needs. The rationale for considering alternative sites becomes even more urgent and compelling in light of negative project impacts associated with continued NYU expansion in Greenwich Village.

### **The Project Would Harm the Historic Character of the Site and the Village**

NYU's 2031 plan states that the university considers the Washington Square Village and University Village superblock designs historically significant, and that it will respect and preserve their historic character. Nevertheless, careful analysis of the proposed design makes clear that historic elements of both superblocks would be eliminated or significantly altered to accommodate the new construction. NYU's design would roughly double the developed square footage of the two superblocks, greatly increasing their density and upsetting the carefully balanced ratio of built to open space that remains an intact and historically significant feature of their original designs. On the National Register-eligible Washington Square Village site, two new academic towers would be built on open space between the existing buildings, and a massive underground academic complex would be excavated and constructed under the entire area of the superblock. On the southern superblock, the three I.M. Pei-designed University Village towers—a designated New York City landmark—would be surrounded by tall new construction that contravenes the original site plan and existing zoning requirements for open space.

The residential character of the site is currently protected by deed restrictions that prevent academic uses on the two superblocks, as well as zoning regulations that prevent commercial uses beyond the commercial strips on LaGuardia Place. The requested rezoning and removal of these deed restrictions would place students, staff, and additional faculty on the site, who would live and work in the new buildings, as well as a transient population associated with the hotel. Considered as a whole, the project would increase the total built square footage of NYU's Washington Square campus by 22% by 2031, a massive increase in the university's physical footprint in the Village after decades of piecemeal and contested expansion.

### **The Project Would Also Reduce Open Space and Diminish Quality of Life**

The project would permanently eliminate 2.52 acres of open space in a neighborhood where publicly accessible open space is scarce. Furthermore, the quality of the remaining open space would be significantly degraded throughout the twenty-year construction period, and would be permanently marred by the new shadows cast by the development. The project would also generate negative air quality and environmental impacts, despite goals to use green building standards for new construction.

NYU has requested that the superblocks be rezoned from R7-2 to C1-7, to allow for commercial uses restricted by current zoning. Notably, the proposed C1-7 zoning would also change the underlying residential zoning to R8, which carries greatly reduced open space requirements compared to the R7-2 zoning, and would allow NYU to build new towers on sites that the present zoning requires to remain as open space. This is especially important on the Washington Square Village superblock, where the current R7-2 zoning requires that roughly 85% of the entire superblock to be open space, while the new C1-7 zoning would reduce that figure to only 38% of the superblock, allowing two large new buildings to be constructed at the center of the block. Overall, the proposed new construction would reduce the entire amount of open space in the project area from 6.23 acres to 3.71 acres.

The DEIS, however, finds that there is currently only 0.58 acres of publicly accessible open space on the site, and that the proposed design would result in a net gain of publicly accessible open space when completed in 2031. This discrepancy is due to the narrow interpretation of City Environmental Quality Review (CEQR) technical guidelines used in the DEIS, which allow the classification of the majority of existing open space as not substantially publicly accessible. Thus, even though approximately 3.13 acres of open space would be eliminated by 2031, the DEIS states the proposed design “would not result in significant adverse impacts to publicly accessible open space” since this analysis considers only a tiny fraction of the 6.23 acres of open space on the blocks. The DEIS does not acknowledge that much of the open space in the area is not being maximally maintained by NYU, and that NYU has either tacitly or explicitly chosen to exclude the public from using this space. NYU’s current operation of the site, therefore, enables the low DEIS estimate of publicly accessible open space and, therefore, the counterintuitive conclusion that the project would result in more, rather than less, open space.

Furthermore, ongoing construction over the next twenty years would result in significant noise, dust, fumes, temporary closings of various areas, and other effects, thereby eliminating or seriously marginalizing all existing or planned open space amenities on site for two decades.

The new buildings would also produce significant amounts of greenhouse gases. The carbon footprint of the new buildings along would be 13,089 tons of CO<sub>2</sub>e annually, or over 5 CO<sub>2</sub>e per 1,000 SF. By comparison, the newly retrofitted, 2.85 million SF Empire State Building produces 11,421 tons of CO<sub>2</sub>e a year, or about 4 CO<sub>2</sub>e per 1,000 SF. In other words, the proposed NYU program, although smaller, and despite the presumption of extensive use of state-of-the-art sustainable technologies, would produce a greater carbon footprint per square foot than the retrofitted but eight-decade-old Empire State Building.

### **Reconsidering the Project in the Context of NYU’s 2031 Plan**

NYU is reasonably seeking to improve its Washington Square campus as part of its NYU 2031 plan for the entire university. While NYU’s desire to develop additional space in the Village is understandable, it may be financially and logistically more expedient to pursue the project elsewhere.

NYU’s 2031 plan acknowledges that the university’s endowment is small relative to its peer institutions. The university therefore seeks the efficiencies of building on sites it owns, both to avoid acquisition costs, and to end its reliance on rented space. However, by placing so much of the newly constructed space underground, the NYU 2031 design for the two superblocks creates engineering and planning challenges that may add greatly to the cost and detract from the long-term utility of the proposed space. Though NYU states that many current and future academic uses can be satisfactorily accommodated in windowless underground space, it may be in the university’s interest to construct or renovate less costly, more flexible space at other locations outside the Village.

More importantly, a 2.5 million SF expansion near Washington Square would only account for roughly a third of the new space in New York City called for in the NYU 2031 plan. NYU is already pursuing alternate locations further from the traditional campus to accommodate growth. Whether building satellite facilities in Brooklyn or Abu Dhabi, NYU has demonstrated its desire to develop as a global presence far beyond the confines of Greenwich Village. In the context of this broader view, and given the many negative impacts associated with this project, it is appropriate for NYU and policymakers to reassess whether this project is the most compelling strategy for growth, both for NYU and the city.

## ECONOMIC IMPACTS

NYU proposes to build approximately 2.5 million square feet of academic space and student and faculty housing on two superblock sites located south of the university's Washington Square campus by 2031. Students would live and study in these buildings; faculty and staff would work in them; parents, relatives, and friends would visit. This population would introduce spending power to the area, generating and supporting new jobs. Additionally, construction of the buildings would create on-site construction jobs and support positions for suppliers, architects, engineers, and others. These permanent and construction-period impacts would spread dollars throughout the region's economy, spurring associated impacts through what is known as a "multiplier effect." The proposed NYU expansion is, therefore, a potentially potent economic development tool.

An accurate evaluation of the economic value of the proposed expansion to both the New York City economy and to the immediate neighborhood requires consideration of NYU's existing presence in Greenwich Village. Simply put, NYU already dominates the Village in physical and human terms. Between 1993 and 2008, NYU increased its enrollment by 30% and its local presence to over 40,000 students, and either constructed or bought and leased space in existing buildings to expand its footprint around Washington Square to 11.4 million SF. Between now and 2031, NYU forecasts continued growth in student enrollment at a rate of 0.5% per year, meaning that NYU's student population will grow by just over 5% in the next decade.

Thus, NYU's proposed project would expand an already dominant presence, rather than introduce a wholly new use; and many of the students, faculty and service workers who would live, study, and work in the project's buildings would be present as economic actors in the neighborhood, whether or not the project is developed. On the other hand, developing the same amount of academic space and housing at a satellite campus in another neighborhood, where such a population would introduce a new local dynamic, would have a greater economic impact than incremental expansion in the Village. Four propositions support this conclusion:

- Most of the project's economic impacts would be citywide or regional in scope. Neighborhood impacts would be limited to local retail spending by students, employees and visitors. The potential size of this direct local spending would be up to approximately \$23 million per year, based on assumptions and methodologies discussed below.
- NYU is an already substantial presence in the Village. The project would increase the space available to NYU students and faculty. However, its purpose is to incrementally expand and reorganize NYU's programs, rather than accommodate a wholly new population. The incremental nature of this expansion would limit the portion of the potential \$23 million per year stimulus that would actually flow into the Village's economy or, in economists' terms, be "net new" (this term is explored below).
- The neighborhood has a strong retail sector. The retail market—i.e., the total amount spent on goods and services—within just ¼ mile of the superblocks is over \$850 million/year. Whatever portion of the potential, annual \$23 million in spending the project produces as net new impacts would result in only a very small expansion of this retail market. Moreover, in the context of constrained real estate supply, any such expansion would be unlikely to allow for significant business creation or expansion.
- Locating project elements in neighborhoods such as the Financial District, Downtown Brooklyn, and Long Island City would align with New York City's stated economic development goals and would catalyze greater net new impacts at the local level.

### **Defining Local Impacts**

To quantify local impacts of the NYU expansion, we must first identify and separate purely local impacts from those that would accrue to the city or region.

Based on the information available, it is reasonable to assume that construction-period impacts would remain approximately the same wherever the project is built. If the development program remained the same size, and the hard and soft construction costs also stayed constant, the amount of construction labor and material spending required, as well as the number of construction period full-time-equivalent positions, would be the same whether the project were built in the Village or elsewhere in the city. NYU has not committed to any local hiring or purchasing, so these benefits could be local, citywide, regional, national or even international in scope (e.g., hiring an architect, or purchasing materials, from a firm based in another city or country). Even if NYU made commitments to hire or buy locally, associated hiring and spending requirements would most likely apply within the five boroughs. Therefore, related impacts, while potentially meaningful, would remain the same for a development anywhere within city limits.

In terms of permanent impacts, the benefits associated with net new jobs that would be created by NYU and filled primarily by New York City residents (according to the Appleseed report, 81% of NYU employees live in the five boroughs) would be also citywide or regional in nature, not local. The new indirect and induced spending these jobs would generate throughout the city by virtue of the multiplier effect, and the incremental increases in purchases of goods and services by the university from New York City-based service providers and suppliers, are not likely to be tied closely to a neighborhood.

The relevant impact at the neighborhood scale is **local retail spending** by populations associated with six principal elements of the proposed NYU 2031 expansion around Washington Square<sup>1</sup>:

- Academic space (1,072,000 SF): NYU students that attend class there, as well as faculty and service workers who work there.
- Dormitory space (370,000 SF): NYU regular and summer students who live there, and service workers.
- Athletic Center (146,000 SF): Students, spectators at athletic events, and service workers.
- Hotel (115,000 SF): guests who stay there, and service workers.
- Faculty housing (105,000 SF): NYU faculty who live there, and service workers.
- Retail (64,000 SF): retail employees and associated spending.

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<sup>1</sup> We do not consider impacts associated with the proposed athletic center, public school, parking, or mechanical/service elements here. More detail is required regarding the public school and athletic center to derive meaningful estimated impacts, and the latter two elements are likely to produce negligible impacts. In addition, visitor spending would also provide a direct, local impact. Estimating visitor spending would require more detailed information than is available at this time; indeed, the Appleseed report and the DEIS, while acknowledging the value of visitor spending, do not attempt to quantify it, given the preliminary nature of the project. Similarly, while visitor spending is a factor in the project's potential impact, Gambit does not attempt to estimate this spending in this report.

