

Lenox Hill Hospital
100 East 77th Street
New York, New York 10075

April 9, 2025

Land Use Committee
Manhattan Community Board 8
505 Park Avenue, Suite 620
New York, New York 10022

Re: Lenox Hill Hospital - Application Nos. C250151ZMM, N250152ZRM, C250153ZSM,
N250154ZAM & N250155ZCM)

Dear Chair Mason and Committee Members,

This letter responds to the follow-up questions we received by e-mail from the Committee in advance of the meeting scheduled for April 9, 2025, regarding the land use approvals that are being sought by Lenox Hill Hospital to facilitate renovation and expansion of the existing hospital in its current location.

As described at the Committee's meeting on March 12, 2025, the proposed approvals consist of a zoning map, zoning text amendments, and a project-specific special permit, authorization and certification to allow construction of new portions of the hospital within zoning envelopes established on the plans filed with the application, along with proposed improvements to the 77th Street subway station. This set of zoning changes and project-specific approvals is the result of coordination with the Department of City Planning and follows the approach of prior approvals for the expansion of healthcare institutions in the City. The proposed actions would allow expansion of Lenox Hill Hospital within its current footprint in a manner that is consistent with the historic land use at the site and that addresses the space needs of contemporary healthcare.

Responses to the Committee's follow-up questions are below.

- 1) As we understand it from your comments at one of our CB meetings, your proposal is calling for 24% of the building height for mechanical rooms. This seems unreasonable, please comment.**

The proposed mechanical floor areas and volumes are consistent with benchmarking for modern day hospitals. The space needs for mechanical systems within a hospital, responsive to hospital construction codes, energy codes, and unique clinical program needs, are typically on the order of 20% of the gross building area, with 15% of the gross allocated to mechanical equipment floors and 5% allocated to shafts, equipment rooms and closets on other floors. Because the floor-to-floor heights needed to accommodate equipment and the distribution systems within the mechanical floors are generally 50% to 100% greater than for non-mechanical floors, the contribution of mechanical floors to building height is expected to approach 25%. Inclusive of

screened rooftop mechanical, which is included in the project height and reflective of Northwell's commitment to sustainability, the contribution of mechanical systems to building height can be expected to approach 30%. The space allocation for mechanical systems on this project is in alignment with expectations.

- 2) You also said that you are planning to use a “trial and error” approach with respect to DoB in order to achieve compliance with the energy code thermal load compliances. Is this correct? We understand that this is only for as-of-right developments where the building height is well established. What can you give us as to your commitment as to the sustainability and "health" of the building? Every applicant is willing to do the minimum because they have to in order to proceed but given that this is a hospital, what more are you willing to commit to, now?**

We are not planning to use a “trial and error” approach. The design team has elected to employ full building energy modeling as the method for determining compliance with the New York City Energy Code. Full building energy modeling is New York City's preferred compliance path because it is the most predictive way of assessing actual building performance and enables the designers to test design options for optimizing energy performance. Northwell is committed to a broad range of sustainability efforts that go far beyond mandatory Energy Code compliance to address the many factors affecting climate, patient, and employee health. The building envelope will incorporate sustainable features to reduce the building's carbon footprint and enhance its interior environment. Measures currently being studied include strategic exterior shading, low carbon façade material, and façade building integrated photovoltaics, among others.

- 3) The proposal has a disproportionate window-to-wall fenestration and it won't comply with ASHRAE 90.1 nor with Local Law 97, article 320 and the Energy Code because the glass cladding has high energy conductivity on the fenestration thus this building will need more thermal loads to satisfy the internal and exterior thermal loads demand regardless if the windows have double or triple layers of glass due to the very high conductance. Moreover, metal window frames have a high thermal bridge, losing uncontrolled energy, leading to the need for higher mechanical ducts thus increasing the floor height and making the building unnecessarily taller. Please comment.**

There has been considerable analysis undertaken to optimize daylighting, solar heat gain, and thermal comfort within the new hospital building's perimeter zone, leading to reduced window wall ratio (WWR) for improved patient comfort and energy performance. The proposed WWR on the patient bed floors currently stands at 27%. We expect that the overall window wall ratio for the new hospital building will be significantly lower due to the need for less transparency on the diagnostics and treatment and mechanical equipment room floors. By comparison, ASHRAE 90.1 allows a WWR of up to 40% when following a prescriptive compliance path. Therefore, we anticipate that the building's WWR will be a benefit rather than an impediment to ASHRAE 90.1 and Energy Code compliance.

