

CASE STUDY



Lincoln Property Company Assures Tenants of Indoor Air Quality With Tapa IAQ Monitoring

101 Constitution Ave, Washington, DC



Lincoln Property Company Provides Assurance to its Tenants for the Safe Return to Their Buildings

Summary

Goal

To assure tenants that indoor air quality meets or exceeds industry recommended safe levels for the safe return to buildings.

Background

This 10 story 511,338 square foot building is the closest building to the U.S. Capitol. With best-in-class comfort systems, and operations, LPC wanted to show its tenants that their air quality mitigation actions delivered safe indoor air quality.

Solution

LPC choose Tapa's Indoor Air Quality (IAQ) Monitoring solution to measure and report 5 key environmental elements that comprise the Tapa IAQ score. The score is displayed throughout the building and via smartphone access to assure tenants of safe air.

Outcome

Immediately upon turning on the monitoring solution, LPC tenants were assured that IAQ scores throughout the building were above 95% and most near 100%.

The Opportunity

As offices, businesses, and the government all announce their return-to-office schedules either full-time or hybrid models, occupants are demanding safe, healthy buildings and more control of their environment. *"They don't just want to hear what we are doing; they want to visually see the demonstrated proof that our mitigation activities are working supporting our company's continued commitment to promoting the safety and well-being of our customers and guests,"* said Jeff Beard Director Engineering and Operations LPC Mid-Atlantic Region.

"The most common way COVID-19 is transmitted from one person to another is through tiny airborne particles of the virus hanging in indoor air for minutes or hours after an infected person has been there," said Alondra Nelson, head of the White House Office of Science and Air.



A May 2, 2022, Facilities Net article by Dave Lubach titled *'Occupants Unhappy with Return-to-Work Health and Safety Measures: Survey'*

indicates employees are still concerned with returning to buildings that are free of germ-causing agents on surfaces and include less-than-clean air.



The White House Clear Air in Buildings Challenge

The Challenge

The White House is pivoting to emphasize that poorly ventilated indoor air poses the biggest risk for coronavirus infections, urging schools, businesses and homeowners to take steps to boost air quality, a move scientists say is long overdue and will help stave off future outbreaks.

On March 17th, 2022, the Biden Administration launched The Clean Air in Buildings Challenge as part of the National COVID-19 Preparedness Plan. The Challenge calls on all building owners and operators to adopt key strategies to improve indoor air quality in their buildings and reduce the spread of COVID-19.

The Challenge is a call to action for leaders and building owners and operators of all types to assess their indoor air quality and make ventilation and air filtration improvements to help keep occupants safe, for improving indoor air quality and reducing the risk of spreading dangerous airborne particles.

Lincoln Property Company accepted the challenge and determined to make indoor air quality monitoring a key part of their IAQ plan to assess the results of their mitigation activities and to communicate real-time results to their building occupants.



The Building 101 Constitution

Owner-occupied with on-site property management, the 101 Constitution continues to earn its impeccable reputation. This landmark is distinguished by its best-in-class design, operations, amenities and views.

Superb craftsmanship is evident in even the smallest details. Every need is attended to by the concierge, and security is subtle but robust.

101 Constitution Avenue
Washington, DC





Lobby 101 Constitution Ave, Washington, DC

The Solution

Lincoln Property Company reviewed several available IAQ monitoring solutions on the market. The Tapa IAQ monitoring solution was selected for many reasons including its ease of installation, ease of use and easily shared communications with selected stakeholders including tenants.

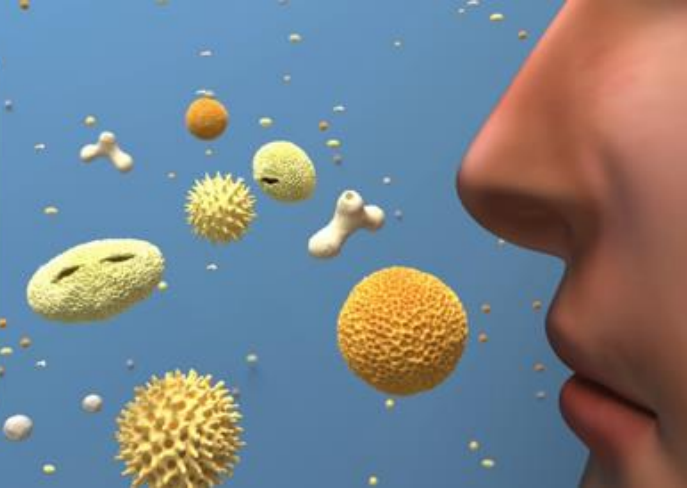
Tom Small, LEED Green Associate Senior Property Manager 101 Constitution stated, *“Unlike other IAQ monitoring solutions, Tapa’s expandable suite of solutions eased our choice. With the Tapa Edge Server in place, LPC will be able to quickly add other Tapa energy efficiency, operation enhancements, and tenant solutions that will greatly improve the quality of experience for everyone in our buildings.”*