**Estimating Potential Direct Local Impacts**

The NYU program is preliminary, would be developed over two decades, and will no doubt change in the years ahead. Indeed, NYU's plan is not specific enough to create a highly detailed economic impact model. However, an illustrative estimate of local direct impacts, based on NYU's development program as well as assumptions provided in the Appleaseed Report and DEIS, paints a picture of the potential local economic stimulus associated with this project.

This estimate is intended to show the **potential** direct local impact associated with the program. Neighborhood characteristics would determine the proportion of this spending that would have actual local impact. Such vital, place-specific considerations are discussed below.

Figure 1 shows the preliminary development program shown in the DEIS. Potential local impacts are analyzed below, project element by project element.

**FIGURE 1**

<b>Preliminary NYU Development Program</b>	
<u>Program Element</u>	<u>SF</u>
Academic space	1,072,000
Student housing	370,000
Athletic center	146,000
Hotel	115,000
Faculty housing	105,000
Public school	100,000
Parking	76,000
Retail	64,000
Academic/conference space	50,000
Mechanical/service areas	377,000
<b>Total</b>	<b>2,475,000</b>

*Source: DEIS. All SF#s rounded to nearest thousand.*

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**Academic Space**

In its 2031 plan, NYU states a goal of increasing university academic space to 240 SF per student. Assuming that the 1,072,000 SF of academic and conference space were built with this space utilization in mind, approximately 4,500 students would attend class at this location. This would yield a ratio of students:instructor in the classroom of about 25:1, in line with NYU's current ratio of "less than 30."<sup>2</sup>

However, according to the DEIS, it appears that a significantly higher number of students would use this space. According to Section 12 ("Solid Waste and Sanitation Services") of the DEIS, if

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<sup>2</sup> <http://www.nyu.edu/admissions/undergraduate-admissions/is-nyu-right-for-you/faqs.html>. Note that this is not to be confused with NYU's "student:faculty" ratio, which appears to not reflect the ratio of students to instructor in a typical classroom, but rather the total number of students in the university to total faculty.

the project were not built, there would be a total of 7,661 students in the project area.<sup>3</sup> The DEIS estimates that, with the addition of the project, there would be 15,212 students in the area. This implies an incremental difference of about 7,550 students attending class in the new academic space. While it is unclear from the DEIS, this calculation suggests that many students would be using the academic space for purposes other than simply attending classes, and that there would be multiple classes throughout the day. These are the kinds of efficiencies one would expect to see in a new academic building where space is at a premium, so it has been assumed that 7,550 students using this space is the more reasonable assumption.

The DEIS does not make clear how much of the academic component would be instructional space and how much would be devoted to similar, but distinct, uses. The Appleseed report apportioned Washington Square academic space among four components: classroom space (12%), research/lab space (32%), office/research (36%), and student services (20%). Additionally, the Appleseed report provided job generation numbers per 1,000 SF in each category. Although the development program has been modified somewhat since the Appleseed report was published, this component would generate about 2,590 full-time equivalent positions assuming that the proposed academic space were similarly utilized.

Appleseed cited several estimates of average NYU student spending. These include average spending on miscellaneous personal expenses per NYU student that varies widely between students that live off campus (\$14,685) versus on campus (\$1,800). Summer students are estimated to spend about a quarter of these amounts. According to the Bureau of Labor Statistics, a typical college student spends (adjusted to 2012 dollars) about \$3,400 per year on food away from home, apparel and services, entertainment, and other discretionary retail spending.<sup>4</sup> The Appleseed figures are not broken out by type of spending, and we do not have an estimate of how many students attending class at the program's academic space would live on- or off-campus or be regular or summer students. In the absence of such details, the BLS figure is a reasonable proxy.

In addition, according to the BLS' 2010 American Time Use Survey, full-time college students spend roughly one-third of their discretionary time (i.e., time not spent eating, grooming, sleeping, or traveling) in educational activities. The more time a student spends at a place, the more likely he or she is to spend money close by. If we assume that most of these educational activities occur in university academic space, and that the students attending class in the new academic space attend *most* of their classes there, we can assume that about a third of their spending in the local categories above would occur at the project site.

By applying \$3,400 in average annual spending per student in these categories to the 7,550 students that would attend class in the new academic space, and dividing by a third to account for how much of a student's discretionary time is spent in or near the space, we can estimate that these students would spend about \$8,530,000 per year in the immediate area around the academic space.

Employees would also spend money locally. According to the International Council of Shopping Centers, U.S. office workers typically spend just over \$3,000 on food and retail in a given year

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<sup>3</sup> This estimate consists of 6,695 students who attend class within a quarter mile of the site today, plus 966 students added once a nearby building is converted from residential to instructional use.

<sup>4</sup> "Expenditures of college-age students and non-students." Geoffrey D. Paulin, Division of Consumer Expenditure Surveys, Bureau of Labor Statistics, 2001.

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near their workplace<sup>5</sup>. Assuming that these 2,590 employees behaved similarly, this would generate an additional \$7,770,000 in neighborhood spending per year.

The academic space, therefore, could provide a potential annual stimulus of roughly \$16,300,000 in direct, local retail spending, based on a population of about 7,550 students and 2,590 employees. Related assumptions and calculations are summarized in Figure 2, below.

**FIGURE 2**

### Estimated Direct Local Retail Impacts | Academic Space

#### Estimated Number of Students

	<u>Students</u>
Students	<b>7,550</b>

(1) Source: DEIS calculation of # of students in project area with project—15,212—less # of students in project area today—6,695—and # of students to be added to area without project—966—rounded to nearest ten.

#### Estimated Number of Direct Jobs

<u>Program Element</u>	<u>Presumed Share of Academic Space<sup>1</sup></u>	<u>SF</u>	<u>Jobs per 1,000 SF<sup>2</sup></u>	<u>Jobs<sup>3</sup></u>
Classroom space	12%	128,600	1.4	<b>180</b>
Research/lab space	32%	343,000	2.1	<b>720</b>
Office/research space	36%	385,900	4.0	<b>1,540</b>
Student services	<u>20%</u>	<u>214,400</u>	<u>0.7</u>	<u>150</u>
<b>Total</b>	100%	1,072,000	2.4	<b>2,590</b>

1. Based on proportions in Appleseed report.

2. Based on multipliers in Appleseed report.

3. Rounded to nearest ten.

#### Estimated Direct Local Retail Spending Per Year

<u>Economic Driver</u>	<u>#</u>	<u>Estimated Local Average Retail Spending/Year<sup>1</sup></u>	<u>Estimated Direct Local Retail Spending/Year</u>
Students	7,550	\$1,130	\$8,530,000
Classroom space-related jobs	180	\$3,000	\$540,000
Research/lab space-related jobs	720	\$3,000	\$2,160,000
Office/research space-related jobs	1,540	\$3,000	\$4,620,000
Student services-related jobs	150	\$3,000	<u>\$450,000</u>
<b>Total</b>			<b>\$16,300,000</b>

1. Estimated local student by analyzing relevant retail categories from BLS statistics, adjusting for Consumer Price Index, and dividing by 3 based on analysis of BLS American Time Use Survey, 2010. Average retail spend for jobs derived from 2003 International Council of Shopping Centers survey, adjusted for CPI.

<sup>5</sup> 2003 ICSC survey adjusted for Consumer Price Index changes.

### Dormitory Space

NYU's recently completed dormitory buildings provide varying amounts of space per student: ~450 gross SF per student (Palladium Hall, 140 E. 14<sup>th</sup> Street, completed 2001); ~350 SF per student (University Hall, 110 E. 14<sup>th</sup> Street, completed 1999); and ~250 SF per student (Founders Hall, 120 East 12<sup>th</sup> Street, completed 2009).<sup>6</sup> Since Palladium Hall has substantial retail tenants that inflate this ratio, and since Founders Hall is NYU's most recent project, it is reasonable to assume that new NYU student housing would be closer to 250 SF per student. At this space utilization, 370,000 SF of dormitory space would house 1,480 residents.

However, Section 4 of the DEIS states that up to 1,750 dormitory beds are possible, while Section 12 assumes 1,317 beds. In the absence of definitive information, 1,480 student housing residents is a reasonable assumption.

Students spend a substantial amount of time near their dorm rooms. In addition to sleeping in the dorms, students study and relax inside or nearby. This represents roughly 1/3 of their discretionary time, so we can assume that roughly 1/3 of students' discretionary spending would occur near their dormitory.<sup>7</sup>

By multiplying the average annual local, discretionary spending of \$3,400 described above by 1,480 students and applying a factor of 1/3, we arrive at an estimated potential direct local spending by students living in the new dormitory space of about \$1,677,000.

In addition, student housing would generate service jobs. Assuming that all of this housing would be for undergraduates, and using the Appleseed report's job generation numbers, the dormitory space would generate roughly 59 positions. According to the 2010 BLS Consumer Expenditure Survey, service workers spend, on average, about \$7,600 per year on retail goods and services.<sup>8</sup> Assuming that roughly half of this amount is spent near work, this means that dormitory workers would spend about \$220,000 a year locally.

Adding student and worker spending, the potential local retail spending associated with this component would be about \$1,897,000 annually.

### Hotel

The Appleseed report assumes that the 115,000 SF hotel will have 240 rooms. The DEIS assumes 300 rooms; however, this assumption is based on a space utilization of 600 SF/room, implying the estimated number of rooms is based on a 180,000 SF hotel, which is inconsistent with the development program. Gambit applied the 600 SF/room assumption to the DEIS program of 115,000 SF, yielding a working assumption of 192 rooms.

Applying the 2011 average New York City hotel occupancy rate of 85.3%, at any given time, about 164 of these rooms would be occupied. Based on analysis of 2011 NYC & Co data and a 2011 Price Waterhouse Coopers report, the average New York City tourist spends about \$83/day on non-hotel related expenses. If guests at the proposed NYU hotel behaved similarly, and spent half this amount in the neighborhood (near their hotel), this would result in a potential local retail

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<sup>6</sup> Greenwich Village Historical Society analysis. [http://www.gvshp.org/\\_gvshp/preservation/nyu/doc/sq-footage.pdf](http://www.gvshp.org/_gvshp/preservation/nyu/doc/sq-footage.pdf)

<sup>7</sup> "Expenditures of college-age students and non-students." Geoffrey D. Paulin, Division of Consumer Expenditure Surveys, Bureau of Labor Statistics, 2001.

<sup>8</sup> "Expenditures of college-age students and non-students." Geoffrey D. Paulin, Division of Consumer Expenditure Surveys, Bureau of Labor Statistics, 2001.

spending of about \$2,484,000.<sup>9</sup>

Hotel service staff would spend an additional amount. We assumed this staff would primarily be service workers who would spend about \$7,600 per year on retail goods and services<sup>10</sup>, and that roughly half this amount would be spent near work. The Appleseed report estimates that the hotel will have 64 workers, while the DEIS assumes 112 based on 1 employee per 2.67 rooms. Again, the DEIS seems to imply a much larger hotel; however, by applying the DEIS' employee:room ratio to our assumption of 192 rooms, the hotel would require 72 employees. This number of employees yields a total annual spend by service workers of \$274,000. Total local direct local retail spending from hotel guests and workers is therefore estimated at \$2,758,000.

