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NYSERDA IAQ Program – October Preliminary Findings Report

Edison's goals for the month of October was to execute the following.

1. Finalize our report for the MSKCC BAIC facility based on revisions made per NYSERDA review comments.
2. Submit our draft report for the MSKCC Josie Robertson facility.
3. Complete the baseline, post Covid and energy conservation measure calculations for the Northwell Health MEETH facility.
4. Complete the baseline, post Covid and energy conservation measure calculations for two Lincoln Center sites (Rose Building and Alice Tully).

## **PROGRESS/RESULTS**

### **1. Facility – MSKCC BAIC**

A draft report including all required energy calculations for the MSKCC BAIC facility was submitted on 9/22/20. NYSERDA reviewer comments and revision requests were received by Edison Energy on 10/15/20. The majority of revisions have been made to the report. Several comments needed clarification in order for Edison Energy to proceed. Clarifications were discussed with NYSERDA on 10/21/20 and these comments are now being addressed. The final report for this facility will be submitted on 10/27/20.

### **2. Facility – MSKCC Josie Robertson**

Energy calculations for the Josie Robertson facility were submitted for review on 9/19/20. NYSERDA reviewer comments were received on 10/14/20 and are currently being addressed. Once the BAIC report has been approved as final, we will be modeling all other reports to match regarding content and presentation. As such, the Josie Robertson draft report will be submitted once the BAIC report has been approved. One low cost / no cost ECM was identified for this facility which entailed the programming of the site's lobby AHU to operate as a single zone VAV. However, as this measure results in the reduction of airflow (OA, RA) dependent on space temperature, this ECM will not be in the report as it conflicts with ASHRAE guidelines.

### **3. Facility – Lincoln Center**

#### **a. Rose Building**

The energy calculations for Rose Building are currently being worked on and will be submitted on 10/28/20. The report will follow and be submitted in November. No low cost / no cost ECMs were identified for this facility.

#### **b. Alice Tully**

All utility data for the Alice Tully building has now been received. However, we are having access issues as the client has communicated to us that we cannot come onsite to conduct a survey of the AHUs until sometime in November. This is concerning as the report for this facility is due on December 8<sup>th</sup>. A report due date extension may be needed for this site.

### **4. Facility – Northwell Health (MEETH)**

The energy calculations for MEETH are currently being worked on and will be submitted on 10/26/20. The report will follow and is projected to be submitted in mid-November. Time of day ECMs were identified for two AHUs which serve non-critical areas and can be shut down at night as a result.

### **5. Facility – Empire State Building**

A site visit was conducted on 10/23/20 where AHUs serving 3 floors were surveyed (Floors - 32, 73 and 74). In summary, the AHUs have fixed outside air quantities and already utilize MERV 14 filters. As such, annual cost increases are only expected to result from the addition of UVGI equipment in the spaces. Our findings for the 3 floors surveyed will then be projected for all floors (i.e. – 102), as the floors chosen are typical representations of the AHU systems in place throughout the building.

## **Newly Researched Technology**

Based on NYSERDA report review comments and internal discussion, research was conducted to look into the use of disinfection techniques within elevator cabins. One such product has been identified so far. In summary, the product consists of four steps to help ensure safety. These steps are as follows:

1. Upgrade the elevator controls - This upgrade involves a new voice recognition platform, which allows passengers to call the elevator to their floor and to communicate the floor to which they need to travel to. As a result, elevator push buttons will be avoided, lowering the potential for viral transmissions via surface contact.
2. Automatic Air Purifier – An automatic air purifier will be installed to continuously sanitize cabin air. The unit is fitted with a fan, HEPA filter and activated carbon membrane. Both components can be easily replaced. Air circulated within the cabin will be filtered and purified from viruses and bacteria.

3. UV-C ultraviolet light – Ultraviolet light will be emitted by LED spotlights onto the elevator cabin surfaces. This light (UVGI) will eliminate 99.9% of the microorganisms adhering to surfaces. These lights will only activate when there are no passengers on board via an occupancy sensor.
4. Thermal Camera – A thermal camera will be used within the elevator to identify any abnormal body temperatures (above 99.5 dF). Once identified, necessary safety protocols can be carried out.

## **Draft Report Submission Schedule**

Please refer below for projected draft report submittal dates for each facility in our scope of work.

1. MSKCC BAIC (Revised) – October 27th, 2020
2. MSKCC Josie Robertson – TBD
3. Lincoln Center Rose Building – November 24<sup>th</sup>, 2020
4. Lincoln Center Alice Tully Building – December 8<sup>th</sup>, 2020
5. Northwell Health MEETH – December 15<sup>th</sup>, 2020
6. Empire State Building – December 9<sup>th</sup>, 2020

## **Next Steps and Goals**

The goals for next month will be to submit our draft final report for the Lincoln Center Rose Building and the Northwell Health MEETH facility including all required energy calculations.

## References

[1] ASHRAE EPIDEMIC TASK FORCE. Healthcare C-19 Guidance. ASHRAE, 4-20-2020

[2] ASHRAE EPIDEMIC TASK FORCE. Commercial-c19-guidance. ASHRAE, 4-20-2020

[3] ASHRAE EPIDEMIC TASK FORCE. Filtration\_disinfection-c19-guidance. ASHRAE, 4-20-2020

[4] ASHRAE EPIDEMIC TASK FORCE. Building Readiness. ASHRAE, 4-20-2020

[5] ASHRAE Standard 170-2017

[6] Elevator UVGI and Controls Upgrade. <https://www.elevatorimagazine.com/en/thyssenkrupp-elevator-voice-assistant/>