“I was impressed that the installation, configuration, and system turn up only took a few

days without interruption to our existing systems” said Michael Meisels, Operations Manager LPC 101 Constitution. *“Tapa’s flexible installation methods for wireless or wired line needs allowed us to adjust during the installation, speeding our time to provide returning workers to the building, access to real-time data.”*

Tapa’s Indoor Air Quality (IAQ) score quickly provides and communicates immediate results of five (5) critical environmental factors considered by industry and health experts as the key to reducing the spread of COVID and other viruses. LPC can now measure temperature, relative humidity, particulate matter (pm2.5), carbon dioxide (CO₂), and total volatile organic compounds (TVOC), along with air flow to provide an at-a-glance assessment of the building air quality on a scale of 1-100.

Visualize Your Indoor Air Quality With Tapa's IAQ Score™



Indoor Air Quality (IAQ) Monitoring

68°

Temperature

Cold temperatures can suppress the immune system and aid the spread of viruses. Maximize occupant comfort and productivity.

Recommended Levels
The optimal range is
18-25°C (64-77°F)



Humidity

Impacts comfort, respiratory health, productivity, those with allergies, asthma, respiratory illnesses.

Maintaining humidity can minimize the growth and spread of mold, viruses, and bacteria.

Recommended Levels
Humidity levels
between 40-50% are
considered optimal



CO₂ Carbon dioxide (CO₂)

High levels of CO₂ can lead to difficulty concentrating, decreased cognitive ability, and fatigue.

Recommended Levels
Concentrations below
600 ppm are
considered ideal for a
healthy and
productive workspace



PM2.5 Particulate Matter

Dust is a trigger for allergy, asthma attacks eczema flare-ups

Worsen the symptoms of chronic and acute bronchitis..

Recommended Levels
Maintain dust levels
below 15 micrograms
per cubic meter
(µg/m³)



Total Volatile Organic Compounds (TVOCs)

Chemicals commonly found in the that can cause headaches, fatigue, allergic skin reactions, eye and throat irritation, affect comfort, concentration, and productivity.

Recommended Levels
Maintain levels under
333 parts per billion
(ppb)



Air Flow

Good ventilation, air exchange, and indoor air quality are important in reducing airborne exposure to viruses, including SARS-CoV-2 that causes COVID-19, as well as other disease vectors, chemicals, and odors.

Recommended Levels

Excellent (6-8 ACH)
Good (4-5 ACH)
Bare Minimum (3-4 ACH)
Low (<3 ACH)

ACH =
Air
Changes
Per Hour

The Tapa IAQ Score at-a-glance assessment of the air quality, on a 0 – 100 scale.