Local Law 97 is not directly tied to WWR or energy use intensity but is intended to eliminate fossil fuels as an energy source. Northwell is committed to decarbonization and reducing emissions. The project design currently incorporates air source heat pumps as an alternative to gas fired equipment

in both the new hospital building and in the existing hospital buildings proposed to remain where there is need for additional conditioning capacity to meet current health codes.

- 4) Even though the cooling towers are a good choice, they are very bulky, making them highly susceptible to human error, meaning, if these cooling towers are not properly maintained, the potential for increasing bacteria is real with significant health implications for the neighborhood. There have been cases of bacteria growth, e.g., Legionnaires disease which could impact the neighborhood, and portend fatal consequences for those with poor immune systems. Have you considered geothermal systems which would be safe and would not add to increased height? Even though such a system may be expensive, the cost would be recuperated between 15 to 16 years as per ASHRAE, making this choice affordable and sustainable. Please comment.**

The use of cooling towers is commonplace in hospitals and other large-scale applications due to their energy efficiency. They are registered with and maintained under strict regulation by city and state health agencies. Northwell is committed to implementing cooling towers due to their sustainable heat transfer methods and reduced environmental impact over other technologies.

The use of geothermal energy systems for this project is not feasible. New York City's Department of Design and Construction maintains a database for screening the geothermal ground source energy potential of over 900,000 City sites. The project site is listed as unsuitable for a full or hybrid geothermal system due to the project's thermal demand and the limited potential thermal capacity of the available outdoor area.

- 5) Furthermore, there are several strategies to improve the environmental conditions of the building such as dedicated outdoor air systems (DOAS) for mechanical ventilation. This DOAS separates the ventilation from the heating and cooling systems, reducing the size of its ducts, having a better distribution of ventilation (indoor air quality) for a hospital and reducing the size of the ducts and the number of mechanical equipment; thus, reducing the number of mechanical rooms and improving the indoor air quality which is paramount in hospitals and also making the building height less oppressive. Please comment.**

A DOAS strategy of air distribution could be utilized for portions of the new development, offering a modern approach to air distribution. While healthcare codes prohibit recirculation type DOAS air terminal devices in specific clinical spaces, the DOAS system provides comparable height of air handling equipment to traditional mixed air handling units. This means that the mechanical floors would contain a combination of both equipment types, ensuring efficiency and effectiveness.

Although the floor-to-floor heights of mechanical equipment floors may be able to be reduced, the height of clinical floors would need to be increased for a DOAS system, the DOAS box air terminal devices offer deeper and more robust solutions compared to mixed air VAV terminal devices. The savings in duct size are balanced by the required DOAS box layout and device depth.

A DOAS design supports the hospital's programs for infectious control purposes, providing a safe and controlled environment but limits the institution's flexibility to operate in a 100% outside air environment should the clinical environment require this operating mode.

- 6) Accepting your premise that this project will be “state-of-the-art” from a medical and hospital standpoint, it appears that the building is not state of the art, and you could make significant improvements which would add simultaneously to the sustainability and health of the building as well as reduce its bulk and height. Please comment.**

Northwell has assembled a respected team of architectural, mechanical, structural, construction, sustainability and healthcare experts experienced in providing buildings that employ the most current planning strategies and building technologies to address project goals. Working together, significant reductions in the proposed project height have been realized without sacrificing the highest standards of quality. Northwell is committed to continued evaluation and evolution of the proposed project based on emerging sustainable technology, equipment, and practices.

We look forward to further discussion at the Committee's meeting this evening.

Sincerely,

Daniel Baker, MD, MBA
President
Lenox Hill Hospital