### Faculty Housing

Assuming an average apartment size of 1,000 gross SF, 105,000 SF of faculty housing would provide 105 apartments.<sup>11</sup> However, Section 4 of the DEIS assumes up to 260 faculty dwelling units. This would mean, presuming 105,000 SF of faculty housing, an average apartment size of only 510 gross SF. Assuming a 15% loss factor, this would mean an average apartment's net area was only 430 SF, about the size of a modest Manhattan studio unit. This space utilization seems unlikely, since the DEIS elsewhere assumes that these dwelling units would generate new school children (i.e. faculty children). In other words, the DEIS tacitly assumes that many of these units will be two bedroom apartments suitable for families. This upper-end calculation may therefore assume that another component is shifted to this use. Gambit therefore assumed 105 apartments, although we note that the DEIS appears to leave open the potential to develop more than twice this number.

According to the Appleseed report, the average NYU faculty member is paid \$113,000 per year. According to the Bureau of Labor Statistics' 2010 Consumer Expenditure Survey, households with incomes above \$70,000 per year annually spend an average of \$19,922 on retail goods and services.<sup>12</sup> Assuming that half of this is spent near their homes, faculty households would directly spend about \$1,046,000 nearby.

### Retail

The Appleseed report assumed 4.1 jobs per 1,000 SF of retail establishments; the DEIS, 3.0. Assuming the DEIS is based on a refined retail program, we would expect about 190 positions to be created within the 64,000 SF of retail in NYU's plan. Assuming service worker retail spending as described in the "Hotel" section above, retail workers would spend \$722,000 annually in the area on retail goods and services.

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<sup>9</sup> Data analyzed included First Quarter 2011 Manhattan Lodging Index (Price Waterhouse Coopers) and NYC & Co's 2011 estimated number of visitors and total direct spending. By dividing an estimated \$32 billion in direct spending by 50.5 million visitors, we find the typical NYC visitor spent \$633 in New York City in 2011. This tourist stayed for an average of 1.86 days and, presuming they stayed in Manhattan, paid an average daily rate of \$204.86/night. This leaves about \$250 in average *non-hotel* spending per visitor. Since the average stay is roughly 2 nights [if the average stay is indeed 1.86 DAYS, then they stayed 1 night. Alternatively, if they stayed 2 nights, you should change it to 1.83 NIGHTS above], this equates to roughly 3 days, meaning the \$250 is spread over three days, for an average daily spend on non-hotel activities of about \$83.33. 164 guests multiplied by \$83/day, multiplied by 365 days/year, and finally multiplied by 1/2, yields the estimated local direct spend.

<sup>10</sup> "Expenditures of college-age students and non-students." BLS

<sup>11</sup> Assuming a 15% loss factor, this would mean that a typical apartment would be 850 SF.

<sup>12</sup> Including all food, alcohol, housekeeping supplies, apparel and services, entertainment, personal care products and services, reading, and tobacco products.

Total Direct Impact

As summarized in Figure 3 below, we estimate potential direct, local retail spending associated with the NYU program would be approximately \$22.7 million per year in 2012 dollars.<sup>13</sup>

FIGURE 3

<u>Estimated Potential Direct Retail Spending/Year</u>	
Academic and conference space	\$16,300,000
Student housing	\$1,897,000
Hotel	\$2,758,000
Faculty housing	\$1,046,000
Retail	<u>\$722,000</u>
<b>Total</b>	<b>\$22,723,000</b>

Net New Impacts Would Be Minimal in Greenwich Village

The above estimate is illustrative and is intended to provide a sense of the maximum potential local economic impact. Neighborhood conditions and context would determine the significance of this impact at the neighborhood level.

“Net new” economic impacts are those impacts that would not occur *but for* the project in question. A 2006 Vanderbilt University Department of Economics working paper warned of the pitfalls of assuming that all, or even most, of a higher education development project’s impacts are truly net new.<sup>14</sup> After reviewing over 90 economic impact studies of higher education institutions and projects, the authors concluded that incremental university expansion in a neighborhood already saturated with populations and uses associated with higher education will produce fewer net new impacts than in a less saturated neighborhood. This analysis is particularly germane to NYU, which is a dominant presence in the Village without the additional Washington Square space proposed in the 2031 plan.

Although the physical expansion associated with this project would be significant, the net new positive economic impact would be minimal, and could even be negative, for three reasons. First, NYU is an established and substantial presence in the Village and has already made a significant economic impact on this area. This project is not intended to allow for a radical expansion of the university, but rather, primarily to allow the school to reorganize existing facilities and programs, and to accommodate only modest growth in enrollment. As such, it is an incremental expansion. Second, Greenwich Village already enjoys robust retail and real estate markets that would not be significantly enhanced by this project. Finally, a review of experiences at peer universities illustrates several ways in which universities’ expansion projects can result in negative impacts on the local economy.

Local Economic Impact would be Minimal Given the Context of the Village

Incremental expansion of a university results in a smaller net new impact than the introduction of a wholly new educational institution, or a new campus for an existing university. Additionally,

<sup>13</sup> As noted above, this estimate does not note potential direct, local retail spending associated with athletic or school program components, or visitors.

<sup>14</sup> “The Economic Impact of Colleges and Universities.” John J. Siegfried (Vanderbilt University), Allen R. Sanderson (University of Chicago), and Peter McHenry (Yale University). Department of Economics, Vanderbilt University. May 26, 2006.

incremental university expansion has a smaller effect in a neighborhood already saturated with college students and employees. The Vanderbilt working paper noted, “Diminishing marginal returns can create mischief when an average impact of the entire investment in a college or university is inappropriately interpreted as the relevant effect on an incremental expansion.”<sup>15</sup>

NYU already dominates the Village in several important ways:

- NYU’s Washington Square campus is an estimated 11.4 million square feet in size, according to the DEIS.
- According to the Appleseed report, over 16,000 NYU employees are affiliated with the Washington Square campus. The DEIS states that there are an estimated 48,700 workers employed within a quarter mile of the site. If we assume most campus employees work within the same quarter-mile radius, then about a third of the local workers are employed by NYU. Note that this does not consider an estimated 9,000 NYU student workers.
- The Appleseed report also estimates that over 42,500 students frequent the Washington Square campus. This is the culmination of growth in NYU enrollment of 30% between 1993 and 2008, or about 0.9%/year. While this growth took place, the overall population of Community District 2 declined; between 1990 and 2000, the residential population shrank from approximately 94,000 to 93,000, and by 2010 had further declined to just over 90,000. While it is not clear how many of NYU’s students are included in the total number of residents, it is apparent that NYU students make up an increasing portion of the residential population.<sup>16</sup>

The project, while significantly expanding the physical footprint of NYU in the Washington Square area, is primarily intended to reorganize and provide more space for its existing population of students and staff, rather than accommodate a large increase of either. This means that this project represents an incremental increase in NYU’s population. For instance, the DEIS estimates only 600 dormitory beds (based on Gambit’s estimate, less than half the total number of beds proposed in the project) of the proposed total would be filled by students that are truly new to the Village.

In comparison, were another neighborhood with limited or no existing NYU student housing to capture the local spending of the entire population of the dormitory—1,480 students—the local economic impacts would be magnified. The difference in direct, net new, local impacts associated with 600 students living in the dormitory component (~\$680,000) vs. all 1,480 students (\$1,700,000) is approximately a million dollars per year. This difference illustrates the potential of each component to have greater impact in another neighborhood, as 100% of the project’s population—as well as the associated retail spending—could be net new.

Even if the project’s full potential impact were realized locally, this impact would be very small relative to the Village’s enormous retail market.

According to Nielsen/Claritas market analysis, 14,000 people live within ¼ mile of the project site and spend over \$370 million annually on retail goods and services. Some portion of this money is spent within this same area. However, total 2011 annual retail sales in the area were

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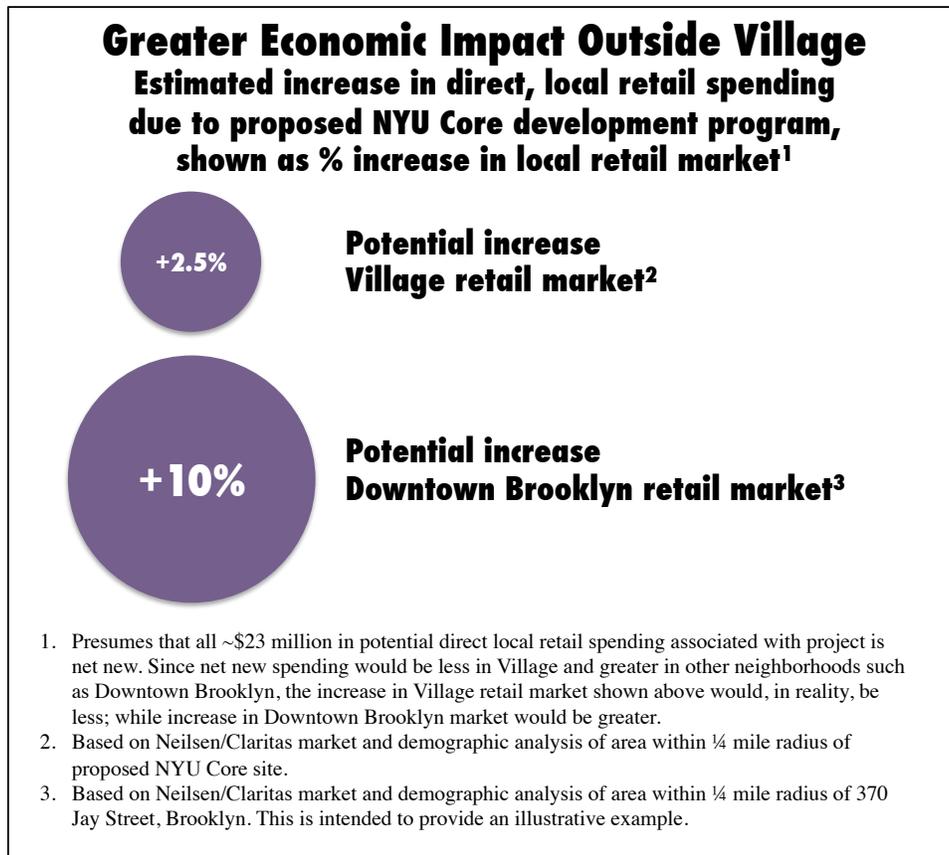
<sup>15</sup> In addition, when considering such an incremental expansion, the overall impact of the institution, however impressive, is irrelevant in considering a policy change that accommodates such a project. Since NYU is requesting a rezoning and other accommodations to facilitate this project, it is appropriate to focus on whether the project would have greater economic impact, and fewer negative effects, elsewhere, rather than dwelling on the acknowledged economic power of NYU’s existing facilities.