101 Constitution Ave. Whole Building



Local Weather

77°F

washington

JUN 14

SHOWERS AND THUNDERSTORMS LIKELY

10 West 101 Constitution Ave.



CO2
Humidity
PM25
VOCs
Temp

464 ppm

56.0 %RH

3 µg/m³

77 ppb

71.33 °F

03 West 101 Constitution Ave.



CO2
Humidity
PM25
VOCs
Temp

507 ppm

40.5 %RH

2 µg/m³

94 ppb

76.32 °F

The Results

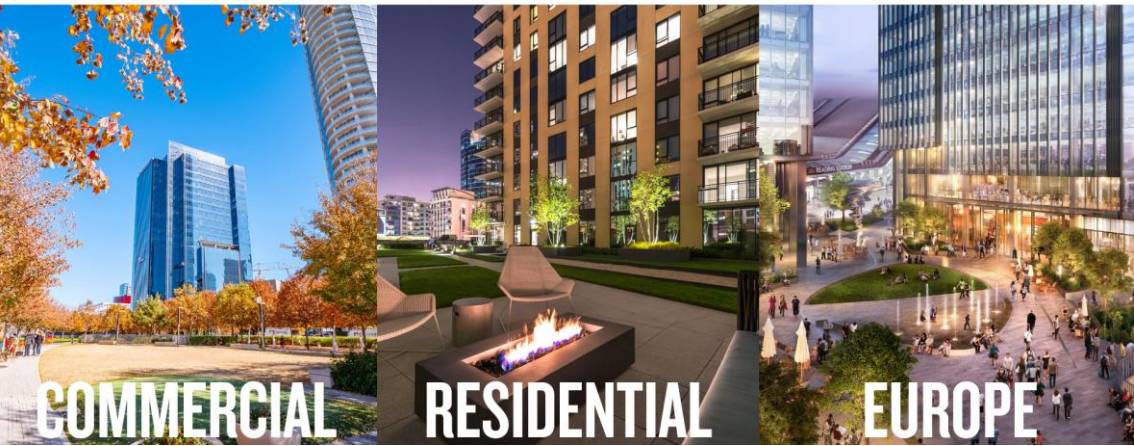
The Lincoln Property Company team quickly achieved their goals of collecting real-time air quality measurements and sharing this information directly with occupants throughout the building. Information sharing options include digital signage, lobby screens, tenant smartphones, and other web enabled solutions.

Within hours of installation and sensor calibration, results began appearing in real-time.

"I knew that Lincoln Property Company had completed many air mitigation enhancements recently and now they needed a way to measure and communicate these results." said Journey Williams Sr. Vice President.

Williams continued, *"The results clearly demonstrated LPC's commitment to air quality with scores all above 95 and considered "Great" right out of the box."* *"With this information now available, LPC can continue to fine-tune their system and provide ongoing assurance to the building occupants, that the air is clean for their safe return to the building."*

- Reduced Occupant Stress now having access to real-time air quality results
- Average building IAQ score 98 (out of 100)
- Exceeded the White House Challenge
- Boosts Health and Wellbeing
- Building operator has access and control of building operations to reduce operations cost and improve response time
- Positioned LPC for additional solutions



About Lincoln Property Company

Lincoln Property Company is an international real estate firm offering a comprehensive suite of value-added services for their clients. With their substantial local presence in each of the markets they serve, they ideally situate their offices to clientele: tenants, investors, lenders, and owners of real estate. Their people and philosophy are the key ingredients for Lincoln's solid track record of success.

Today, Lincoln Property Company is one of the most respected and diversified service firms in the United States, employing thousands of experienced, dedicated people who serve a growing client base that reaches coast-to-coast, as well as into Mexico and Europe.

LPC currently leases or manages nearly 60 million square feet of building space with approximately 3 million square feet attributed to the federal government and continues to provide a comprehensive suite of real estate services to their clients.

Lincoln Property Company's Washington, D.C., office at 101 Constitution Avenue NW serves as the firm's headquarters for LPC's Mid-Atlantic Region—including the D.C. Metro Area, Delaware, Pennsylvania, and Southern New Jersey. Over the past five decades, Lincoln Property Company helped define quality and excellence in real estate management for the twentieth and twenty-first centuries.



About Tapa

Tapa is an edge server and software that connects directly to the building's communication protocol and gives building operator's direct (local & cloud) access to IoT devices, sensors, actuators, and controllers to manage the building and related access to data. An IoT network of sorts on a single pane of glass.

Our Buildings include commercial office spaces, retail, restaurants, medical offices and facilities, schools, universities, government spaces and numerous others.

For Building Owners, we increase revenues, improve asset valuation, lower operations and energy costs, provide a single dashboard with real-time & historical views, and direct monitoring & control.

For Building Operators, we provide quicker facility response, lower ops and energy costs, provide more accurate billings, gather information, and feeds ML and AI to enable "Smart Buildings".

For Buildings Occupants, we Increased controls information, improved the quality of experience (QoE), provide direct control to temperature & lighting, and provide an Indoor Air Quality Score.

Tapa Solutions Include:

- Tapa Tenant
- Tapa IAQ Monitoring
- Tapa Monitor
- Tapa Manage
- Tapa Intelligence
- Tapa Usage
- Tapa Dashboards