<sup>16</sup> New York City Department of Planning, Community District 2 Statistics, and 2010 5-year American Community Survey estimates, US Census.

about \$854 million. In other words, visitors from outside the area provide the majority of the area's retail spending. Even if the entire net new impact of the project were realized locally, the project would increase this local retail market by only about 2.5%.<sup>17</sup>

NYU has proposed a new Center for Urban Science and Progress at 370 Jay Street in Downtown Brooklyn. The ¼ mile around this potential project has a much smaller retail market—about \$224 million in annual spending. Introducing up to \$23 million in new retail spending would increase retail sales in this area by 10%. Since this would represent a new NYU campus in the area, rather than an incremental expansion, we could expect the bulk of this \$23 million to be realized as net new. Moreover, in the context of the Village's constrained real estate supply, any such expansion would be unlikely to allow for significant business creation or expansion. This difference in increased retail spending is summarized visually in Figure 4, below.

FIGURE 4



This retail spending would spur additional impacts, as related businesses expanded or set up shop. These positive impacts would vary depending, as shown above, on the amount of spending by net new economic actors. However, the Village's expensive and constrained real estate market would further limit such benefits.

<sup>17</sup> Nielsen/Claritas Report, RMP Opportunity Gap-Retail Stores.

The median 2011 residential unit sale price in Greenwich Village was \$1.8 million.<sup>18</sup> Office rents are drastically higher than other areas of Manhattan; according to the Real Estate Board of New York, Greenwich Village/NoHo market asking rents are \$79/SF<sup>19</sup> as compared to \$36-\$43/SF in the Financial District. Most relevant, retail rents are also very high: a recent Massey Knakal study placed asking retail rents at \$179/SF (by comparison, REBNY estimated Financial District rents at \$144/SF).

Additionally, vacancy rates in Greenwich Village in the residential, retail and office sectors are all extremely low, even relative to elsewhere in Manhattan. Residential rental vacancy is about 0.6%, compared to about 1% for Manhattan as a whole<sup>20</sup>. In 2011, 7.4% of office space is vacant in the Greenwich Village/NoHo market, compared with, for example, 12.3-15.3% in the Financial District<sup>21</sup>. According to CoStar Property, only about 3.4% of retail space in the Village was available in the fourth quarter of 2011. (This is put in context among three other neighborhoods below).

Additional demand in the context of this constrained context would likely further increase rents, rather than create opportunities for new establishments to open, or existing businesses to expand.

### Similar Projects Encountered Problems that Reduced Anticipated Benefits

A review of expansions at peer universities shows that unanticipated consequences can further reduce positive net new impacts. First, increased enrollment brings greater demand for off-campus student housing. This has been shown to increase local residential rents while causing housing and neighborhood conditions to deteriorate. Second, in recent years several major universities have abandoned major campus expansions due to financial shortfalls, and local communities have suffered as a result.

Students are more willing to live in very close quarters, and therefore will pay more than traditional renters on a square foot basis. This can push out longtime residents. Yet as students push rents up, housing stock quality often deteriorates. As one study stated, "Students tend to have a lower investment claim in the area in which they reside, and thus act very differently than permanent residents who have a greater financial commitment to the region in preserving neighborhood quality."<sup>22</sup> Non-student residents, whether owners or renters, are more invested in their neighborhood's quality, and the quality of their own building. Student renters, who typically rent for no more than a couple of years, are less likely to invest time, money or energy into the neighborhood.

Long-term residents may find that their property values or rents increase, while the quality of life in their neighborhood decreases. If longtime residents are pushed out, their spending power leaves, too. Such changes would reduce net new local positive impacts from the NYU expansion. In the worst case scenario, if NYU's expansion results in a significant change in the neighborhood's character, Greenwich Village may lose its favored status as a shopping and dining destination; spending associated with NYU students would be unlikely to be sufficient to substitute for this deficit. Other areas, with smaller resident student populations and lower retail sales, may be better able to accommodate a new student population (due to higher residential

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<sup>18</sup> Douglas Elliman 2002-2001 Sale Report and Brooklyn and Queens 4Q, 2011.

<sup>19</sup> Real Estate Board of New York 2011 Statistical Abstract.

<sup>20</sup> Citi Habitats Manhattan Rental Report, 2006-2011.

<sup>21</sup> Real Estate Board of New York 2011 Statistical Abstract.

<sup>22</sup> "The Impacts of Changing College Enrollments on Local Housing Prices Over Time—A Case Study: Purdue University and West Lafayette, Indiana." George A. Chressanthis. *Journal of Education Finance*, Vol. 11, No. 4 (Spring 1986), 460-479.

vacancy rates, or sites or buildings available for use as dorms), and proportionally would benefit more from the associated retail spending.

Another negative scenario involves NYU having difficulty either financing the ongoing construction of the project or funding the operation of the buildings once completed. Harvard University's stalled Allston campus dramatically highlights this possibility. In 2009, in the wake of the financial crisis, Harvard's endowment lost more than 27% of its value, and the university halted development of the 5 million SF Allston campus.<sup>23</sup> Harvard's endowment was worth \$25 billion after the decline in value, and the estimated project cost was \$1.2 billion when the university stopped construction. In the past year, Harvard officials have begun to discuss its development plans but have not reinitiated the expansion project.<sup>24</sup> In the meantime, economists have estimated an \$85 million loss in potential direct earnings for each year the Allston project is delayed, and a \$275 million loss to the regional economy. In addition, the community is left with a vacant, blighted site, without the amenities that were cleared.

Harvard is not alone in having to halt major development programs: Boston University, Boston College and Dartmouth, among others, have also slowed down their development plans as a result of endowment losses.<sup>25</sup>

In 2009 NYU's endowment was valued at \$2.2 billion, or less than ten percent the size of Harvard's.<sup>26</sup> Given Appleseed's estimated development cost of \$1,000/SF, the project would cost \$2.5 billion, almost twice Allston's estimated cost. NYU has not provided details on how it plans to finance the proposed development. Given NYU's relatively small endowment, and the significant cost of its plans, it seems reasonable to be concerned that NYU could suffer financial shortfalls during the course of this twenty-year construction project. Such a delay would be extremely damaging, not only economically, but also to NYU's standing and neighborhood quality of life. Given the project site's location, directly beneath residential buildings housing thousands of people, any financing problems, and associated construction interruptions, would be especially impactful upon the quality of life of the neighborhood, and would substantially reduce economic benefits. On a less complex site, without existing uses, potential impacts would be less problematic.

### **Economic Impact Would Be Greater at Alternate Locations**

In order to investigate the hypothesis that other locations in New York City might derive greater economic benefits from the project, we identified three potential neighborhoods worthy of NYU investigation: the Financial District, Downtown Brooklyn, and Long Island City. This selection was based on five criteria:

***Excellent transit access.*** Proximity to the Washington Square campus by transit was a critical consideration. While NYU notes in its 2031 plan that its expansion must be within walking distance of Washington Square, its stated peer institutions have built or are in the process of building satellite campuses and facilities that are further afield. Harvard, Brown and Columbia all recently began development of satellite campuses approximately one mile from their core campuses. NYU itself is looking to develop the Center for Urban Science and Progress at 370 Jay Street in Downtown Brooklyn, a neighborhood that is two and a half miles, and about a twenty-

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<sup>23</sup> <http://news.harvard.edu/gazette/story/2007/02/harvard-submits-multi-decade-master-plan-framework-for-allston/>

<sup>24</sup> <http://harvardmagazine.com/2011/09/allston-plan-endorsed-by-harvard-corporation>

<sup>25</sup> "Educational Endowments and the Financial Crisis: Social Costs and Systemic Risks in the Shadow of the Banking System" Joshua Humphreys, Ph.D., Senior Associate, Tellus Institute. May 27, 2010.

<sup>26</sup> <http://www.nyu.edu/budget2010/budget/>

five minute subway ride, from Washington Square.<sup>27</sup> As NYU's consideration of Brooklyn shows, New York City's extensive subway system makes locating satellite facilities farther from core campuses reasonable.

***Assets that align with NYU's mission and curriculum.*** The Financial District, of course, is a leading global business center. Downtown Brooklyn is part of an emerging "Tech Triangle" (i.e., DUMBO, Brooklyn Navy Yard, and Downtown), and is a place that NYU has already deemed appropriate for expansion. Long Island City is home to numerous cultural institutions including the American Museum of the Moving Image, Silvercup Studios, the Noguchi Museum, MoMA PS 1, the Thalia Spanish Theater, and the Chocolate Factory theater.

***Potential for higher net new local economic impacts, based on real estate metrics.*** Each neighborhood has a real estate market that can accommodate the increased demand for residential and commercial space, and the upward pressure on rents that can result from higher education projects without unduly burdening existing residents and businesses.

According to REBNY, Greenwich Village/NoHo market asking office rents are \$79/SF.<sup>28</sup> Each of the alternate neighborhoods has lower asking rents: \$36-\$43/SF in the Financial District, \$32/SF in Downtown Brooklyn; and \$23-\$36/SF in Long Island City. Office vacancies are also higher than or comparable to the Village. Greenwich Village ranges by submarket from 7.4-9.2%. Downtown Brooklyn office vacancy is an estimated 7.6%; Long Island City, 11-13%; and the Financial District, 12.3-15.3% (with millions of square feet from the World Trade Center about to come online).<sup>29</sup> With such vacancies, these neighborhoods can better accommodate business expansion, or the establishment of new businesses.

The retail market in the Village is also much more expensive. A recent Massey Knakal study placed asking retail rents at \$179/SF. REBNY estimated Financial District rents at \$144/SF, and the New York City Economic Development Corporation estimated Downtown Brooklyn rents between \$40-\$90/SF and Long Island City rents between \$15-\$26/SF.

Perhaps most importantly, the retail markets in these neighborhoods have much higher vacancies rates than Greenwich Village. As shown in Figure 5 below, businesses that would form or expand to serve the new project population would have sufficient space in which to do so.

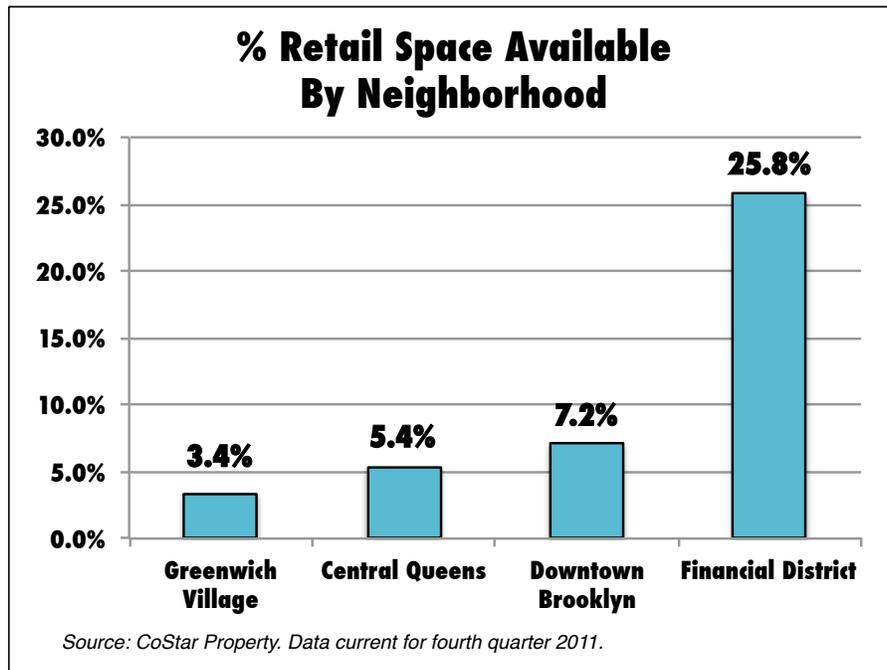
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<sup>27</sup> Harvard: Allston (1.2 miles), Brown: Jewelry District (1.1 miles), and Columbia: Manhattanville (1 mile). Estimates derived using Google Earth.

<sup>28</sup> Real Estate Board of New York 2011 Statistical Abstract.

<sup>29</sup> Real Estate Board of New York 2011 Statistical Abstract; Newmark Knight Frank Brooklyn Office Market Report, Q4 2011; and New York City Economic Development Corporation.

FIGURE 5



Each of these neighborhoods also offers potential development opportunities of a scope substantially greater than what is available in the Village. The newly redeveloped World Trade Center will, in the years ahead, offer the chance to occupy large amounts of square footage in state-of-the-art buildings and likely open up space in older buildings in the area; the Jehovah’s Witness’ portfolio in Downtown Brooklyn/Brooklyn Heights, put on the market in late 2011, spans 3.2 million SF; and Long Island City continues to see considerable new development owing to a 2001 rezoning and a public-private project at Queens West. All three sites offer more space than what NYU proposes to build in the Village, and, in utilizing this space, NYU would avoid the significant difficulties inherent in redeveloping and adding underground space to complex superblock sites.<sup>30</sup> Additionally, all three areas would provide ample opportunities for the university to grow after 2031 as NYU will presumably continue to need new facilities after that date. The Village, with its more constrained real estate market and significant landmark protections would, by contrast, provide fewer opportunities for future growth.

**Alignment with New York City economic development priorities.** New York City has promoted economic development in these three areas with planning efforts and incentives.

In Long Island City, a 2001 rezoning allowed for denser mixed-use development of 37 blocks in the commercial business district. The Department of City Planning announced the rezoning, stating, “The goal of the zoning is to foster reinvestment and redevelopment that takes advantage of Long Island City’s excellent mass transit access and its supply of large, underdeveloped properties.”<sup>31</sup> Other examples of city efforts include the Queens West public-private

<sup>30</sup> “Hallelujah! Jehovah’s Witness’ Land Sell-Off Has Brooklyn Dreaming Big.” Amanda Fung, *Crain’s New York*, October 16, 2011.  
<sup>31</sup> <http://www.nyc.gov/html/dcp/html/lic/lic1.shtml>

redevelopment project, which has produced 2,600 residential units; and the expansion of Gantry Park in 2009.

The Department of City Planning approved the Downtown Brooklyn Development Plan in 2004, and the City, according to the Downtown Brooklyn Partnership, has \$300 million in public improvements underway. The New York City Economic Development Corporation has invested in efforts such as the City Point project and improvements to the Fulton Mall, and the Brooklyn Navy Yard is spearheading various industrial and sustainability initiatives.

Finally, the Financial District has been the focus of numerous economic initiatives since the September 11 attacks. Examples include the Port Authority's redevelopment of World Trade Center site, creation of Lower Manhattan Development Corporation, and rollout of numerous public sector incentives. These new entities and programs succeeded in rebuilding the Financial District as a budding 24/7 neighborhood with a diversity of uses. The city and state continue to offer incentives to expanding or relocating businesses including the Commercial Revitalization Program.

***Smaller existing student population.*** Each of these neighborhoods has an existing student population and some higher education presence. Adding NYU students and staff would be consistent with current uses. However, the student populations are smaller in each of the alternate areas, and NYU's presence in each neighborhood is either nonexistent (Long Island City) or relatively limited (in Lower Manhattan, the School of Continuing and Professional Studies; in Downtown Brooklyn, NYU Polytechnic). Therefore, a new NYU presence would be a significant change in the dynamics of these neighborhoods:

- The Village has a student population of about 58,000 students. The majority of these students attend NYU's Washington Square Campus (42,500) and the New School (13,900). The balance includes Cardozo School of Law and Cooper Union. The residential population of these schools is significant: the majority of NYU's 11,700 dormitory beds are located in the area, as are roughly 2,000 New School and Cooper Union rooms.
- Borough of Manhattan Community College and Pace University provide the overwhelming majority of the Financial District's student population—34,100 out of 35,900, not counting part-time students associated with NYU's School of Continuing and Professional Studies (11,000 in total, divided among the Financial District and Midtown Manhattan). New York Law School has an enrollment of about 1,750 students.

However, the vast majority of area students do not live in the area and are part time. BMCC does not operate any dormitories. Pace, in partnership with Education Housing Services (a private company), operates four dormitories in the area, housing 1,850 students. New York Law School houses 90 students—in a building on East 3<sup>rd</sup> Street. As of 2010, 62% of BMCC's students were not full time.

- Similarly, Downtown Brooklyn has a smaller student population than the Village—about 33,000 people—with few living in the neighborhood. New York College of Technology (NYCT), Long Island University (LIU) and NYU Polytechnic are the major institutions, with 29,000 enrolled. NYCT does not provide housing. LIU houses 800 students, and some additional graduate students, in Downtown Brooklyn. Including a Clark Street

## THE IMPACTS OF NYU'S PROPOSED EXPANSION IN GREENWICH VILLAGE

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dormitory operated by EHS, NYU Polytechnic houses about 1,600 students in the area.

- LaGuardia Community College is the sole higher education institution in Long Island City. 17,600 students attend, and there are no dormitories.

The Village would experience limited net new economic benefits from the proposed development project, but would be subjected to negative externalities associated with the project. In contrast, if NYU built its proposed development in another area of the city—perhaps one that is, from the city's point of view, a priority for such economic stimulus—the net new impacts would be greater, both because of the existing economic conditions of those alternate locations, and because development would represent more than an incremental expansion of an existing higher education presence.

## COLLATERAL IMPACTS

The economic analysis presented above shows that the positive economic impacts of NYU's growth would be amplified if were developed elsewhere in New York City. In addition to economic considerations, the NYU 2031 plan must also be carefully weighed against the collateral negative impacts that the proposed expansion would have on the immediate Washington Square vicinity and on the Village as a whole.

These collateral impacts would be significant. The proposed NYU 2031 design would greatly increase the developed square footage of the two residential superblock sites beyond the planned density of their original designs, which carefully balanced towers with park landscape. This is especially true on the Washington Square Village site, where a historically significant landscape would be demolished to build two new academic towers on open space, and where an unprecedented 770,000 SF underground complex would be constructed beneath the entire superblock. On the southern superblock, the three 30-story I.M. Pei-designed University Village apartments—designated, together, as a New York City landmark—would be surrounded by new tall construction that contravenes the zoning, deed restrictions, and original design intention to keep the towers framed by open space or low-rise buildings.

In both cases, the requested rezoning from R7-2 to C1-7 would greatly decrease the required open space on the site by changing the underlying residential zoning to R8, which mandates far less open space for residential building than the existing zoning. In doing so, the proposed design, if completed, would permanently eliminate approximately 2.5 acres of open space in a neighborhood where publicly accessible open space is scarce. Furthermore, the quality of the remaining open space would be significantly degraded by the planned construction for twenty years. Once completed in 2031, the open space would be subject to increased shadowing, with a number of areas in shade most of the day including the Toddler Playground, the Greene Street Walk, the dog run, and the La Guardia Corner Gardens.<sup>32</sup> Finally, the project would also generate negative air quality impacts and environmental impacts despite goals to use green building standards for new construction.

### **Superblocks: Placing New Towers in the Towers in the Park**

The NYU 2031 plan compresses 2.5 million SF of new development into two residential superblock sites south of Washington Square Park: Washington Square Village and University Village. These sites, which contain the area of roughly six regular New York City blocks, were conceived as towers-in-the-park housing developments, with ample open space offsetting large, tall residential buildings. The NYU 2031 plan envisions building an additional 1.4 million SF of new construction above ground on the two superblocks, including two new buildings in the open space between the two 600-foot-long Washington Square Village towers. The plan would also place an additional 1.1 million SF underground on the two superblocks. Thus, if built, the NYU 2031 design would radically increase the density of the two superblocks and obliterate the careful balance of tower and open space of the original designs, which remain intact today.

NYU states that the “primary objective” of the NYU 2031 design on the superblock sites is to “foster an increased engagement with the city.”<sup>33</sup> Further, NYU states that its 2031 design is an attempt to bring into balance the legacy of the two great antagonists of New York City urban planning and Greenwich Village preservation, Robert Moses and Jane Jacobs. In the words of the

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<sup>32</sup> DEIS, 6-2.

<sup>33</sup> NYU 2031, 144. <http://www.nyu.edu/nyu2031/nyuinny/>

2031 plan, the redesign of the two superblocks would “respect and bring into balance” the “conflicting visions” of Moses and Jacobs on the same site.<sup>34</sup>

This claim deserves close scrutiny against the history of the proposed building sites, as the majority of NYU's postwar expansion south of Washington Square has occurred on land that Moses, while serving as Chairman of the Mayor's Committee on Slum Clearance, successfully fought to level in the 1950s. Nine blocks were cleared of almost 200 existing buildings, and combined to form three superblocks stretching from Washington Square to Houston Street. The northernmost block, created by combining the area bounded by West Broadway, West Third Street, Mercer Street, and West Fourth Street, was reserved for academic use for NYU buildings, and the two southern superblocks were slated for residential developments by private developers.

The Washington Square Village residential complex was completed in 1960 on the superblock bounded by LaGuardia Place, Bleecker Street, Mercer Street, and West Third Street. The two massive 17-story residential towers were placed directly on West Third Street and Bleecker Street, respecting the original street wall. Architect Paul Lester Weiner and landscape architect Sasaki, Walker & Associates placed a central garden landscape, with fountains and street furniture, as a public amenity in order to “compensate for the superscale of the slabs” and “their comparative anonymity.”<sup>35</sup> A third identical tower was planned for the southern cleared superblock, but the economic failure of the Washington Square Village residences led the developers to sell the block to NYU. The site was developed as the University Village complex of three towers (two housing NYU faculty, one middle-income housing), designed by I.M. Pei & Associates, and built from 1964-1966. NYU purchased the Washington Square Village superblock from its original developers in 1963. Thus, the entire swath of the Washington Square South slum clearance site has been under NYU's stewardship for nearly half a century.

The towers-in-the-park housing typology was intended to promote the health and well-being of residents, and had become the favored mode of large-scale residential housing in New York City in the post-World War II era of slum clearance spearheaded by Moses under the federal 1949 Housing Act. The building typology was closely associated with the fraught social policy decisions tied postwar urban renewal nationwide, and later was condemned wholesale as a sign of the failure of U.S. housing policy, punctuated by the celebrated demolition of the Pruitt-Igoe development in St. Louis in 1972.

While the intellectual dialogue regarding this housing type remains contentious, the historic significance of this building typology is now clear. University Village is widely recognized as one of the most significant of such developments in the U.S., and was designated as a New York City landmark in 2008. Meanwhile, Washington Square Village has been determined eligible for listing on the National Register of Historic Places by the New York State Historic Preservation Office (SHPO). In its 2031 plan, NYU concurs with these assessments, stating that its design approach “defines both Washington Square Village and University Village as historic building types that need to be restored, preserved, and maintained.”<sup>36</sup> NYU further states that, unlike other failed versions of the tower-in-park typology, both Washington Square Village and University Village, are functioning and successful. In the language of the 2031 plan, both Washington Square Village and the three Silver Towers on the University Village superblock “remain vital, due in part to the proximity of vibrant neighborhoods and NYU's academic core.”<sup>37</sup>

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<sup>34</sup> NYU 2031, 145

<sup>35</sup> Robert A.M. Stern, Thomas Mellins and David Fishman, *New York 1960: Architecture and Urbanism Between the Second World War and the Bicentennial*, 227.

<sup>36</sup> NYU 2031, 145.

<sup>37</sup> NYU 2031, 144.

Will the proposed design modifications in fact restore, preserve, and maintain the character of the historic superblocks? Below, the effects of the NYU 2031 design on the Washington Square Village and University Village sites are considered separately before weighing the cumulative impact of the design as a whole.

### Washington Square Village

The New York State Historic Preservation Office has determined the entire Washington Square Village site to be eligible for the State and National Register of Historic Places, finding that the Washington Square Village “superblock complex of two residential towers, elevated landscaped plaza, commercial strip, and below-grade parking” meets National Register criterion C for historic significance as an “impressive example of postwar urban renewal planning and design.”<sup>38</sup>

NYU’s proposed additions to the Washington Square Village site would add 1,111,500 SF of space on the Washington Square Village site, nearly doubling the amount of square footage on the site. Two new academic towers are to be constructed directly between the two residential towers (the Mercer building, 208,500 SF, and the LaGuardia building, 133,000 SF). In addition, the design calls for 770,000 SF of below-grade space, stretching underneath the entire superblock, which to be executed would require the destruction of all existing landscape features of the superblock. According to the DEIS, the first floors of the Washington Square Village would also be modified to accommodate new uses at ground floors. Among these alterations would be “the removal of the canopies at the Greene and Wooster driveway entrances; modifying some first floor windows and installing new metal cladding panels on the first floors; and re-programming the first floors and basements.”<sup>39</sup>

The New York State Historic Preservation Office has found that the proposed design would result in an adverse effect to the historic Washington Square Village site, and NYU was required to prepare an Alternatives Analysis, submitted on December 7, 2011.<sup>40</sup> NYU’s analysis states that its academic needs require that new space be located in close proximity to its Washington Square campus, and due to development restrictions on the University Village superblock, the Washington Square Village superblock makes sense as the most logical locus for development on land that NYU already owns. The analysis states that the Washington Square Village superblock “presents opportunities for development due to **the undeveloped areas located on it.**”<sup>41</sup> SHPO’s finding of Register eligibility covers the entire Washington Square Village superblock; thus, NYU’s analysis has defined areas without buildings (the overwhelming majority of the site) as undeveloped space, even though, according to the State Historic Preservation Office determination of significance, the entire site is already developed.

Beginning in 2007, NYU, as part of the alternatives analysis, prepared scenarios that would involve placing no new buildings on the entire Washington Square Village site, either by restricting institutional growth to other sites in the Village or displacing all new growth to satellite campuses. NYU determined that both these alternatives were infeasible due to its stated need to significantly expand its space near its existing Washington Square campus, and that it had no choice but to build upon the Washington Square Village site while attempting to mitigate the impact on its historically significant features.<sup>42</sup>

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<sup>38</sup> New State Historic Preservation Office, Resource Evaluation, Washington Square Village, Bounded by West Third Street, Bleecker Street, Mercer Street, and LaGuardia Place. February 23, 2011.

<sup>39</sup> DEIS, 7-3.

<sup>40</sup> NYU Alternatives Analysis for Washington Square Village superblock, December 7, 2011.

<sup>41</sup> NYU Alternatives Analysis for Washington Square Village superblock, December 7, 2011, 8. Emphasis added.

<sup>42</sup> NYU Alternatives Analysis for Washington Square Village superblock, December 7, 2011, 12-13.

The alternatives analysis states the present design retains the “most significant features of Washington Square Village”—that is, only the existing residential towers—since the rest of the site must be cleared and excavated to accommodate the planned underground space. The analysis states that the plan would “maintain much of the original site composition,” and the “principal elements” of the site plan would be maintained simply by maintaining the residential tower slabs along the site’s north and south street fronts. Further, the alternatives analysis states that the new Mercer and LaGuardia towers built in between the existing Washington Square Village towers “would support several key principles of the original Washington Square Village site plan—maximizing access to light and air...[and] creating large central open space” in the middle of the site. In other words, building new towers within the park space of the original towers-in-the-park design—with a smaller amount of park space between them—is supposed to mimic the design principles of the original Washington Square Village.

Clearly, the generous spacing between the two Washington Square Village residential buildings is a key part of the original design that remains intact today, and placing new towers in between the two buildings functions as a radical design intervention. The alternatives analysis refers to the plan for the superblock sites as a “densification approach”—even though the historic integrity of the Washington Square Village site is based on the existing density.<sup>43</sup>

There is little precedent in New York City for building new towers in space originally designed as open space in a tower-in-the-park development. In NYU’s own description, Washington Square Village is a successful and thriving example of the towers-in-the-park typology. Therefore, NYU’s design intervention should meet an extraordinary criterion of necessity to go forward.

A finding of no feasible alternative for the destruction of historically significant elements of the historic design of Washington Square Village relies on the assumption that NYU must place its expansion on the two superblock sites. If the entire square footage of NYU’s planned 2031 expansion were placed in another neighborhood, then there would be no need to destroy historically significant elements of the Washington Square Village design.

### University Village (Silver Towers I & II, 505 LaGuardia Place)

The NYU 2031 plan envisions fewer changes to the University Village site than the Washington Square Village superblock, restricting new development on the area designated as a New York City landmark only to landscape modifications. The DEIS finds that these landscaping plans would not significantly adversely impact the University Village site, and the New York City Landmarks Preservation Commission itself has already signed off on the proposed changes, approving a Certificate of Appropriateness application in July 2011.<sup>44</sup>

The adjacent Bleecker corner site, at LaGuardia Place and Bleecker Street, and Coles Gymnasium, are not part of the LPC-designated University Village parcel, and NYU plans to place the roughly 1.4 million SF of new construction on these locations. Nevertheless, it makes sense to consider the superblock as a whole, rather than only the LPC-designated University Village in weighing the effects of the proposed new construction, since the original design envisioned the three towers as a composition defined in part by the views allowed by the cleared open space surrounding them, as the 2008 LPC designation report notes: “Whereas most Manhattan buildings fit snugly into the grid and address the street directly in a conventional way, at University Village each structure seems independent and was deliberately positioned in an

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<sup>43</sup> NYU Alternatives Analysis for Washington Square Village superblock, December 7, 2011, 7.

<sup>44</sup> DEIS, p. 7-3; NYC LPC CofA #12-3095; Docket #12-2620.

asymmetrical manner around a 100-by-100-foot lawn to maximize views and create general visual interest.”<sup>45</sup> Indeed, the designation report finds that, “Unlike many ‘tower in the park’ projects located in New York City” University Village was designed to create a “deliberate tension between the buildings and the space they occupy”—and that the surrounding open space or low-rise construction functions much like the negative space of a modernist painting to frame the towers themselves. Though the LPC did not designate the entire superblock, it is possible to infer that the construction of adjacent tall buildings would directly affect the composition that the designation cites as a unique quality of the design considered as a whole.

Considered under the less subjective rubric of open space requirements required by the existing R7-2 zoning—in place when University Village was constructed and specifically mapped for high-rise towers in parks—the overwhelming majority of the superblock is required to remain as open space. (See below section on open space for calculations.)

These open-space requirements were designed in part so that residents in tall residential towers, especially those on lower floors, would have access to light and air. The bulk of the planned Zipper Building on the southeastern corner of the superblock would cast shadows on the existing buildings, whose site plan was designed to carefully let all three towers receive natural lighting. The DEIS summarizes the effect of the Zipper Building on the available sunlight to the three towers as follows:

By 2021, the proposed Zipper Building would for several morning hours throughout the year cast new shadows on the east facade of 100 Bleecker Street/Silver Tower II (the easternmost of the three University Village buildings), on the south façade in December and March/September for shorter durations, and on the north façade in May/August and June for a brief duration. New shadows also would be cast on one or more facades of the other two University Village buildings, but for shorter durations and on smaller areas in most months.<sup>46</sup>

Another Pei design from the same era, Society Hill Towers in Philadelphia—a trio of tall concrete residential whose site plan is remarkably similar to University Village—have been preserved with the surrounding open space intact. Though the NYU 2031 design would not greatly alter the University Village within the boundaries designated by the LPC, the new construction would greatly alter the largely intact relationship between tower and open space foreseen in the original design and zoning.

### Cumulative Effect on Superblocks

NYU claims that the “overall design concept for the NYU Core would add density to the site through strategies that would balance the University’s development objectives and spatial needs with the community’s expressed need for publicly accessible open space.”<sup>47</sup> In this manner, NYU 2031 has been presented to the public largely as a reorganization and reprogramming of the existing landscape design, rather than a massive increase of density on sites that are already built to a high level of density.

The NYU 2031 plan states that its design approach for all new development is “contextual”<sup>48</sup> to the existing landscape—and that the superblock sites, in time, have become more like the diverse Village surrounding them. The NYU 2031 plans states that the “superblock site is an eclectic

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<sup>45</sup> University Village Designation Report, November 18, 2008, Designation List 407 LP-230, 7.

<sup>46</sup> DEIS, 6.2.

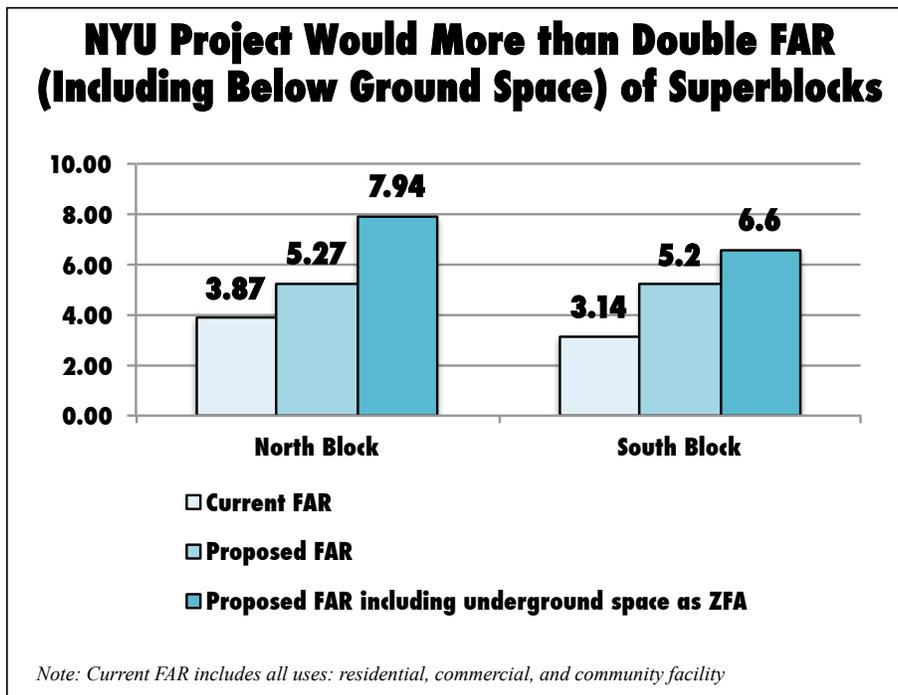
<sup>47</sup> NYU Alternatives Analysis, Washington Square Village Superblock, December 7, 2011, 20.

<sup>48</sup> NYU 2031, 141.

urban collage, an assemblage of building and open spaces that came together in an unplanned sequence.”<sup>49</sup> Adding massive new density, even with a sensitive landscape design, may erase the qualities that the NYU 2031 plan claims it seeks to preserve.

The increase in density can be illustrated by examining the total FAR (floor to area ratio) for the north and south blocks in their entirety, without dividing by use or zoning lots, as this is the way that residents, visitors and neighbors experience these buildings and the space that surrounds them. It also clearly illustrates the increase in density that the proposed design would create by including underground square footage, which is not counted as floor area in zoning calculations.<sup>50</sup> This change is significant—effective FAR on both superblocks would more than double—and is shown graphically in Figure 6, below:

FIGURE 6



<sup>49</sup> NYU 2031, 144.

<sup>50</sup> The Washington Square Village superblock is 288,067 SF in area. The existing residential floor area is 1,100,849 SF, split roughly equally between the existing Washington Square Village buildings, and 21,628 SF in the LaGuardia retail strip. The proposed Mercer and LaGuardia buildings would respectively add 208,520 SF and 132,962 SF of zoning floor area as community facility space. Finally, the proposed below-grade space under the entire superblock would total 770,000 SF. University Village superblock is 228,567 SF in area. The existing floor area, spread across multiple zoning lots, is residential 643,202 SF, split equally between the three University Village buildings, and roughly 74,800 SF in additional built floor area in the Morton Williams and Coles Gymnasium building. After the demolition of the latter two buildings, the NYU 2031 plan proposes 829,410 SF in total community facility space on the superblock, and 226,000 SF in commercial space. Finally, the proposed below-grade space on the superblock totals 318,000 SF. All figures are from the “NYU Core” ULURP and Zoning Change submission to Department of City Planning dated December 5, 2011.

### **Loss of Open Space and Other Negative Environmental Impacts**

The project would permanently eliminate 2.52 acres of open space in a neighborhood where publicly accessible open space is scarce.<sup>51</sup> Notably, the proposed C1-7 zoning has greatly reduced open space requirements compared to the R7-2 zoning, and would allow NYU to build new towers on sites currently required to remain as open space, reducing total open space on the site from 6.23 acres to 3.71 acres. The DEIS, however, finds that there is currently only 0.58 acres of publicly accessible open space on the site, and that the proposed design would result in a net gain of 3.13 acres of publicly accessible open space when completed in 2031. This discrepancy is due to the narrow interpretation of CEQR technical guidelines used in the DEIS, which allow the classification of the majority of existing open space as not substantially publicly accessible. The DEIS also does not acknowledge that much of the open space in the area is not being maximally maintained by NYU, and that NYU has either tacitly or explicitly chosen to exclude the public from using this space.

The loss of open space is not the only environmental impact associated with the project. The destruction of greenery, the duration and challenging logistics of the construction, the energy new buildings would use, and the resource-intensive nature of new construction on this site present environmental impacts that are not adequately considered in the DEIS. While NYU has committed to incorporating green technologies and methods into its architectural plans and construction, the new buildings would create a number of negative environmental impacts.

### **Rezoning Greatly Reduces Required Open Space Under Residential Zoning**

NYU's rezoning application to New York Department of City Planning states that, in addition to allowing commercial uses on the site, the "proposed C1-7 district would also reduce the amount of required open space on both Superblocks in order to allow for the development of the four proposed buildings."<sup>52</sup> The requested rezoning would dramatically reduce the required open space to allow the new buildings to be constructed on existing open space—a function of changing the underlying residential zoning from R7-2 to R8 in the new C1-7 zoning. On the North Block, the current R7-2 zoning requires almost 250,000 SF of open space on a lot of roughly 290,000 SF, while the new C1-7 zoning would require only 111,000 of open space. NYU states that the new construction would leave 153,000 SF of open space on that block—generous under the rezoning, but not possible under the current zoning. (The DOT strips along the Washington Square Village blocks are not being used as part of the zoning lots and thus not as part of the open space calculation here.)<sup>53</sup>

On the South Block, the drawing of the new zoning lots makes this calculation a little more complex, as the zoning divides a block that visually appears to be a cohesive parcel. Excluding the third University Village tower and the Bleeker corner site, which are separate zoning lots, the current R7-2 zoning would require 126,000 SF of open space on the eastern part of the

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51 DEIS 5-12. The DEIS states there are 11.05 acres on the site, including Coles Gymnasium. Deducting Coles (4.82 acres) leaves 6.23 acres. The DEIS states there are 0.58 acres of publicly accessible open space on the site, and the remaining 5.65 acres are deemed open space that is not publicly accessible. For the purposes of this analysis, only spaces labeled and detailed in the DEIS were considered potential open space. However, a different analysis of the two superblocks looking at total square footage on the site, rather than designated areas, results in a higher open space assessment.

52 NYU Core Zoning Application, December 5, 2011, 18-19.

53 The figures for the required and proposed open space under the C1-7 rezoning are provided on p. Z-004 of the NYU ULURP submission to Department of City Planning, dated December 5, 2011. The required open space in both R7 and R8 zoning is determined by the height factor of the buildings, which is calculated by dividing the total residential zoning floor area by residential lot coverage. The Washington Square Village superblock, a single zoning lot under the proposed rezoning, has a height factor of 15. The open space ratio is then calculated by using the open space ratio (OSR) required by the zoning text, dividing it by 100, then multiplying that number by the total residential zoning floor area on the site. The OSR for height factor 15 buildings in R7 districts is 22.5 as opposed to 10.1 in R8 districts, meaning that current zoning requires 2.23 times the amount of open space as does the rezoning, or 247,692 SF vs. 111,186 SF.

superblock, as opposed to 61,000 SF under the rezoning.<sup>54</sup> NYU states the new construction would leave 111,000 SF of space on that zoning lot, again ample under the rezoning but not permissible under the current zoning. If all three University Village towers are used to calculate the open space requirements—which makes sense, as they are an ensemble, and designated as such by the LPC—then 190,000 SF of the entire 229,000 SF superblock are required to be kept as open space under the current R7-2 zoning. (The roof of the Coles Gymnasium building, due to zoning language added at the time of its construction, currently is classified as open space.)<sup>55</sup>

In addition, the new faculty housing SF, totaling over 100,000 SF, is not counted as residential zoning SF because of a zoning loophole that allows faculty housing to be counted as community facility zoning SF in a building that contains other community facility uses. The proposed faculty housing is integrated into the mixed-use Zipper Building, which also contains academic and student housing. If the faculty housing component of the Zipper Building were constructed as a freestanding building, the faculty housing SF would count as residential zoning SF and would be used in the calculation of required open space under the existing or requested rezoning.

### Reevaluating Open Space Use Restrictions from a Practical Perspective

Despite NYU's stated intent to change the site's zoning to allow for a reduction in the open space required under current zoning, the DEIS states that the project "would not result in significant adverse impacts to publicly accessible open space."<sup>56</sup> This conclusion is possible because the DEIS determines that there is little publicly accessible open space in the project area. While the DEIS inventories 11.05 acres of open space, it finds only 0.58 acres meet the CEQR criteria for open space.<sup>57</sup> This determination is flawed for two fundamental reasons: the methodology used to determine the existing amount of open space excludes almost all spaces that residents would recognize as "open" given their everyday uses. Second, the DEIS apparently does not apply the second CEQR open space criteria, "[space] set aside for the protection or enhancement of the natural environment."

The DEIS acknowledges that the amount of open space in the neighborhood, defined as a ¼ or ½ study areas surrounding the site, is very low: "With or without the Proposed Actions, all open space ratios in the study areas would be below, and in many cases severely below, the levels recommended by the City's open space planning guidelines."<sup>58</sup> In spite of this judgment, its analysis concludes that the project would produce no adverse impact.

The DEIS dismissed 10.47 acres of the project area's open space inventory as not publicly accessible open space due to restrictions on use such as prohibition of active recreation and fences.<sup>59</sup> The 4.82 acres attributed to the Coles Gymnasium would not typically be identified, either formally or informally, as open space, however it is important to note that NYU was originally granted permission to build Cole Gymnasium with the express understanding that the

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<sup>54</sup> The figures for the required and proposed open space under the C1-7 rezoning are provided on p. Z-004 of the NYU ULURP submission to Department of City Planning, dated December 5, 2011. The height factor for Zoning Lot 2 in the proposed rezoning, which comprises the University Village Silver Towers 1 and 2 and the Coles Gymnasium site, is 29. The OSR for height factor 29 buildings in R7 districts is 29.5 as opposed to 14.3 in R8 districts, meaning that current zoning requires 2.06 times the amount of open space as does the rezoning, 126,497 SF vs 61,139 SF.

<sup>55</sup> The figure for the entire southern superblock was calculated using the same height factor, 29, for all three University Village towers, since they are identical. The total residential zoning floor area across the entire superblock is 643,202 SF, or 1.5 times the 428,801 SF of two of the three towers. Thus the required open space if the whole superblock is considered as a single zoning under the current R7 zoning is 189,745 SF (29.5/100 X 643,202 SF) as opposed to 91,978 SF (14.3/100 X 643,202 SF) under the proposed C1-7 (underlying R8) zoning.

<sup>56</sup> DEIS, 5-1.

<sup>57</sup> DEIS, 5-3

<sup>58</sup> DEIS, 5-2.

<sup>59</sup> For example, the LaGuardia Landscape has no "recreational areas," and the planted strip along Bleecker Street is considered not public open space because it is surrounded by fencing. DEIS, 5-10.

community would have access to the facility for recreational purposes. Community members do actively use this space and would suffer from its loss. For the purposes of considering ground level open space open to the general public, however, the Coles space is excluded from the following analysis of open space. The balance of the remaining 5.65 acres is classified in the DEIS as not typically public accessible. However, closer analysis reveals that much of this space is either de facto publicly accessible open space, or is space that contributes to the natural environment, per the CEQR definition.

The DEIS determines that nearly all the space in the project area is not accessible to the public, but in reality, much of this space is, in fact, part of the public realm. Open spaces surrounding the University Village buildings, such as the Silver Oaks Grove, and the Elevated Garden and playground within Washington Square Village, are available to the thousands of residents who reside in both developments, and are furthermore effectively largely open to the public. Indeed, the Elevated Garden was originally designed to be open to the public<sup>60</sup>; the unlocked gates at the entrance, which currently discourage, but do not prevent, public access, were added by NYU and are not original to the design.<sup>61</sup> The public also enjoys as visual amenities, if not as active recreational resources and spaces, the planted areas and trees around and within the site.

### Revisiting the CEQR Definition of Open Space

“Open space” is defined by the 2010 City Environmental Quality Review Technical Manual as “publicly or privately owned land that is publicly accessible and operates, functions, or is available for leisure, play or sport, or set aside for the protection and/or enhancement of the natural environment.” The criteria applied in the DEIS is too narrow and therefore discounts the importance of the site’s open space as a natural resource. The DEIS excludes fenced green areas, gardens and landscapes as not accessible, and does not include them on the criteria of enhancing the natural environment. By this definition much of New York City’s parkland would not be considered open space. Large swaths of Riverside Park, Central Park and other parks throughout the city are blocked off year-round in order to facilitate gardening, yet these areas clearly have tremendous value and are enjoyed by the public. Central Park’s Great Lawn is also periodically inaccessible, and permits must be procured to use the baseball diamonds. Nonetheless, the Great Lawn is considered one of New York City’s iconic open spaces. The crowds who stroll along the lawn’s oval edge throughout the winter, or sit on benches and enjoy its beauty, demonstrate its value and accessibility even when it is technically closed to the public in the off-season.

The original plans for the Silver Towers and Washington Square Village sites both include significant passive green spaces that were clearly designed to enhance the natural environment. The Silver Towers Oak Grove and the Silver Tower Seating Area and Playground and the Washington Square Village Elevated Garden, were intended to offset the massive scale of the buildings on the site.

The DEIS also does not deem several of the *publicly* owned green spaces in the project area “public space.” LaGuardia Landscape and the planted strips along Bleecker Street are not considered public open space, even though both are publicly owned property in good or excellent condition, with carefully maintained plantings. These spaces clearly “enhance the natural environment” and an assessment of open space should include these resources. The Time Landscape is also excluded, although it also contributes to the natural environment and, as green space directly on the sidewalk, is actively enjoyed by the public.

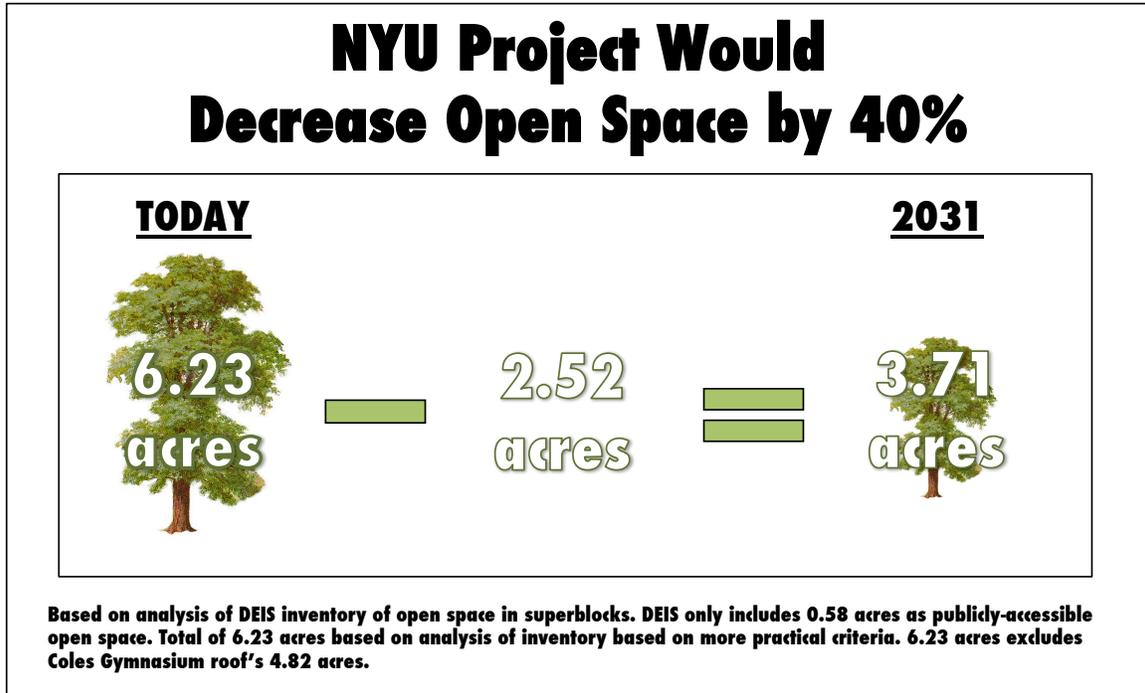
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<sup>60</sup> Robert A.M. Stern, Thomas Mellins and David Fishman, *New York 1960: Architecture and Urbanism Between the Second World War and the Bicentennial*, 227.

<sup>61</sup> NYU Alternatives Analysis for Washington Square Village superblock, December 7, 2011, 12.

Figure 7 illustrates the open space impact of NYU's project.

FIGURE 7



Lack of Maintenance Leads to Undervaluing of Open Spaces

The DEIS also implicitly assumes that the area's open spaces are in conditions that maximize their value: it fails to address the tremendous unrealized potential value of these spaces as resources for NYU residents and workers and area residents. It logically follows, from this point of view, that the only way to improve these spaces is through the proposed project. The DEIS does not consider the more immediate and practical solution of NYU taking greater stewardship of these areas.

The DEIS identifies and assesses twenty-five open spaces, only five of which are in optimal condition:

- Only five are listed in "excellent" condition (one owned by the New York City Department of Parks and Recreation, two by the City's Department of Transportation, and two by NYU).
- Ten are listed in "good" condition (eight NYU, two NYCDOT).
- Four are listed in "fair" condition (three NYU, one NYCDOT).
- Six in "poor" condition (four NYU, two NYCDOT). Of the properties managed by NYU, ten are in good or excellent condition and seven are in fair or poor condition.

If NYU maintained its open space at the highest level, and provided public access to the site's open space, the discussion of the loss of the open space, and the DEIS assessment of the impact of the proposed project, would be very different. Although the value of the open space is currently not maximized by its maintenance or access, that does not mean its value should be ignored almost entirely.

### Additional Environmental Impacts

The DEIS concludes that the new buildings and additional vehicular traffic would not cause significant adverse impacts. However, it also assumes that, without the project, the air quality in the area would continue to improve as technology improved and cleaner fuel was used for heating.<sup>62</sup> Despite the conclusion that the project would not worsen air quality, the DEIS states that the new buildings and associated mobile emissions required for servicing them would produce over 19,000 tons of CO<sub>2</sub>e annually. According to the EPA, this is the amount of carbon sequestered on an annual basis by 3,687 acres of pine or fir forest. Although the measures employed by the authors of the DEIS find no adverse impact on air quality, it is clear that a significant amount of pollution would be generated by the new development, and the impact would be both local and regional in nature.

The carbon footprint of the new buildings would be 13,089 CO<sub>2</sub>e. By comparison, the newly retrofitted, 2.85 million SF Empire State Building produces 11,421 tons of CO<sub>2</sub>e a year. In other words, the proposed NYU program, although smaller, and despite the presumption of extensive use of sustainable technologies, would produce a greater carbon footprint than eight-decade-old Empire State Building.<sup>63</sup>

The DEIS also fails to consider how the loss of open space, including areas planted with trees, bushes and flowers, would also deteriorate the air quality in the area. In its analysis of open space, the DEIS acknowledges that the LaGuardia Garden would lose much of its planting due to increased shade. According to the New York City Department of Environmental Conservation, one tree removes 600 pounds of carbon dioxide from the air over a 40-year period.<sup>64</sup> For the construction period the trees, grass and other plants in the PDA would be compromised, removed or killed by the increasing amounts of shade. The impact to the air quality in the area because of the loss of natural air cleaners, i.e. trees, grass and plants, is not discussed by the DEIS and was presumably not taken into consideration.

Trees, plants and grass also play an important role in reducing the heat island effect that impacts urban areas dominated by concrete. The loss of this green space would potentially make this neighborhood hotter in the summer, increasing cooling costs for the surrounding buildings and generating additional pollution due to the increased use of HVAC.<sup>65</sup>

Finally, the complex conditions of the site, with existing buildings interspersed throughout the area, do not lend themselves to a green development. The space constraints and existing uses of the site require that various uses be shifted several times over the course of the twenty-year construction period, leading to a more complex and material-intensive project. For example, the waste and materials involved in demolishing the existing Coles Gymnasium, constructing a temporary gymnasium, demolishing the temporary facility and building a new facility, is resource intensive and would have significant environmental impacts. Developing this project in a location that is better able to accommodate the construction staging and allow for a more linear construction plan could eliminate some of the waste associated with the complex plan for the project area. In addition, if NYU moved some of its proposed development program to existing buildings in some other area of the city, the embodied energy of the existing buildings would be preserved, resulting in less construction waste and fewer construction materials being used. The

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<sup>62</sup> DEIS, 15:25.

<sup>63</sup> The Empire State Building produced 16,666 tons of CO<sub>2</sub>e *before* it was retrofitted and reduced its carbon footprint by 40%.

<sup>64</sup> <http://www.dec.ny.gov/public/43563.html>

<sup>65</sup> The tremendous cost savings associated with trees and grass, and a comparison between the two, is articulated by Dr. Sylvan Addnick in "Trees are Sacred, Grass is Bad; Why?", TPI, Turf News March/April 2007.

design possibilities in the project area are limited and the existing buildings would lose natural light and open space with the introduction of the new buildings. The large amount of underground development is particularly resource intensive and would result in permanently higher operation costs for that space. Underground space would clearly require artificial lighting and HVAC at all times. If the project were developed elsewhere, there would potentially be greater opportunity to include natural light, green space, and other elements typically encouraged for a LEED development.